



2022 SUSTAINABILITY REPORT

Creating shared value
and involving stakeholders: the story
of a company committed to leaving a mark.
But not a footprint

Consolidated non-financial reporting drawn up pursuant to Articles 3
and 4 of Italian Legislative Decree No. 254/2016

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Letter to stakeholders

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Hera for the Planet, People and Prosperity: the presentation of our results offered in this Sustainability Report is permeated by these **three “P”s**, which express Hera’s purpose, formally included as of 2021 in the Articles of Association. They represent the culmination of a long path of construction pursued over the years through the actions, behaviour and intentions of all the Group’s employees.

Precisely on the basis of our social purpose, during 2022 we updated our **Code of Ethics**. We did so with the involvement of our employees, and this peculiarity ensured that we could once again define guidelines in which the company and its people fully recognise themselves, and which also provides a reference for reporting commitments and results to all our stakeholders.

We have always been convinced about contributing to sustainable development through our activities, and this belief was further strengthened when we introduced, in our planning and management system, a quantification of the amount of Ebitda generated by business activities that create **shared value**, i.e. that contribute to carbon neutrality, resource regeneration, innovation and resilience in the local areas served. This indicator rose to **670 million euro** in 2022, or **52% of total Ebitda**. Supported by improvement in all main target parameters, as recognised among others by S&P Global, this result included us for the third consecutive year in the Dow Jones Sustainability Index, confirming us as the **world’s best multi-utility for ESG factors** (environmental, social and governance). In spite of the difficulties arising from a complex international context and an unprecedented energy scenario, the growth in Shared-value Ebitda was thus confirmed as being in line with the path set out by our Business plan, which projects it at 62% in 2026.

These important results spur us to do even better in facing the challenges before us: the rising cost of living and climate change are the main risks according to the World Economic Forum’s 2023 Global Risks Report. We have paid special attention to these issues in this report, providing information on our commitments and initiatives. Among these, we would like to mention, in particular, the **measures introduced to support our customers facing economic hardship**, in some cases improving on the measures introduced by the regulatory authority, as well as an expansion of our collaboration with municipalities, signing agreements in favour of users undergoing difficulty. In addition, we carried out numerous interventions to **mitigate the risk of drought and improve the resilience of the aqueduct system** in the areas served, in order to ensure supply, continuity and quality in such a fundamental service.

We are aware that in order to tackle the climate change emergency and the ecological transition, it is essential to work at the level of the ecosystem, bringing together the many resources and skills that the Hera Group and various bodies and subjects in the areas served are able to contribute. In this sense, the NRRP funding received, supporting so many of our projects, will enable us to speed up their implementation, and at the same time it confirms that we are on the right track.

Only by **working together** will we be able to develop the strength, ideas and tools required to **reduce our carbon footprint** and evolve towards a circular economy that embraces all areas, while concurrently guaranteeing its full economic and social sustainability.

Tomaso Tommasi di Vignano
Executive Chairman

Orazio Iacono
CEO

Methodological guide to this report

[2-3]

This sustainability report is a **Consolidated non-financial statement** (NFS) drafted by Hera S.p.A. and its subsidiaries (the "Group") which refers to the financial year 2022 (from 1 January 2022 to 31 December 2022) and was prepared in accordance with Articles 3 and 4 of Legislative Decree 254/2016 implementing Directive 2014/95/EU. This NFS reports information regarding significant issues which concern the environment, social factors, personnel, human rights and anti-corruption, which are useful in understanding the Group's activities, including its performance and results, and their impact. The topics regarding the Group and its stakeholders were defined based on a well-structured **materiality analysis**, which is described in the section "Materiality analysis and definition of contents", part of the present Methodological guide to this report.

As provided for by Article 5 of Legislative Decree 254/2016, this document forms a separate report and is marked with specific wording, identifying it as a NFS, as provided for by legislation.

The Hera Group considers this NFS as its **sustainability report**, a primary tool for managing and reporting on its activities and results in the **economic, environmental and social spheres**, as well as a fundamental tool for **informing and communicating** with its stakeholders.

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The Group's sustainability report has been drafted and published annually since 2002, and since 2007 it has been **approved by the Board of Directors of Hera Spa** at the same time as the annual and consolidated financial statements, in addition to being presented at the Shareholders Meeting. This version was approved by the Board of Directors of Hera Spa on 21 March 2023 and published on 5 April 2023. This fact bears witness to the **central role** of sustainability and corporate social responsibility in the Hera Group's planning and control system, which anticipated by more than ten years the obligations introduced by the European directive on non-financial reporting.

The structure of this sustainability report is a direct consequence of the **strategic approach** aimed at **creating shared value** that the Hera Group has adopted since 2016, with the aim of responding more effectively to the challenges of sustainable economic development both globally and locally, and making the value created in the areas served more tangible.

In addition to the **results** and **targets achieved**, this sustainability report sets out the **principles** underlying the Hera Group's actions, its **future objectives** and the results of its **communication with stakeholders**.

The attachments to this report also include **case studies**, i.e. descriptions of projects and initiatives that are particularly representative of the Group's commitment to sustainability and to creating shared value.

This document is widely distributed to all Group stakeholders, through its publication on the company's website and other initiatives.

Scope of reporting

[2-1]

[2-2]

The scope of the **operating and financial** data and information is the same as that of the Hera Group's consolidated financial statements at 31 December 2022. The scope of the **social and environmental** data and information includes all companies shown below, consolidated on a line-by-line basis in the Group's consolidated financial statements.

COMPANIES INCLUDED IN THE SCOPE OF REPORTING

Hera Spa	Hera Comm Spa	Herambiente Spa	AcegasApsAmga Spa	Marche Multiservizi Spa
■ Acantho Spa ■ AcegasApsAmga Spa ■ Hera Comm Spa ■ Hera Trading Srl ■ Herambiente Spa ■ Heratech Srl ■ Inrete Distribuzione Energia Spa ■ Marche Multiservizi Spa ■ Uniflotte Srl	■ Con Energia Spa ■ Eco Gas Srl ■ EstEnergy Spa – Etra Energia Srl ■ Hera Comm Marche Srl ■ Wolmann Spa	■ Aliplast Spa – Alibardi Fiorenzo Srl – Aliplast France Recyclage Sarl – Aliplast Iberia SL – Aliplast Polska SP O.O. ■ ASA Scpa ■ Biorg Srl ■ Feronia Srl ■ Frullo Energia Ambiente Srl ■ Herambiente Servizi Industriali Srl: – Recycla Spa – Vallortigara Servizi Ambientali Spa and 2 subsidiaries ■ Hestambiente Srl	■ AcegasApsAmga Servizi Energetici Spa – Hera Servizi Energia Srl – Tri-Generation Scarl ■ Aresgas EAD – Aresenergy EOOD – Ares Trading EOOD – Atlas Utilities EAD and 1 subsidiary – Black Sea Gas Company EOOD ■ Hera Luce Srl	■ Marche Multiservizi Falconara Srl ■ Green Factory Srl ■ Macero Maceratese Srl

Compared to 2021, the following changes in the scope of operations occurred:

- **Amgas Blu Srl** was merged by incorporation into Hera Comm Spa on 1 October 2022, with accounting effects backdated to 1 January 2022;
- **Ascopiave Energie Spa, Ascotrade Spa and Blue Meta Spa** were merged by incorporation into Estenergy Spa on 1 October 2022, with accounting effects backdated to 1 January 2022;
- **Vegri Scarl**, a subsidiary of Vallortigara Servizi Ambientali Spa, completed the liquidation process on 15 November 2022;
- **Alibardi Fiorenzo Srl**, a company involved in plastic material collection and production, was acquired by Aliplast Spa on 13 September 2022 and fully consolidated with accounting effects backdated to 1 July 2022;
- **Con Energia Spa**, specialising in gas and energy sales to end customers, was acquired by Hera Comm Spa on 13 April 2022 and fully consolidated with accounting effects backdated to 1 January 2022;
- **Macero Maceratese Srl** was acquired by Marche Multiservizi Spa on 30 June 2022 and fully consolidated with accounting effects backdated to 1 January 2022.

Any changes to the scope of operations described above have been noted in this document and, where present, do not compromise the proper representation of the company's activities.

Even though it is not included in the scope of consolidation, information on the company **Enomondo Srl** (50% owned by Herambiente Spa), which manages a biomass plant, is also reported. This information includes aspects related to atmospheric emissions and waste disposal.

In order to provide a comparison of data over time and an evaluation of the Group's business performance, comparative data for the previous two years have been included, where available. Furthermore, in order to offer a fair representation of Hera's performance and to ensure that the data is reliable, the use of estimates is kept to a minimum and, where they have been used, they are based on the best methodologies available and noted accordingly.

Reporting standards

This NFS was prepared in accordance with the methods and principles set out in the **GRI Sustainability Reporting Standards**, defined by the Global Reporting Initiative (GRI Standards). The paragraph entitled "GRI content index" presents all indicators reported in this NFS, including references to their position in the report and any possible omissions. Note that for the report concerning the 2022 financial year, the **GRI general standards published in 2021** were adopted, which updated the drafting process, the general disclosures and the process for identifying and evaluating material issues: GRI 1 Foundation principles; GRI 2 General disclosures; GRI 3 Material topics. GRI 1 Foundation 2021 defines the general principles of sustainability reporting (Reporting principles): accuracy, balance, clarity, comparability, completeness, sustainability context, timeliness and verifiability.

The "**2013 GBS Standards - Principles for drawing up sustainability reports**" defined by the Gruppo di Studio per il Bilancio Sociale (GBS) were also taken into account when drafting this statement as regards the definition and distribution of added value.

Even though they are not mandatory reporting standards and therefore were not used for the purposes of this NFS, a table correlating the **Sustainability Accounting Standards Board (SASB)** indicators has been included in the attachments.

As regards information concerning climate change, since 2020 the Hera Group has made reference to the **Recommendations of the Task Force on Climate-related Financial Disclosures (TCFD)**, published in 2017 by the Financial Stability Board, and the **European Union Guidelines on climate-related disclosures**, published in June 2019 by the European Commission. The process of adhering to and aligning with the TCFD's Recommendations, approved in 2020 by the Management Review Committee, involved a dedicated cross-department team with members from the Shared Value and Sustainability, Risk Management, Strategic Planning and Energy Management Departments, as well as the Central Administration, Finance and Control Department. The information consistent with the TCFD's Recommendations includes: an overview of the Group's greenhouse gas emissions, broken down by supply chain; a table with the main greenhouse gas targets and indicators in the Attachments (updated in 2021 based on the document entitled "Guidance on Metrics, Targets, and Transition Plans", published

in October 2021 by the TCFD); a description of the incentive system linked to climate targets; a description of the governance processes regarding the supervision and management of climate-related risks; and lastly, some initiatives identified to reduce risks and anticipate opportunities arising from climate change.

The NFS (paragraph “Information concerning sustainable economic activities”) includes the information required by Article 8 of EU Regulation 2020/852, concerning the EU Taxonomy of sustainable activities. The EU Taxonomy sets out the conditions that an economic activity must fulfil in order to be considered sustainable. The information required by the obligations under the Regulation is accompanied by a few additional elements, such as the comparison between the Taxonomy Ebitda and the “Shared-value Ebitda” (CSV Ebitda) that the Group has been reporting since 2016.

The reporting process

In addition to the criteria listed above, this sustainability report was drafted in accordance with a specific **internal procedure** introduced by the Group in 2012 and updated in 2015 and 2019. This procedure sets out the activities required for planning, carrying out, approving, disclosing and presenting the report, as well as the related roles and responsibilities.

The **social and environmental sustainability targets** included in this sustainability report were defined based on the planning and control tools used by the Group: the 2022-2026 Business plan, the 2023 budget and the 2023 balanced scorecard. These interconnected tools contain sustainability objectives which have an impact on stakeholders. In particular, the Business plan includes sustainability-related indicators for which quantitative targets have been defined.

The information and data presented in this sustainability report were **collected and consolidated** by using dedicated software. The data and information were directly communicated via the software by the contact persons and were subsequently validated by designated managers as part of the internal procedure.

In order to ensure consistency and comparability in the information, where considered necessary to correct any errors or take into account changes in the measurement methodology of the indicators or in the nature of the activity, the quantitative data presented and relating to previous periods may be recalculated and restated with respect to what was published in the previous year’s NFS. The related indications, recalculation criteria and effects are mentioned in the corresponding chapters and paragraphs.

[2-4] Any **changes in calculations** compared to previous years have been indicated in the notes to the tables.

Management Review Committee and work group [2-3]

This sustainability report was prepared by Hera Spa’s Shared Value and Sustainability Department (bs@gruppohera.it) with the participation of numerous contact persons, both in terms of data collection and for the descriptions and comments. The preparation and supervision of this work, as well as the approval of the improvement targets and of the document to be submitted to the Board of Directors, was carried out by the Management Review Committee, made up of the Executive Chairman of the Board of Directors, the CEO and 18 Group managers.

We would like to thank the 380 people who contributed in various ways to drafting this report.

Auditing the report [2-5]

This Consolidated Non-Financial Statement has undergone a limited audit by Audirevi S.p.A. in accordance with the principles and guidance contained in ISAE 3000 (International Standard on Assurance Engagements 3000 - Revised) of the International Auditing and Assurance Standards Board (IAASB). The Auditor’s Report is attached as an appendix to this document.

Note that the quantitative information in this Non-financial statement that does not refer to the indicators reported in the “Index of GRI contents” was not specifically examined by Audirevi Spa. This information has been presented on a voluntary basis, partially based on the materiality analysis, to supplement the requirements of Legislative Decree 254/2016 and the reporting standards adopted by the Hera Group.

Stakeholders and materiality analysis

[2-12]

Hera's stakeholders

[2-12]

[2-29]

The Hera Group's **stakeholder map** was defined based on a survey of the company's stakeholders. Each stakeholder category identified presents particular interests and priority topics and its input is received through communications and involvement initiatives. The infographic below shows a summary of the stakeholders identified and the main dialogue and consultation activities carried out during the year. For detailed information, see the section entitled "[Communication with our stakeholders](#)" (in the chapter "Governance and creating value").



Materiality analysis and definition of contents

[3-1]

The Group's sustainability reporting is preceded each year by a process that consists in **analysing and identifying material topics** for the Hera Group and its stakeholders. More specifically, as of this report, the process has been drafted in accordance with the **new GRI Universal Standards** published in 2021 (GRI 3). An analysis of internal and external sources has made it possible to identify and analyse the impacts generated or undergone by the Group, which are useful for prioritising the material topics presented in this section.

In order to understand the **external context and identify the material topics**, the following sources were analysed, among others:

- the scenario of **global, European, national and local policies** regarding the three drivers identified for creating **shared value**: pursuing carbon neutrality, regenerating resources and closing the circle, and enabling resilience and innovating;
- the **main risks** identified by the Enterprise Risk Management analysis and an analysis of climate risk;
- **legislative and regulatory changes** in the sectors in which the Hera Group operates;
- the main critical issues that emerged from the **press review**;
- the results of stakeholder communication activities, thanks to numerous activities organised during the year; in particular, the topics identified during HeraLABs, the results of the annual customer satisfaction survey, and the topics discussed in the communications with consumer associations were considered.

The most relevant topics were also identified by considering the corporate strategy, through an analysis of the Group's main goals identified in the **2022-2026 Business plan**, and the results of the biennial **employee satisfaction** survey.

Analysing these sources enabled the impacts generated and undergone to be **identified**, anticipating the provisions of EU Directive 2022/2464 (CSRD - Corporate Social Responsibility Directive) in terms of double materiality, on the economy, the environment and people, including human rights. Each impact was then defined as positive or negative and actual or potential. Based on these parameters, individual impacts were assessed according to their severity and likelihood of occurrence.

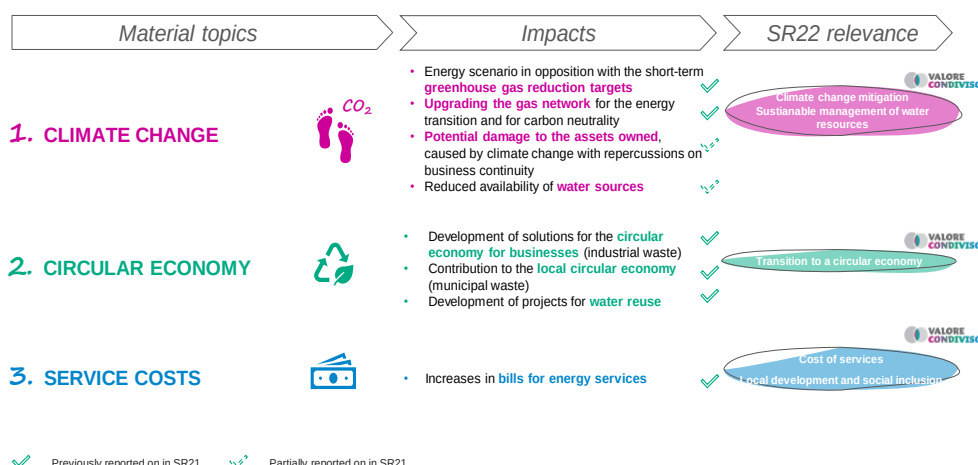
Following this assessment phase, the impacts were grouped into topics and **prioritised** based on their assessments.

[2-14]

The material topics resulting from this analysis are submitted annually to the **Management Review Committee** and the Group's **Ethics and Sustainability Committee**.

Breakdown of the information required by Italian Legislative Decree No. 254/2016 and material topics in order of priority
[2-25]
[3-2]
[3-3]

The most significant topics that emerged from the materiality analysis concern climate change, the circular economy and the cost of services, all of which are amply reported within this NFS. Compared to the topics in the 2021 Sustainability Report, those relating to **climate change** and the **cost of services** took on greater importance.



Within this report, each sphere of Legislative Decree 254/2016 has been taken into consideration, in accordance with current legislation. The various material topics identified by the analysis mentioned above are consistent with Legislative Decree 254/2016 on non-financial disclosures.

The following table summarises the material topics, listed **in order of relevance**, along with the impacts identified and an indication of their nature (impacts generated or undergone, positive or negative impacts, actual or potential impacts), and their relationship with the aspects of Legislative Decree 254/2016. In addition, for each topic, the commitments, policies and management methods put into practise by the Group are described and references are given to the paragraphs of this report along with a description of the actions, objectives and targets considered to manage the impacts, whether positive or negative.

Material topic and description of impact	Leg. Dec. 254/16	Commitments, policies and management methods	Actions, objectives, targets and monitoring
Climate change mitigation			
Impacts generated: - Adaptation of the gas network to the energy transition and carbon neutrality, partially thanks to the incentive system introduced by ARERA and support coming from EU policies (Fit for 55 and REPowerEU). (positive; potential) - Trends in greenhouse gas emissions generated. In the coming years, due to the current energy scenario and the ensuing external factors, the reduction in emissions could be lower than the commitments made (negative; actual). Impacts suffered: - Reduced availability of water sources in the areas served by the Group most exposed to drought risk. (negative; potential) - Damage to property assets as a result of extreme natural phenomena (e.g. floods), partially caused by climate change. (negative; potential)	●	Statements of commitment: - Greenhouse gas emission reduction targets to 2030 approved by SBTi - Drafting this report and, specifically, the "Climate change mitigation" section, following the recommendations of the Task Force on Climate-related Financial Disclosure (TCFD) and the European Union Guidelines on Climate-related Disclosures - Annual participation in the CDP project Policies: - Quality and Sustainability Policy - Code of Ethics and its system for implementation (Ethics and Sustainability Committee and its rules of operation) Management systems: - ISO 14001 environmental certification - ISO 50001 energy efficiency certification - EMAS registration	The actions, objectives, targets and their monitoring with regard to the impacts of this topic are reported under "Climate change mitigation" (chapter "Energy"). Within this sustainability report, the final results of the four targets in line with the "well below 2 degrees" reduction scenario, approved by SBTi, are reported. The management of this material topic affects the Hera Group's performance in the ESG ratings described in the paragraph "Shareholders and financial institutions". UN Agenda 2030: Goal 13
Circular economy			
Impacts generated: - Development of circular economy solutions for businesses (industrial waste). (positive; potential) - Contribution to the circular economy (municipal waste) (positive; actual) - Development of water reuse projects (positive; actual) - Promotion of the circular economy in households, public administrations and local businesses through awareness-raising and communications	●	Statements of commitment: - New Plastics Economy Global Commitment of the Ellen MacArthur Foundation - European strategy for plastics - voluntary pledges Policies: - Quality and Sustainability Policy - Code of Ethics and its implementation system (Ethics and Sustainability Committee and its rules of operation)	The Group's activities, commitments, targets and initiatives with regard to the impacts of this topic are reported in the sections "Transition to a circular economy" and "Economic value for stakeholders". This paragraph also includes the following benchmarks: comparison of sorted waste indicators with national performance; comparison of final destination of waste with Italy and Europe; comparison of network losses with national averages and the main

Material topic and description of impact	Leg. Dec. 254/16	Commitments, policies and management methods	Actions, objectives, targets and monitoring
activities (positive; actual)		Management systems: - ISO 14001 environmental certification - Circular Economy Project Management System (AFNOR XP X30-901)	Italian utilities. The management of this material topic affects the Hera Group's performance in the ESG ratings described in the paragraph "Shareholders and financial institutions". UN Agenda 2030: Goal 12
Safety, cost and continuity of services			
Impacts generated: - Suspension of supplies to customers due to non-payment. (negative; potential) - Cost of district heating service, of which gas is one of the sources. (negative; actual)	 	Policies: - Quality and Sustainability Policy - Code of Ethics and its implementation system (Ethics and Sustainability Committee and its rules of operation)	The Group's activities, commitments, objectives and targets with regard to the impacts of this topic are reported in the sections "Cost of services", "Service quality", "Safety and continuity of services".
Impacts suffered: - Rising cost of gas and electricity, which is negatively reflected in energy service bills for customers. (negative; actual) - Suspension of the operation of waste management facilities. (negative; potential)		Management systems: - ISO 9001 Quality Certification - Ongoing implementation of the ISO 22301 Business Continuity Management System	This paragraph also includes the following benchmarks: comparison of the change in Hera bills over the years, comparison of expenditure from consumption of bottled or tap water, % compliance with commercial quality standards (ARERA).
Innovation and digital transformation			
Impacts generated: - Development of innovative projects for the services managed, through the Group's "Innovation strategy". (positive; potential) - Efficiency and improvement of metering systems for energy consumed, partially thanks to ARERA's bonus systems. (positive; potential) - Customer digitisation, for the improvement of the customer experience and increased interaction with the company. (positive; effective) - Use of advanced technologies for the digitisation of internal processes. (positive; effective)		Policies: - Quality and Sustainability Policy - Data protection policy - Code of Ethics and its implementation system (Ethics and Sustainability Committee and its rules of operation)	The Group's activities, commitments, objectives and targets with regard to the impacts of this topic are reported in the paragraph "Innovation and digitalisation".
		Management systems: - ISO 9001 quality certification - ISO 27000 series information security certification (Acantho)	The management of this material topic affects the Hera Group's performance in the ESG ratings described in the paragraph "Shareholders and financial institutions". UN Agenda 2030: Goals 9, 11
Quality and costs of waste collection and city cleanliness			
Impacts generated: - Citizens' perception of the quality of waste management services. (negative; actual) - Rising waste management services bills. (negative; actual) - Optimisation of waste		Policies: - Quality and Sustainability Policy - Code of Ethics and its implementation system (Ethics and Sustainability Committee and its rules of operation)	The Group's activities, commitments, objectives and targets with regard to the impacts of this topic are reported in the sections "Transition to a circular economy" and "Cost of services". This paragraph also includes the

Material topic and description of impact	Leg. Dec. 254/16	Commitments, policies and management methods	Actions, objectives, targets and monitoring
management services and sorted waste collection (positive; potential)		Management systems: - ISO 9001 quality certification	following benchmarks: comparison of sorted waste indicators with national performance; comparison of final destination of waste with Italy and Europe; comparison of network losses with national average and the main Italian utilities. The paragraph "Cost of services" provides a comparison of the cost of waste management services for Hera's household and non-household customers and the average for Italy, northern Italy and the main cities in Italy. UN Agenda 2030: Goal 12
Resilience and adaptation			
Impacts generated: - Interventions for the resilience of water networks. (positive; potential) - Interventions for the resilience of gas/electricity networks. (positive; potential)		Policies: - Quality and Sustainability Policy - Code of Ethics and its implementation system (Ethics and Sustainability Committee and adaptation) Management systems: - ISO 9001 Quality Certification - Ongoing implementation of the ISO 22301 Business Continuity Management System	The Group's activities, commitments, objectives and targets with regard to the impacts of this topic are reported in the paragraph "Resilience and adaptation". The management of this material topic affects the Hera Group's performance in the ESG ratings described in the paragraph "Shareholders and financial institutions". UN Agenda 2030: Goals 13, 11
Supply Chain Management			
Impacts generated: - Sustainability monitoring in the supply chain. (positive; actual) Impacts suffered: - Inability to provide services or works due to supplier default. (negative; potential)	 	Statements of commitment: - Utilitalia's pact for inclusion in the company Policies: - Quality and Sustainability Policy - Code of Ethics and its implementation system (Ethics and Sustainability Committee and its rules of operation) Management systems: - Certification for SA 8000 social responsibility and SA 8000-inspired management systems - ISO 9001 quality certification - Management system for the prevention of corruption ISO 37001	The Group's activities, commitments, objectives and targets with regard to the impacts of this topic are reported in the paragraph "Economic growth and social inclusion" and the chapter "Suppliers". The management of this material topic affects the Hera Group's performance in the ESG ratings described in the paragraph "Shareholders and financial institutions". UN Agenda 2030: Goal 8
Customer relations			
Impacts generated: - Contract management not in line with expectations. (negative, actual)		Policies: - Quality and Sustainability Policy - Code of Ethics and its implementation system (Ethics and Sustainability Committee and its rules of operation)	The Group's activities, commitments, objectives and targets with regard to the impacts of this topic are reported in the section "Customer relations".

Material topic and description of impact	Leg. Dec. 254/16	Commitments, policies and management methods	Actions, objectives, targets and monitoring
- Customers' involvement in the definition of their offers and in customising the services provided. (positive; actual)		and Sustainability Committee and its rules of operation) Management systems: - ISO 9001 environmental certification	
Energy efficiency and renewables			
Impacts generated: - Increased efficiency in the consumption of customers (households, businesses and public administrations) and of the Group (positive; potential) - Increased production of biomethane and renewable energies (positive; potential)		Policies: - Quality and Sustainability Policy - Code of Ethics and its implementation system (Ethics and Sustainability Committee and its rules of operation) Management systems: - ISO 50001 energy efficiency certification - ISO 14001 environmental certification	The Group's activities, commitments, objectives and targets with regard to the impacts of this topic are reported in the paragraphs "Promoting energy efficiency" and "Energy transition and renewables". The management of this material topic affects the Hera Group's performance in the ESG ratings described in the paragraph "Shareholders and financial institutions". UN Agenda 2030: Goals 7, 13
Air protection			
Impacts generated: - Environmental impacts of waste treatment plants (NIMBY syndrome). (negative; potential) - Development of efficient and renewable district heating. (positive; potential)		Policies: - Quality and Sustainability Policy - Code of Ethics and its implementation system (Ethics and Sustainability Committee and its rules of operation) Management systems: - ISO 14001 environmental certification - ISO 9001 quality certification - EMAS registration for several sites with waste treatment plants - ISO 17025 laboratory accreditation	The Group's activities, commitments, objectives and targets with regard to the impacts of this topic are reported in the sections "Transition to a circular economy"; "Protection of air, land, and biodiversity" and "Sustainable management of water resources". The paragraph also includes the following benchmarks: atmospheric emissions from WTE plants compared to legal limits (details by parameter and by plant), atmospheric emissions from WTE plants compared to authorisation limits, atmospheric emissions from the Imola cogeneration plant compared to legal and authorisation limits, comparison of the percentage of low environmental impact vehicles between Hera and the main Italian utilities. The management of this material topic affects the Hera Group's performance in the ESG ratings described in the paragraph "Shareholders and financial institutions". UN Agenda 2030: Goals 11, 12
Occupational health and safety			
Impacts generated: - Accidents on the workplace,		Policies: - Quality and Sustainability Policy	The Group's activities, commitments, objectives and targets with regard to

Material topic and description of impact	Leg. Dec. 254/16	Commitments, policies and management methods	Actions, objectives, targets and monitoring
including Group supplier sites. (negative; actual)		- Code of Ethics and its implementation system (Ethics and Sustainability Committee and its rules of operation) Management systems: - Certification for SA 8000 social responsibility and SA 8000-inspired management systems - ISO 45001 occupational safety certification	the impacts of this topic are reported in the sections "Health and safety" as regards employees and "Contract management" as regards suppliers. This paragraph also includes the following benchmarks: frequency rate comparison among Italy's main utilities. The management of this material topic affects the Hera Group's performance in the ESG ratings described in the paragraph "Shareholders and financial institutions".
Local development and social inclusion			
Impacts generated: - Development of instruments and agreements supplementing regulations, to support weaker users (instalments and bonuses). (positive; actual)	 	Statements of commitment: - Utilitalia's pact for inclusion in the company Policies: - Quality and Sustainability Policy - Code of Ethics and its implementation system (Ethics and Sustainability Committee and its rules of operation) Management systems: - Certification for SA 8000 social responsibility and SA 8000-inspired management systems - ISO 9001 quality certification	The Group's activities, commitments, objectives and targets with regard to the impacts of this topic are reported in the paragraph "Economic growth and social inclusion". The management of this material topic affects the Hera Group's performance in the ESG ratings described in the paragraph "Shareholders and financial institutions". UN Agenda 2030: Goal 8
Diversity			
Impacts generated: - Protection of employment and diversity within the company. (positive; actual)	 	Statements of commitment: - Charter for equal opportunities and equality on the workplace (promoted by the Ministry of Labour and the Ministry of Equal Opportunities, Fondazione Sodalitas, Impronta Etica, AIDAF, AIDDA and UCID) - Value D Manifesto for female employment - Utilitalia's pact for corporate inclusion - Women's Empowerment Principles (WEPs) of UN Global Compact and UN Women Policies: - Quality and Sustainability Policy - Remuneration policies - Code of Ethics and its implementation system (Ethics and Sustainability Committee and its rules of operation)	The Group's activities, commitments, objectives and targets with regard to the impacts of this topic are reported in the paragraphs "Economic growth and social inclusion" and "Job creation and development of new skills". This paragraph also includes the following benchmark: women in senior roles in major Italian utilities. The management of this material topic affects the Hera Group's performance in the ESG ratings described in the paragraph "Shareholders and financial institutions". UN Agenda 2030: Goal 5

Material topic and description of impact	Leg. Dec. 254/16	Commitments, policies and management methods	Actions, objectives, targets and monitoring
		Management systems: - Certification for SA 8000 social responsibility and SA 8000-inspired management systems	
Training and professional development, remuneration and incentives			
Impacts generated: - Development of valuable professional figures. (positive; actual)		Policies: - Quality and Sustainability Policy - Remuneration policies - Code of Ethics and its implementation system (Ethics and Sustainability Committee and its rules of operation)	The Group's activities, commitments, objectives and targets with regard to the impacts of this theme are reported in the paragraphs "Management of skills and training", "Development of individuals" and "Welfare" (chapter "People"). These paragraphs also include the following benchmark: comparison of average hours per capita in the main Italian utilities. The management of this material topic affects the Hera Group's performance in the ESG ratings described in the paragraph "Shareholders and financial institutions".
		Management systems: - ISO 9001 Quality Certification - Health and safety ISO 45001 certification - ISO 37001 corruption prevention certification - Certification for SA 8000 social responsibility and SA 8000-inspired management systems	UN Agenda 2030: Goal 8
Anti-corruption activities			
Impacts generated: - Anti-corruption. (positive; actual)		Policies: - Code of Ethics and its implementation system (Ethics and Sustainability Committee and its rules of operation) - Model for Corruption Prevention	The Group's activities, commitments, objectives and targets with regard to the impacts of this topic are reported in the paragraph "Sustainability and risk management". The management of this material topic affects the Hera Group's performance in the ESG ratings described in the paragraph "Shareholders and financial institutions".
		Management systems: - Organisational model for the prevention of offences against the company (Legislative Decree 231/2001) - ISO 37001 corruption prevention certification.	
Quality and consumption of network water			

Material topic and description of impact	Leg. Dec. 254/16	Commitments, policies and management methods	Actions, objectives, targets and monitoring
Impacts generated: - Ongoing and supplementary controls to ensure the quality of water resources. (positive; actual)	●	Policies: - Quality and Sustainability Policy - Code of Ethics and its implementation system (Ethics and Sustainability Committee and its rules of operation) Management systems: - ISO 14001 Environmental certification - ISO 9001 Quality certification - ISO 17025 accreditation of laboratories	The Group's activities, commitments, objectives and targets with regard to the impacts of this topic are reported in the paragraphs "Sustainable management of water resources" and "Service quality". This paragraph also includes the following benchmarks: Quality comparison between water distributed by Hera and natural mineral water on the market, Quality of purified water compared to legal limits, Percentage of analyses of water leaving purification plants that comply with the law. The management of this material topic affects the Hera Group's performance in the ESG ratings described in the paragraph "Shareholders and financial institutions". UN Agenda 2030: Goal 6
Sustainable management of water resources			
Impacts generated: - Actions for protecting and saving water resources (positive; actual)	●	Statements of commitment: - UN CEO Water Mandate Policies: - Quality and Sustainability Policy - Code of Ethics and its implementation system (Ethics and Sustainability Committee and its rules of operation) Management systems: - ISO 14001 environmental certification - ISO 9001 Quality Certification - Aws certification for the Setta Valley drinking water plant	The Group's activities, commitments, objectives and targets with regard to the impacts of this topic are reported in the paragraph "Sustainable management of water resources". This paragraph also includes the following benchmarks: quality comparison between water distributed by Hera and natural mineral water on the market, quality of purified water compared to legal limits, percentage of analyses of water leaving purification plants that comply with the law. The management of this material topic affects the Hera Group's performance in the ESG ratings described in the paragraph "Shareholders and financial institutions". UN Agenda 2030: Goal 6
Topics of Legislative Decree 254/16: ● Environment; ● Social; ● Personnel; ● Human rights; ● Preventing active and passive corruption			

**Policies,
management
systems and
other
statements of
commitment**

The main **management systems** (Art.3.1(a) of Legislative Decree 254/2016) adopted by the Group, with regard to the topics falling under Legislative Decree 254/2016, are:

- Organisational model for preventing offences against the company (Legislative Decree 231/2001)
- Management system for corporate social responsibility or Supplier audit system based on criteria similar to those of SA 8000
- Environmental Management System ISO 14001
- Quality Management System ISO 9001
- Energy Efficiency Management System ISO 50001
- Occupational Safety Management System ISO 45001
- Management system for corruption prevention ISO 37001
- Data Security Management System ISO 27001
- Laboratory Accreditation ISO 17025
- Circular Economy Project Management System (AFNOR XP X30-901)
- Ongoing implementation of the ISO 22301 Business Continuity Management System
- EMAS registration

The **company's policies** (Art.3.1(b) of Legislative Decree 254/2016), again with regard to these topics, are as follows (published on the Group's website):

- [Code of Ethics](#) and its implementation system (Ethics and Sustainability Committee and its rules of operation)
- [Quality and sustainability policy](#)
- [Data protection policy](#)
- [Remuneration policies](#)
- [Model for corruption prevention](#).

The Hera Group has also signed the following declarations of commitment:

- WBCDS Human Rights CEO Guide (2021)
- Charter for equal opportunities and equality at work (promoted by the Ministry of Labour and the Ministry of Equal Opportunities, Fondazione Sodalitas, Impronta Etica, AIDAF, AIDDA and UCID) (2009)
- Value D Manifesto for female employment (2017)
- Utilitalia's pact for inclusion in the company (2019)
- CSR Europe CEOs call "a New Deal for Europe" (2019)
- Women's Empowerment Principles (WEPs) of the UN Global Compact and UN Women (2022)
- UN CEO Water Mandate (2019)
- Ellen MacArthur Foundation New Plastics Economy Global Commitment (2018)
- CO2 Coalition Italy, formal commitment to achieve climate neutrality (2022)
- Manifesto "Together to Fight Energy Poverty" promoted by the Energy Bank

The Group adheres to the following internationally significant organisations/programmes:

- UN Global Compact (Hera is a founding member of the Global Compact Network Italy Foundation)
- Ellen MacArthur Foundation

and supports the Task Force on Climate-related Financial Disclosure (TCFD) established by the Financial Stability Board.

Hera's **risk management model** (Art.3.1, letter b) of Legislative Decree 254/2016) is also integrated with environmental and social issues, as described within the paragraph "[Sustainability and risk management](#)".

The attachments to this report contain two tables correlating the material topics to the management policies/methods and risks identified by the Enterprise Risk Management analysis.

1. SUSTAINABLE STRATEGY AND SHARED VALUE

1.01 About us

[2-1]
[2-6]

The Hera Group is one of Italy's leading multi-utility companies, and provides **4.2 million residents** with a sustainable management of multiple **public services in 311 municipalities** spread across five of the country's regions (Emilia-Romagna, Veneto, Friuli-Venezia Giulia, Marche and Tuscany). AresGas, a subsidiary of AcegasApsAmga, provides methane gas distribution and sales services to approximately 27 thousand customers in Bulgaria. The Group is also present in other European countries by way of the plastic recycling plants owned by subsidiary Aliplast.

The Hera Group provides **energy** (gas and electricity distribution and sales), **water** (aqueduct, sewerage and purification) and **waste management** (waste collection, recycling and treatment) **services** to residents and businesses.

The Group's main strengths are:

- a balance between free market services (gas and electricity sales, waste recycling and treatment) and regulated services (gas and electricity distribution, integrated water services and waste collection, recycling and treatment);
- a strong local presence and focus on aspects of sustainability;
- a diversified shareholder base, with approximately 24,000 shareholders.

Hera's
leadership
confirmed in all
sectors in Italy

The **Hera Group** ranks among the top companies nationwide in all business areas in which it operates, ahead of other listed companies:

1st operator in the waste management sector by waste treated

2nd operator in the water cycle by volume of water delivered

3rd operator in gas and electricity sales by number of customers

4th operator in gas distribution by volume delivered

5th operator in public lighting by number of lighting points managed

5th operator in electricity distribution in terms of volumes distributed.

Internal processing of 2021 data

Services
managed
[2-6]

Hera's growth has been achieved with a strong focus on aspects of sustainability in managing regulated services (gas and electricity distribution, water services and waste collection) and on the free market (special waste disposal, gas and electricity sales). This development has taken place in a balanced way across the various sectors, creating shared value for local areas and putting sustainability and quality at the centre of the services managed.

	Energy Services	Integrated water service	Waste management services
	Gas and electricity sales and distribution, district heating, heat management and public lighting	Civil and industrial aqueduct, sewerage and purification	Collection, recovery, treatment and disposal of municipal and special waste
Customers	Gas: 2.1 million Electricity: 1.5 million District heating: 13,000	Water: 1.5 million	
Municipalities served	Gas distribution: 222 Electricity distribution: 26 District heating: 16 Public lighting: 184	Aqueduct: 226 Sewage and purification: 227	Waste collection: 188
Citizens served	3.4 million	3.6 million	3.2 million

	Energy Services	Integrated water service	Waste management services
Volumes	Gas sold: 13.1 billion m ³ Electricity sold: 12.2 TWh	Water sold: 289.3 million m ³	Municipal waste treated: 2.2 million tons Waste treated: 6.9 million tons

CITIZENS AND MUNICIPALITIES SERVED IN LOCAL AREAS (REGULATED SERVICES)

Local area	Group Companies	Energy Services	Water services	Waste management services	At least one service
Bologna	Hera	822,000 (94%)	858,000 (98%)	767,000 (87%)	858,000 (98%)
Ferrara	Hera	287,000 (84%)	245,000 (72%)	130,000 (38%)	299,000 (88%)
Forlì-Cesena	Hera	323,000 (82%)	391,000 (100%)	213,000 (54%)	391,000 (100%)
Imola-Faenza	Hera	193,000 (76%)	254,000 (100%)	254,000 (100%)	254,000 (100%)
Modena	Hera	476,000 (68%)	468,000 (67%)	490,000 (70%)	490,000 (70%)
Padua	AcegasApsAmga	207,000 (22%)	297,000 (32%)	289,000 (31%)	358,000 (39%)
Pesaro-Urbino	Marche Multiservizi	240,000 (61%)	273,000 (69%)	262,000 (66%)	318,000 (80%)
Ravenna	Hera	236,000 (87%)	272,000 (100%)	272,000 (100%)	272,000 (100%)
Rimini	Hera	35,000 (10%)	335,000 (100%)	319,000 (95%)	335,000 (100%)
Trieste	AcegasApsAmga	216,000 (94%)	226,000 (99%)	199,000 (87%)	229,000 (100%)
Udine and Gorizia	AcegasApsAmga	390,000 (59%)	-	-	390,000 (59%)
Hera Group		3.4 million (64%), 226 municipalities	3.6 million (67%), 227 municipalities	3.2 million (59%), 188 municipalities	4.2 million, (78%), 311 municipalities

Number of municipalities, resident citizens and percentage with respect to the total number of residents in the province or local area (at 1 January 2022; source: ISTAT) in which Hera manages at least one energy service (gas, electricity or district heating distribution), water service (aqueduct, sewerage or purification) or waste management service (sorted waste collection, non-sorted waste collection and street sweeping). The Imola-Faenza area includes three municipalities in the province of Florence, in which Hera manages energy, water and waste management services. The Padua area includes one municipality in the province of Venice in which AcegasApsAmga manages water services. The Pesaro-Urbino area includes six municipalities in the province of Ancona where Marche Multiservizi manages waste management services through its subsidiary Marche Multiservizi Falconara and two municipalities in the province of Rimini.

Mission

Hera aims at being the best multi-utility in Italy for its customers, workforce and shareholders. It intends to achieve this by further developing an original corporate model capable of innovating and forging strong links with the areas served, while respecting the local environment.

For Hera, being the best is a source of pride and trust for:

- **Customers**, who receive quality services that meet their expectations, thanks to Hera's constant responsiveness;
- **Employees**, because the women and men who work for the company, with their skills, engagement and passion, are the foundation of its success;
- **Shareholders**, confident that the economic value of the company will continue to be generated, in full respect of the principles of social responsibility;

- **The local areas served**, because economic, social and environmental wealth represents the promise of a sustainable future;
- **Suppliers**, because they are key elements in the value chain and partners in growth.

Values

Integrity, a Group made up of fair and loyal people

Transparency, sincerity and clarity towards all stakeholders

Personal responsibility, committed towards the good of the company together

Consistency, doing what we say we will do.

Operational Principles

Sustainability and shared value: a company built to last, and to improve society and the environment for future generations

Service quality and excellence: focus on customers, will full coherence

Efficiency: making the most of available resources

Innovation and continuous improvement: a team that generates ideas and makes things better

Involvement and valorisation: sharing knowledge for improvement

Desire to choose: selecting the most useful solution for growth

The Company's Mission, Values and Operational Principles have been drawn up with the involvement of all Hera Group employees and approved by the Board of Directors of Hera Spa. They can be found, set out in full, on the Group's website, on the company's intranet and in its Code of Ethics, which is subject to review every three years and will be updated in 2022.

A "purpose" included in the Articles of Association

On 28 April 2021, the Shareholders Meeting approved the inclusion in the Articles of Association of Hera, one of the first companies to do so in Italy, of the **concept of "purpose", with a focus on creating shared value**. More specifically, an additional paragraph was inserted in Article 3 to explain the Group's **corporate purpose**, i.e. the objectives it aims to achieve in carrying out its business activities, and thus affirm its **commitment to sustainability**, which has characterised it since its establishment.

The new paragraph reads as follows: "The Company's business model aims at creating long-term value for its shareholders, by creating a value that is shared with its stakeholders. For this purpose, the Company organises and carries out its business activities also in order to promote social equity and contribute to achieving carbon neutrality, the regeneration of resources and the resilience of the system of services managed, for the benefit of its customers, the local ecosystem and future generations (Hera for the Planet, People and Prosperity)".

The updated Articles of Association, in line with the new Corporate Governance Code of Borsa Italiana and best practices at European level, further strengthen the Hera Group's commitment to the **energy transition** and the **circular economy**, through **innovation** and **digitalisation**, as well as to promoting **social equity**.

Major recognitions in 2022

The Hera Group's path of growth can also be traced through the awards received by the company. The most important recent recognitions include:

- **Dow Jones Sustainability Index (DJSI)**: Hera is ranked as the world's leading multi-utility for Environmental, Social and Governance (ESG) factors by S&P Global, which each year selects the companies to be included in the Dow Jones Sustainability Index. For the third consecutive year, Hera was awarded the Gold Class by S&P Global;
- Hera is among the best companies rated internationally by S&P **Global Ratings** (ESG Evaluation);
- **Inclusion in Bloomberg's MIB ESG index**: for the fourth consecutive year, Hera is part of the international index that evaluates outstanding companies for their policies on gender equality, diversity and inclusion;
- **Top Utility 2023**: first place in the "Training" category of the 11th annual Top Utility Awards;

- **Integrated Governance Index 2022:** Hera ranks first among Italian companies for fully and consciously integrating sustainability policies into its business strategies;
- Hera was included among the world's best companies in **Refinitiv's Diversity & Inclusion Index**;
- **Top Employers 2023** award (among the top three companies in Italy, out of 1,600 analysed) for Hera's strategy of putting people at the centre of welfare, training and diversity, promoting work agility and digitalisation.

1.02 The Hera Group for the Planet, People and Prosperity

Putting the figures in relation to the world

Planet, People and Prosperity: the world that Hera wishes to “give” to its numbers is made up of these three “P”s, which are projected towards the horizon its business as the very reason for its existence. This is why they are not simply letters.

Each of these “P”s, in other words, identifies a sphere that becomes part of a dynamic and circular relationship with the Group, representing at the same time a goal and a tool, an objective – in other words – whose progressive achievement serves the company itself.

Precisely by taking care of the planet, protecting its stability, regeneration and biodiversity, Hera can in fact encourage the rebalanced use of the natural resources on which the very services it provides depend and, when possible, their regeneration.

And precisely by caring about people – and thus promoting their rights, dignity, knowledge and perspectives – the Group can consolidate a motivated stakeholder base, that is also an active part of this new balance.

Lastly, by contributing to the prosperity, fairness and harmony of the system in which it operates, Hera can look with confidence towards a socio-economic context that is favourable to its own growth and the development of its businesses in the medium and long term, with a view to creating shared value.

Already at the heart of the agenda of the G20 chaired by Italy in 2021, the requests underlying “planet, people and prosperity” well reflect the **demands that have emerged globally from crises of various kinds**, which have definitively dismissed the possibility of planning society's well-being within watertight compartments. They also provide a comprehensive summary of the value-related horizon common to the most significant new business and development models that are currently being developed.

These are important cornerstones, which focus on the central role played by stakeholder value and on the driving role of the company's social purpose. As such, **Hera has largely anticipated** these issues, and is now able to include under these three “P”s the many results achieved over the years, the historical evolution of its **approach to sustainability**, its **mission** and, ultimately, its very **purpose**, which in 2021 became an integral part of the company's Articles of Association.

The **balanced scorecard system**, which has been positively guiding the actions and goals of the entire management team for sixteen years now, and the **Code of Ethics**, are also part of this framework. Introduced in 2007 and updated every three years, on the occasion of the fifth revision, carried out in 2022 and one of the most participatory in its history, the Code now sees the corporate purpose extend across Group activities. New topics have been included and others strengthened, also in light of the changing sensitivities due to the major changes in the external scenario over the last three years. Since the purpose of this document is to affirm and update the strategic and cultural outlook with which Hera's **Business plan** is drawn up every year, it is therefore no coincidence that the Plan to 2026 also outlines a wide range of actions for the energy transition, the circular economy and technological evolution, with concrete and innovative projects that can make full use of the funding opportunities of the National Recovery and Resilience Plan (NRRP).

Taken as a whole, these elements provide the framework within which Hera, for some time now, has been making **specific public commitments** in various fields, finding itself already concretely on the **road to climate neutrality by 2050 mapped out by the European Union**. What's more, the Group's operations are fully in line with the transition represented by the **sustainable development goals that**

the United Nations Agenda sets for 2030. Seven of these, in particular, involve planning and business management, but Hera also contributes – more indirectly – to four additional targets.

All of this ranges from reducing climate-changing emissions to promoting renewable energies, without forgetting the sustainable use of water resources, the development of a circular economy, recycling plastics, commitments on human rights and diversity and inclusion. These are all quite different challenges, united however by the common thread of a commitment that runs through them all: leaving a mark, not a footprint.

Reporting the shared value generated by Hera through its businesses – introduced in 2016 to mark a change of pace in the **integration of sustainability in the Group's strategy** and made even more relevant by the continuous occurrence of systemic crises – thus fits into a broader perspective, as is described below in the paragraph "Alongside the protagonists of change". The very mechanism by which shared value is created, after all, is as essential as it is delicate, and therefore needs to be shared by all players involved.

And so, keeping our focus on the drivers for creating shared value, which were updated in 2020, this report also provides an account of the history of the **stakeholder company** that Hera has never ceased to be, further confirming its business model, based on values and operating principles that the sixth and most recent edition of the **Code of Ethics** brings together in a mature way. What emerges is a heritage made up of assets but also relationships, both of which are fundamental for overcoming the many challenges of a transition that will continue to make sense to the exact extent that it can prove its own humanity and fairness.

A number of recognitions, in this sense, confirm the correct path taken by the Group, the first Italian multi-utility to be included in the Dow Jones Sustainability Index (DJSI), one of the world's most authoritative stock market indices assessing the social responsibility of listed companies, which ranked Hera as the world's best multi-utility in 2022 for ESG (environment, social, governance) factors, maintaining the excellent score achieved in 2021.

How we do what must be done

In order to achieve the many targets implied by the three "P"s, Hera commits all its energies to enhancing the economic, social and environmental impact of the primary services it provides, following an approach that combines the positive effects produced by stakeholder relations with those generated by creating shared value. For this reason, Hera constantly analyses the external context and continues to map the shifting links between the "Global Agenda", European objectives and the company's own strategy, all of which are fundamental for identifying the most effective guidelines on which to focus ideas, investments, people and actions.

All this takes place while moving towards a change that the Group pursues in full consistency with the European principles of the **Just Transition**, that is, recognising people as the vital link between development, essential to the future of the company, and sustainability, essential to the company of the future. Hera is, moreover, well ahead of the European guidelines and has always strongly focused on a real philosophy of inclusion, which embraces every type of stakeholder and involves them in a twofold strategy: involving them in distributing the value created and, at the same time, in creating the value to be distributed. This value, most importantly, is enriched with new aspects year after year, which are not solely financial (however important this may be) and whose intangible capital represented by "hard" and "soft" skills is becoming increasingly important. This is because the often disruptive nature of the changes we need to address continues to require, alongside at times new skills, an increasingly fresh and original interpretation of the events, which we believe should be shared and built with everyone.

Planet

All drivers of change with which Hera creates shared value act in the direct interests of an increasingly hot planet, whose climate balances are being eroded and whose natural resources are being compromised by development models that are slow to move away from the linear paradigm. For Hera, this translates into a multifaceted commitment.

It includes, for example, the many actions taken by the Group aimed at "**pursuing carbon neutrality**" throughout its value chains, with actions ranging from promoting energy efficiency to the energy transition and renewable energy.

Hera is also committed to “**regenerating resources and closing the circle**”, by getting all businesses managed involved in protecting and regenerating the planet’s natural capital and creating partnerships aimed at increasing the circularity rate of the broader socio-economic system.

Hera also works towards “**enabling resilience and innovating**”. Here, the objective is to encourage the adaptation of the areas served through an increasingly smart and resilient infrastructure, to guarantee continuity and sustainability in essential supplies, and also to promote the ongoing consistency of the innovation process, which especially in digital terms is accompanied by adequate governance of their economic, environmental and social impacts.

People

Hera also believes in the core value of people and uses its range of action to try to promote an active role for individuals, both inside and outside the company. Part of its business activities, linked to **economic growth and social inclusion**, as well as to job creation and development of **new skills**, directly contributes to creating Shared-value Ebitda, giving the driver of change dedicated to “Local areas (and businesses)” additional content.

Hera’s commitment to managing relations with two particular categories is fundamental: its **workforce** and **suppliers**. Crucial players in meeting important challenges, these stakeholders are both involved by the Group in numerous initiatives aimed at promoting, on the one hand, health, safety and enhanced diversity, and on the other, transparency, quality and sustainability in partner companies, public tenders and contracts. In this regard, a decisive role is played by company welfare and even more by training, with which Hera intends to rise to a challenge that concerns not only the younger generations but also reskilling previous ones, whose jobs are rapidly evolving.

In addition to these categories, customers must be mentioned, whom Hera seeks to involve in many fundamental initiatives on recycling, saving and efficiently using resources, as part of a society in which the notion of citizenship is evolving towards the principle of “doing things together”.

Prosperity

Lastly, all the impact areas involved in **creating shared value**, and the entire system of relations with stakeholders go beyond a rationale of profit only for the few, and contribute in various ways to fair and widespread prosperity, concerning the various parties that interact with the company and also the interests of future generations. In other words, Hera is committed to the lasting, balanced and sustainable growth of its businesses and the socio-economic fabric that surrounds them, consolidating year after year a governance model that in 2022 alone transferred **wealth coming to 1,674 million euro** to its stakeholders.

Our commitment to the Just Transition

Guided by the principles of Planet, People and Prosperity that oriented the 2021 G20, chaired by Italy, Hera embraces an integrated approach which has always guided the Group’s business model and sustainable development, and has become the distinctive cultural trait on which the European Union has recently based its commitment to carbon neutrality.

Strategy

In full agreement with Brussels, therefore, the Hera Group also strives towards a change in the system that combines its chances of success with the harmony with which this change is pursued. The Hera Group believes that no step forward, especially if it involves ground-breaking technological innovations, can ever be lasting and fruitful unless it is shared by everyone. This is fully reflected in the many initiatives reported in the pages of this report and with which Hera intends to make a concrete contribution to the EU objective of the “Just Transition”, i.e. a transition capable of merging climate action and social inclusion, an EU objective that was formalised among the principles to be followed in the sixth edition of the Code of Ethics, approved by the Board of Directors in February 2023.

In planning and reporting on these initiatives, in particular, Hera therefore follows its own **Code of Ethics**, and recognises itself operationally in the framework defined by the Grantham Research Institute on Climate Change and the Environment and the London School of Economics and Political Science. This document guides investors and companies through all the factors to be monitored in the interest of a transition that truly has a human orientation.

Workers

In this context, the Group’s workers play an essential role, and it is no coincidence that Hera regards its people as the essential cornerstone of its Code of Ethics, a document which, moreover, was drafted by

listening to people within the company. This attention to human resources is also reflected by the periodic climate surveys that involve the entire company staff, whose results represent the basis for implementing new improvements.

The Group continues to guarantee a high level of employment stability, without the need to use social shock absorbers, with 96.6% of workers having permanent contracts, and a flexible corporate welfare system tailored to the needs and choices of each individual worker. And that is not all: given that a transition is first and foremost a human undertaking, since 2006 Hera has linked its bonus systems to sustainability goals and, since 2016, to creating shared value, developing new skills and continuing to invest in safety, not to mention its commitment to consolidating gender balance, and diversity and inclusion policies. Central to this is reskilling, which Hera works on in the awareness that the many professions involved in its various businesses are and will be subject to an evolution that must be anticipated and governed, including by seizing and enhancing the opportunities arising from the presence of both experienced and new workers in the company. For example, the increasing digitalisation of activities and processes already uses the approach to Corporate Digital Responsibility as a benchmark, to reduce environmental and social footprints and to maximise the benefits for all stakeholders involved.

Suppliers

In line with its Code of Ethics, Hera is committed to ensuring that its suppliers work in an absolutely legal manner, guaranteeing full protection of human rights and the environment, and according to a strategy aimed at the sustainable development of the areas served, to which - not by chance - 76% of the total wealth produced by the Group is transferred. The Group also acts as a partner for growth that empowers its suppliers, giving them access to knowledge and technologies that can improve their performance and consolidate their future prospects. Hera also pursues stable working conditions in its contracts, with employment protection clauses that protect the incomes of the families involved. Finally, suppliers are specifically monitored to check, encourage and reward their results in terms of corporate social responsibility. They are a key link in the value chain along which Hera seeks to reduce climate-changing emissions and promote the circular economy.

Local communities

The Group's focus on teamwork also permeates its broader relationship with local communities. Hera contributes to their transition with its services, continuing to invest in innovating infrastructural assets that will be increasingly decisive in meeting the challenges of the coming years, especially with regard to climate change. The Group also involves the various local players in many projects dedicated to the environment, social inclusion and digitalisation, thus strengthening the overall resilience of its socio-economic system, in line with the United Nations' 17th Sustainable Development Goal on partnerships. These projects are detailed in the sustainability report and come alongside the HeraLABs, real communications tools aimed at involving stakeholders in the communities served in defining new improvements.

Customers

Hera is committed to ensuring that its supplies are also accessible to the more vulnerable social categories, with safeguards on top of those provided for by law and specific protocols set up in conjunction with local administrations to avoid arrears and disconnections, even in a context of high energy prices. Hera strives to turn all its customers into protagonists of the transition, encouraging responsible and informed consumption behaviour and orienting households and companies towards energy-efficient, renewable energy sources and the circular economy.

Policies and partnerships

In cooperation with its own trade association, Utilitalia, and also with the academic context, Hera is committed to increasing the quality of public debate on transition issues. The Group contributes with its concrete experience and scientific evidence, and makes its know-how available to legislators, so that they can develop regulatory frameworks that are increasingly suited to a transition that is not only environmentally effective, but also well-balanced, inclusive and fair.

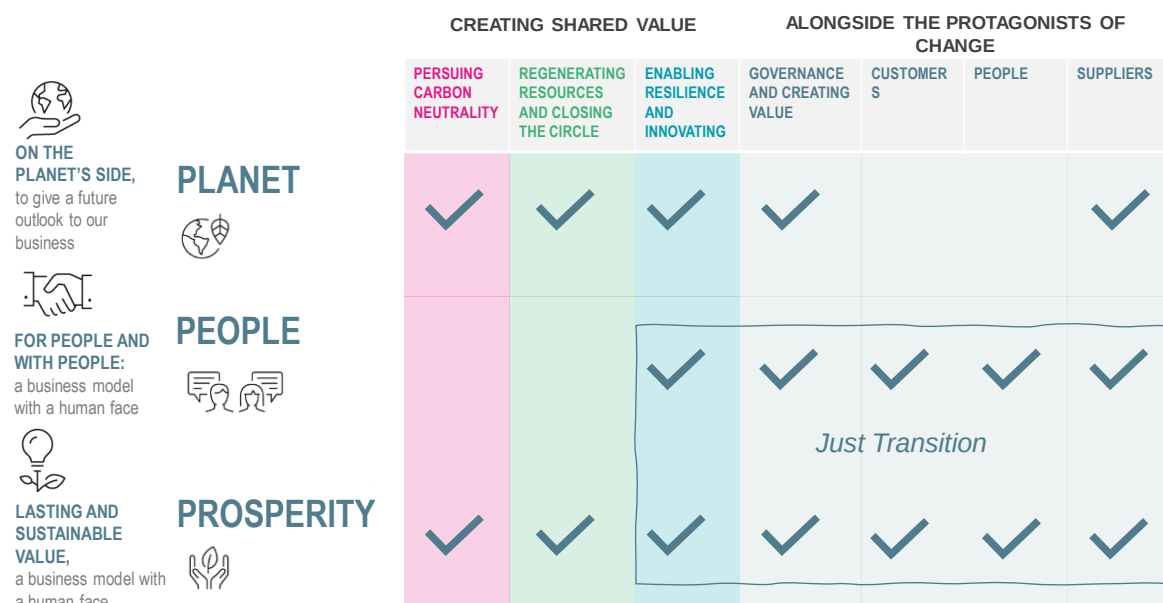
Transparency and accountability

Implicitly present in previous editions of this non-financial statement, as of this year reporting on aspects of the Just Transition is highlighted and discussed as such. In particular, this encompasses the entire paragraph "Alongside the protagonists of change", as well as the discussion of some of the impact areas of the drivers for creating shared value dedicated to "Enabling resilience and innovating", with particular reference to job creation, the development of new skills and social inclusion. What emerges is a narrative that runs through, more or less under the surface, most of this report, appearing not as an additional

Sustainable strategy and shared value	Pursuing carbon neutrality	Regenerating resources and closing the circle	Enabling resilience and innovating
Governance and creating value	Customers	People	Suppliers

topic but as a cross-cutting key to interpretation, which – as shown in the diagram below – qualifies the overall commitment to transition made by the Hera Group.

HOW THE JUST TRANSITION TAKES SHAPE FOR HERA



Shared value

Objectives, performance and targets

What we said we would do	What we did	SDGs	Progress*
2,093 million euro "shared value" investments in 2022-2025 (65% of total investments).	489.5 million euro investments in 2022 alone (59.8% of total investments)	All**	●
55% of total Ebitda: Shared-value Ebitda at roughly 780 million euro by 2025 (+323 million euro compared to 2020).	670.3 million euro Shared-value Ebitda in 2022, or 51.8% of total Ebitda	All**	●

* ● Result achieved or in line with planning; ● Result with slight variance compared to planning; ● Result with significant variance compared to planning.

**this target cuts across all SDGs to which Hera contributes (4,5,6,7,8,9,11,12,13,14,17)

Hera's approach to shared value

For Hera, creating shared value is the result of all activities and projects that generate operating margins and respond to the priorities of the "Global Agenda", i.e. the **calls to action for change, moving**

towards sustainability as regards Hera's spheres of responsibility, indicated by policies at global, European, national and local level and by megatrends.

This definition of Creating shared value (CSV) is the result of a path, inspired by Porter and Kramer's indications set out in the well-known article "The big idea: Creating shared value", which began in 2016 and led to the identification of Hera's approach to Creating shared value as **a new source of direction for future strategy**, in line with the goals on the UN's 2030 Agenda.

This approach also led to a **renewed version of the Sustainability Report**, enriched with new views and perspectives, including, since 2016, a quantification of both **Shared-value Ebitda generated by "Shared-value" activities and projects (CSV Ebitda)** and the investments made in this area.

The calculation applied to overall Ebitda represents the portion of industrial income attributable to activities that **meet the need for change in the direction of sustainability** indicated by the "Global Agenda" and summarised in a reference framework: the Hera Group's CSV framework. These activities thus produce value for the company while responding to the problems and challenges of the communities in which Hera operates.

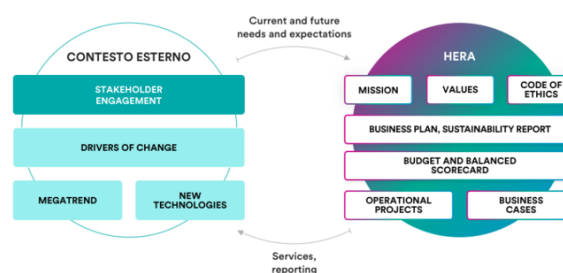
The method for calculating CSV Ebitda requires **specific calculation criteria**. Through an analysis of all the activities managed by the Hera Group, the ones that are consistent with the drivers and impact areas that make up the CSV framework are identified and the related Ebitda produced is calculated. As of 2019, CSV Ebitda has been **audited by an external firm**. For more information on the method used, see the specific report available at bs.gruppohera.it and the related auditor's verification statement.

HERA'S APPROACH TO CORPORATE SOCIAL RESPONSIBILITY (CSR) AND SUSTAINABILITY: PREVIOUS ELEMENTS CONFIRMED AND NEW ONES INTRODUCED

From an approach that integrates CSR in our strategy and business activities



...to an explicit connection between the «Global Agenda» priorities and business



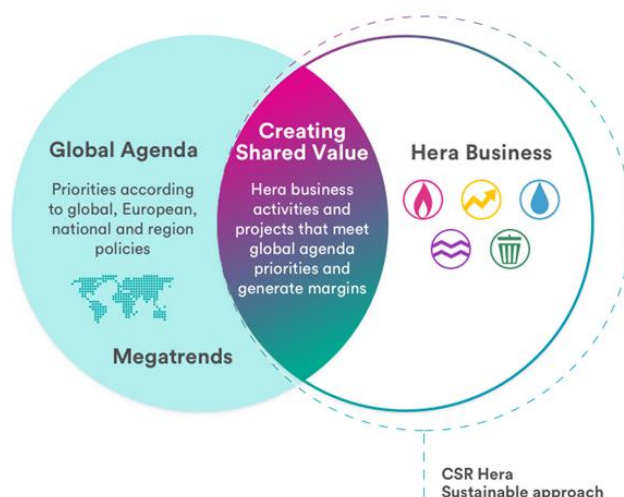
The relationship between Corporate social responsibility (CSR) and Creating shared value (CSV) according to Hera

Since 2016, Hera's approach to CSR and sustainability has been enhanced by integrating a CSV perspective into the elements of sustainability that have been part of its strategy and business activities since the Group's establishment.

Thus, as of 2016, the Hera Group's approach to sustainability **integrates CSR with the CSV perspective**, resulting in activities and projects that:

- improve their own environmental and social sustainability performance, mainly related to the businesses they manage (including, but not limited to, legislation and sector regulations) (CSR);
- generate operational margins while responding to the priorities of the "Global Agenda" (CSV).

This latter point is a major development in the Hera Group's original approach to CSR, which will **increase the shared value generated** by overlapping business and "Global Agenda" priorities.



How we identify "Global Agenda" priorities and CSV areas

The needs for change in the direction of sustainability set out in the "Global Agenda" represent calls to action and, at the same time, **challenges and opportunities** for the Hera Group. Understanding this scenario is essential not only to make the Group's sustainability reporting more up-to-date, but above all to **orient its strategy and operational processes towards addressing change, thus contributing to the Company's competitiveness**.

The CSV framework is periodically checked and updated based on new and emerging global challenges. The most recent review that brought the framework to its current state took place in 2020, while in 2022 the analysis of the "Global Agenda" and the needs for change included in it continued with an in-depth examination of global, European, national and local policies.

During 2022, additional policies were added to the previous set of approximately 100 analysed as of 2016, thus increasing and enriching the sustainability scenario. The main elements identified during the analysis are as follows:

- **climate neutrality** and **energy transition**, boosted by the REPowerEU plan, COM (2022) 230, and the European Solar Energy Strategy, COM (2022) 221;
- **the circular economy** and **eco-friendly production** promoted by the 1st Circular Economy Package, and in particular by the European Strategy on Sustainable Textiles, COM (2022) 141, and the proposal for a regulation on eco-design, COM (2022) 142;
- improved **management of water resources**, as is being pursued at European level with the revision of the Urban Waste Water Treatment Directive COM (2022) 541;
- reducing **soil pollution** and improving **biodiversity**, boosted by the negotiations for a global framework for protecting and restoring global biodiversity, COP 15;
- the **digital transformation** pursued through the new European Declaration on Digital Rights and Principles, COM (2022) 27, which will guide the countries of the Union towards a digitised future that gives due attention to social inclusiveness and sustainability;
- **economic development** that is also **inclusive** and leaves no one behind, as reiterated by the Council Recommendation on ensuring a fair transition to climate neutrality (Council Recommendation 2021/0421), one of the cornerstones for the just transition.

The CSV framework is made up of three drivers of change and nine impact areas, which in turn are linked to the 11 UN Agenda goals to which the Group contributes, seven of which are identified as priorities, and on which most of this report's 55 "What we will do" (future goals) are focused.

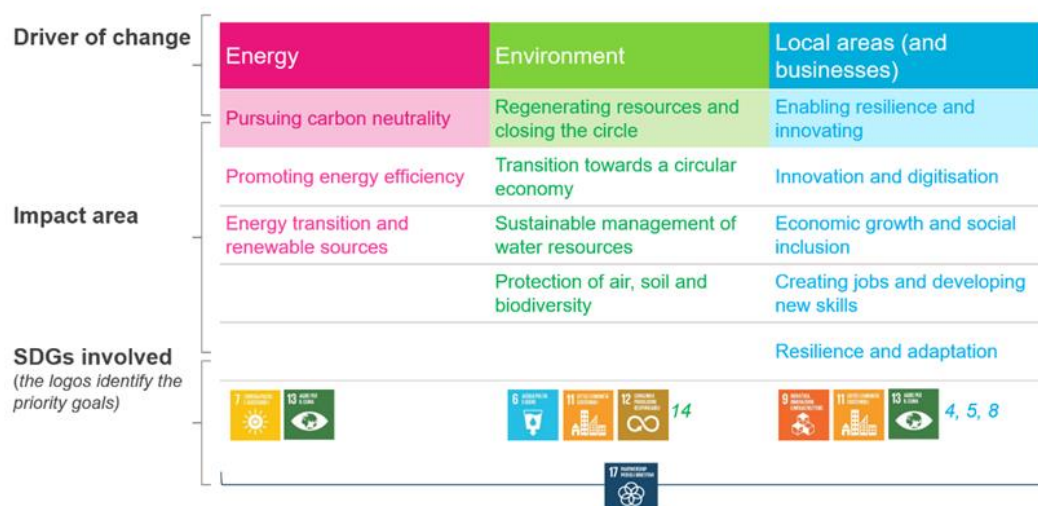
The seven **priority SDGs** for the Hera Group are goals that are more **directly related to its business activities** and on which the Group has a **direct impact**. The priority SDGs are as follows: Goal 6, clean water and sanitation; Goal 7, clean and affordable energy; Goal 9, business, innovation and infrastructure; Goal 11, sustainable cities and communities; Goal 12, responsible consumption and

Sustainable strategy and shared value	Pursuing carbon neutrality	Regenerating resources and closing the circle	Enabling resilience and innovating
Governance and creating value	Customers	People	Suppliers

production; Goal 13, combating climate change; and Goal 17, partnerships for the goals. Goal 17 is one of the priorities, because **partnerships are indispensable** to achieve the entire set of important sustainability goals.

The **other four SDGs having significance** for the Hera Group are goals on which the Group has an **indirect impact through internal processes** (e.g. human resources management) or **business activities** (e.g. protecting more vulnerable users), and are as follows: Goal 4, quality education; Goal 5, gender equality; Goal 8, decent work and economic growth; and Goal 14, life under water.

AREAS IN WHICH HERA CREATES SHARED VALUE (CSV FRAMEWORK): DRIVERS FOR CHANGE, IMPACT AREAS AND UN 2030 AGENDA GOALS OF INTEREST TO HERA

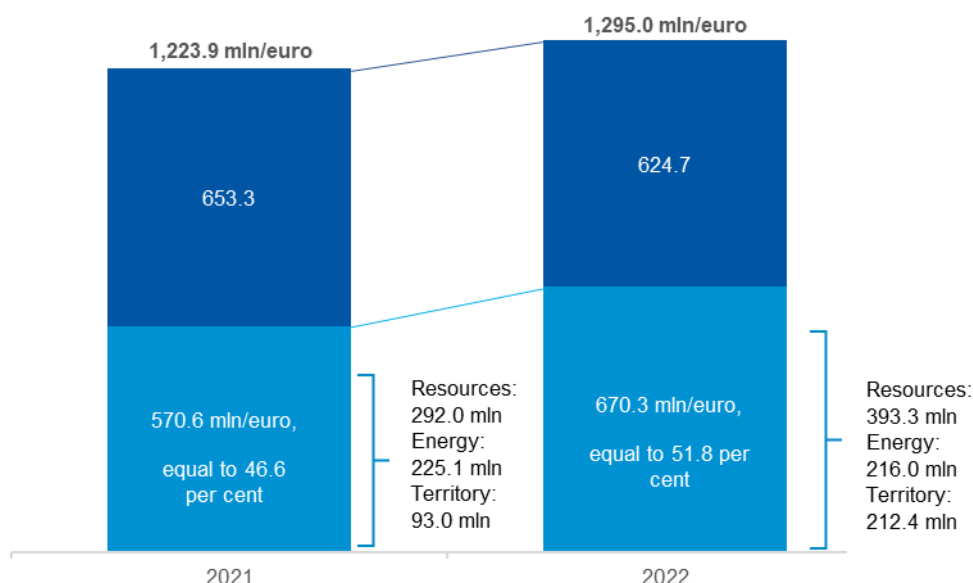


Shared-value Ebitda (CSV Ebitda)

Shared-value Ebitda for 2022 came to 670.3 million euro (51.8% of the Group's total Ebitda), up 17% compared to 2021. This result respects the path set out by the Business plan, designed for CSV Ebitda to reach 62% in 2026 and 70% in 2030.

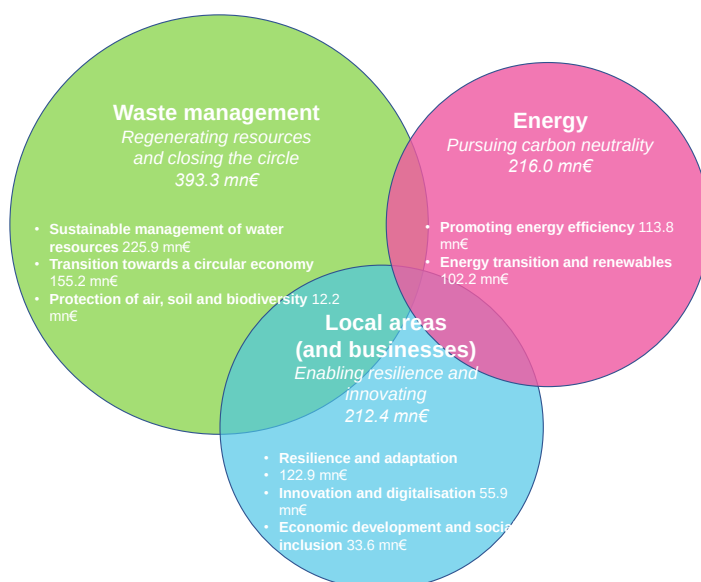
The 17% increase in Shared-value Ebitda came alongside a 6% increase in the Group's overall Ebitda (which came to 1,295.0 million euro) compared to the previous year. It is thus clear that the growth in Ebitda coming from business activities that create shared value is greater than that coming from business activities that do not.

SHARED-VALUE EBITDA VS. OVERALL EBITDA



The amount of CSV Ebitda shown in this diagram does not correspond to the sum of the individual drivers, since some activities fall under more than one driver.

The most significant contribution came from activities and projects related to the Environment driver, aimed at “Regenerating resources and closing the circle” (393.3 million euro), followed by those related to the Energy driver, aiming at “Pursuing carbon neutrality” (roughly 216.0 million euro). Projects and activities falling under the Local Areas (and Businesses) “Enabling resilience and innovating” driver contributed with 212.4 million euro in 2022.



The total Shared-value Ebitda does not correspond to the sum of the individual drivers, since some activities fall under more than one driver.

As is clear from this graph, the Shared-value Ebitda generated in 2022 mainly resulted from activities and projects that respond to the call to action of the Global Agenda for the Environment driver, aimed at “**Regenerating resources and closing the circle**” (approximately 59% of total CSV Ebitda). As regards the impact area, the Group’s important role in creating value can be seen in its activities related to the **sustainable management of water resources** (57%) and **transition to a circular economy** (40%). As

regards **air and soil protection** (3%), the most relevant portion of CSV Ebitda came from the district heating service (regarding heat generated by cogeneration and energy recovery from the combustion of municipal and industrial waste).

Activities in the areas falling under pursuing carbon neutrality, instead, accounted for 31% of Shared-value Ebitda, of which 54% came from activities related to initiatives aimed at **promoting energy efficiency**, through (i) commercial offers to energy customers that incorporate services and tools to reduce consumption, (ii) energy efficiency services for public administrations, businesses and condominiums, (iii) industrial cogeneration, (iv) progressive energy efficiency in public lighting services (in particular, increasing the number of municipalities where only electricity from renewable sources is used, where electricity consumption per inhabitant equivalent is less than 50 kWh/inhabitant and where all managed lighting points are LED). Of this Ebitda, 46% was related to the **energy transition and renewables**, which included margins from: (i) sales of renewable electricity with a Guarantee of Origin (GO) and methane gas with CO₂ emissions offsetting, (ii) electricity distribution (activity eligible and aligned to the EU Taxonomy), (iii) district heating (for the amount of heat generated from geothermal sources), (iv) renewable electricity generated from biogas from the anaerobic digestion of waste and landfills, and (v) biomethane production.

Lastly, the Hera Group created roughly 10% of its Shared-value Ebitda through activities in the areas of **enabling resilience and innovating**. In the **innovation and digitalisation** area (84%), this Ebitda came both from the sale of telecommunications services, through the company Acantho, and through the development of projects and the implementation of investments aimed at the digitalisation of operating processes, services offered and cities. In the area of **“economic growth and social inclusion”** (16%), CSV Ebitda was achieved through contracts and partnerships with social cooperatives resulting in the employment of disadvantaged people.

In order to highlight the Group's commitment to mitigating the risks involved in adaptation to climate change, and to the resilience of the services managed and consequently of the area served, as of this year, the amount of Shared-value Ebitda deriving from **resilience and adaptation** activities has been valued in the Local areas (and businesses) driver. More specifically, the following has been reported in the Local areas (and businesses) driver:

- the amount of aqueduct Ebitda determined by the percentage of residents served who are “covered” by water safety management plans; this amount is also reported under the environment driver, in the sustainable water resource management impact area;
- the amount of Ebitda determined on the basis of the return on investments for the electricity grid resilience plan, already considered under the energy driver, in the energy transition and renewables impact area.

The graph representing the CSV drivers and their respective impact areas shows some **overlaps** that are mainly caused by activities which, by their very nature, may **respond to more than one call to action on the Global Agenda**, as mentioned in the case of the “resilience and adaptation” impact area discussed above, or by the **method used for accounting** for the amount of CSV Ebitda that considers marginality net of the amount responding to another impact area. The main activities that explain these overlaps are:

- District heating, an activity responding to the calls to action related to the impact areas “air, soil and biodiversity protection” (driver Environment) and “energy transition and renewables” (Energy driver);
- Implementation of water security management plans, an activity responding to the calls to action related to the impact areas “sustainable management of water resources” (Environment driver) and “resilience and adaptation” (Local areas (and businesses) driver).
- Electricity grid resilience plan, an activity that responds to the calls to action related to the impact areas “energy transition and renewables” (Energy driver) and “resilience and adaptation” (Local areas (and businesses) driver).
- Bill instalments for customers facing hardship: the amount of CSV Ebitda relating to the “social inclusion” impact area (Local areas (and businesses) driver), calculated based on margins for gas, electricity and district heating sales, net of the amount already considered in the “energy transition and renewables” impact area (Energy driver).

Environmental services outsourced to social cooperatives: the amount of CSV Ebitda related to the “social inclusion” impact area (Local areas (and businesses) driver), calculated based on margins for urban cleanliness net of the amount already considered in the “transition towards a circular economy” impact area (Environment driver).

GROWTH IN CSV EBITDA IN 2022: +99.7 MILLION EURO (+17%) COMPARED TO 2021

CSV drivers	Impact area	Main 2022 results and changes compared to 2021
ENERGY Pursuing carbon neutrality: 210.4 million euro (-2.2 mn€ vs 2021)	Promoting energy efficiency: 113.7 million euro (+9.8 mn€ compared to 2021)	■ Increase in gas and electricity contracts with energy efficiency services and solutions (27%, vs 23% in 2021); ■ Increased volumes of energy efficiency activities for public administrations, condominiums and businesses; ■ Increase in municipalities where only electricity from renewable sources is used for public lighting (46.4%, vs 43.8% in 2021).
	Energy transition and renewables: 96.6 million euro (-12.0 mn€ vs 2021)	■ Reduced margins from sales of electricity and gas on the free market; ■ Increased volumes of gas sold with CO₂ offsetting (14.2%, vs 9.1% in 2021) ■ Reduced volumes of electricity from renewable energy sources (41.1% compared to 45.1% in 2021); ■ Increase in district heating service with geothermal heat production (15.9%, vs 13.6% in 2021).
	Transition to a circular economy: 155.2 million euro (+15.3 mn€ vs 2021)	■ Increased margins from the sale of recycled plastic products by Aliplast; ■ Increased volumes of industrial waste sent for material and energy recovery, partially due to the acquisitions of Vallortigara and Recycla (48.6%); ■ Extension of agreements for reusing reusable wastewater resulting in an increase in potential volumes (7.3%, vs 6.0% in 2021).
ENVIRONMENT Regenerating resources and closing the circle 393.3 million euro (+101.3 mn€ vs 2021)	Sustainable management of water resources: 225.9 million euro (+84.8 mn€ vs 2021)	■ Technical closure of additional water safety management plans at water utilities (61.9% inhabitants covered by the plans, vs 22.6% in 2021);
	Protection of air, land, and biodiversity: 12.2 million euro (+1.2 mn€ vs 2021)	■ Increased margins from sales of thermal energy for district heating, partially due to an extension of the volumes sold.
LOCAL AREAS (AND BUSINESSES) Enabling resilience and innovating: 66.6 million euro (+0.6 mn€ vs 2021)	Economic growth and social inclusion: 10.7 million euro (+0.2 mn€ vs 2021)	■ Increase in the number of instalments requested by customers (+36% vs 2021) and of customers with at least one instalment (6.5%, vs 4.7% in 2021).
	Innovation and digitalisation: 55.9 million euro (+0.4 mn€ vs 2021)	■ Investment of 102.8 million euro in innovation in 2022; increase in electronic gas meters installed by the end of 2022 (87%, vs 78% in 2021); ■ Increased marginality of telecommunication and digitisation services provided by Acantho.

This table presents the data for CSV Ebitda consistent with the drivers and impact areas, net of elisions. All changes shown do not correspond to the changes deducible from the graphs above.

Shared-value Ebitda increases in the 2022-2026 business plan

The Group's 2022-2026 Business plan targets a 2026 Shared-value Ebitda amounting to 906 million euro, +59% compared to 2021 and accounting for approximately 62% of the Group's total Ebitda (70% in 2030).

The rise in Shared-value Ebitda over the period covered by the plan compared to 2021 (335 million euro, of which a minor amount due to M&As aimed at increasing shared value) is greater than the growth in overall Group margins (246 million euro) thanks to a significant contribution coming from increased activities in the CSV drivers: “pursuing carbon neutrality” (+64 million euro), “regenerating resources and closing the circle” (+249 million euro) and “enabling resilience and innovating” (+22 million euro).

CSV drivers

Main actions and goals

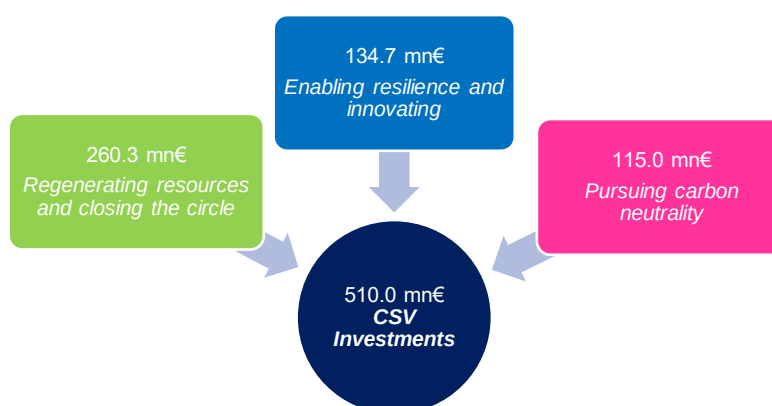
Pursuing carbon neutrality: +64 mn€	- Further increase in offers for gas and electricity customers with energy efficiency solutions (customers making use of such offers: 34.3% as of 2026); - Further development of the energy efficiency business (industrial cogeneration, heat management, etc.) for public administrations, businesses and condominiums; - Further improvement of the sustainability profile of public lighting. Progressive increase in municipalities in which: only electricity from renewable sources is used (57.8% by 2026); electricity consumption per inhabitant equivalent is less than 50 kWh/inhabitant (51.1% by 2026); all managed lighting points are LED (19.2% by 2026); - Increase in volumes of gas sold with CO₂ offsetting: 21% of total free market volumes by 2026; - Increase in volumes of electricity from renewable sources: 44% of total free market volumes by 2026; - Launching and increasing photovoltaic renewable electricity generation (over 90 MW, installed photovoltaic capacity by 2026) - Increased production of biomethane from biodigestion of organic waste (12 million cubic metres by 2026). - Increased sales of renewable energy technologies to Group customers (2.3 thousand photovoltaic panels sold by 2026)
	- Progressive increase of users served in areas with a Water Safety Plan: 90.2% by 2026; - Increased volumes of waste sent for energy and material recovery at the HASI (49% to 2026), Vallortigara (32% to 2026), Recycla (74% to 2026), ACR (49% to 2026) and SEA (20% to 2026) plants; - Development of Aliplast's business (+102% recycled plastic sold to 2026 compared to 2017); - Completion of the process of upgrading agglomerations >2,000 p.e. in the areas served in line with EU directives (100% agglomerations >2,000 p.e. upgraded by 2025); - Development of district heating and increase in the volume served (+7% to 2026 compared to 2021); - Progressive increase of reusable wastewater volumes compared to total volumes treated (about 13% to 2026). - Launch of remediation activities and increase in the number of urban and industrial site clean-ups
Regenerating resources and closing the circle: +249 mn€	- Innovation and digitalisation: investments in digital transformation to optimise operational processes and management; progressive rollout of electronic gas meters (86% by 2026); - Innovation and digitalisation: development of Acantho's activities (telecommunications and connectivity).
Enabling resilience and innovating: +22 mn€	

Shared-value investments [203-1]

In 2022, the Hera Group allocated approximately **510.0 million euro** (+8% compared to 2021) to investments and corporate acquisitions aimed at creating shared value. This amount represents **62.3% of the total investments** made by the Hera Group, net of capital grants and including operating and financial investments (amounting to 688.7 million euro) and corporate acquisitions (amounting to 131.5 million euro). Only considering operating and financial investments, the amount of CSV investments would come to 69.3%.

Corporate acquisitions were considered under the creation of shared value based on the nature of the business involved and specific sustainability indicators relating to the individual companies acquired.

The graph below shows these investments and corporate acquisitions broken down by driver of change.



Part of the shared-value investments related to the driver “Regenerating resources and closing the circle”, and in particular part of the investments related to the integrated water service, are also related to the driver “Enabling resilience and innovating”, since they are aimed at improving the resilience of this service.

In 2022, the main investments for “**Pursuing carbon neutrality**” concerned:

- the acquisition of new energy customers (approximately 31.6 million euro) – “Energy transition and renewables” impact area;
- interventions to renew public lighting systems and increase energy efficiency in public administration buildings, as well as energy efficiency interventions for condominiums and businesses, including the construction of industrial cogeneration plants. These interventions were carried out by the companies Hera Luce, Hera Servizi Energia and AcegasApsAmga Servizi Energetici (approximately 21.6 million euro) - impact area “Promoting energy efficiency”;
- investments to improve the performance of the Group’s composting and biodigestion plants and to build new plants (approximately 12.4 million euro) - “Energy transition and renewables” impact area;
- energy efficiency investments related to constructing new connections and junctures, new cabins, new grids and other grid-related energy efficiency projects (approximately 10.3 million euro) - “Promoting energy efficiency” impact area.

With regard to the driver “**Regenerating resources and closing the circle**”, the main investments concerned:

- maintenance and rehabilitation work on distribution networks in the aqueduct service (approximately 92.0 million euro) - impact area “Sustainable management of water resources”;
- upgrading the sewerage and purification sector to ensure higher water quality standards in both urban and rural areas (approximately 68.1 million euro) - impact area “Sustainable management of water resources”;
- investments for increased waste recovery and recycling, in Aliplast, Hasi and Herambiente selecting plants (approximately 31.9 million euro) - impact area “Transition to a circular economy”;
- investments in assets for the urban hygiene service, in particular for the purchase of new generation bins, bins and bells for sorted waste collection (29.6 million euro) - impact area “Transition to a circular economy”;
- investments to improve the efficiency of energy recovery from the Group’s waste-to-energy plants (approximately 21.4 million euro) - impact area “Transition to a circular economy”;
- interventions for enhancing the district heating service and for purchasing electric and low-impact vehicles (approximately 4.6 million euro) - impact area “Protection of air, land, and biodiversity”.

Lastly, under the driver “**Enabling resilience and innovating**”, investments were mainly aimed at:

- enabling the resilience of the Group’s water, electricity and gas networks with respect to physical risks such as hydro-geological instability and climate change (approximately 62.1 million euro) - “Resilience and adaptation” impact area. Note that these investments are only one component among those included in the Business plan and related to resilience in terms of business continuity, since they are only aimed at mitigating physical risks and/or those related to climate change. Part of these investments (amounting to 30.2 million euro) also fell under other impact areas, such as “Transition towards a circular economy”, “Sustainable management of water

resources" and "Protection of air, soil and biodiversity", since investments in resilience have effects across the board;

- promote a broader use of innovative technologies related to the energy transition, circular economy and digital transformation (approximately 102.8 million euro) - impact area "Innovation and digitalisation".

The investments aimed at creating shared value outlined in the 2022-2026 Business plan total roughly 2.9 billion euro (including the NRRP funds obtained), equivalent to 70% of total investments (taking into account financial investments and corporate acquisitions). The average annual investments in the 2022-2026 Business plan are approximately 59% higher than the average seen over the last three-year period (2019-2021). Approximately 1.5 billion will be invested in interventions associated with the driver "Regenerating resources and closing the circle"; interventions in the area of "Pursuing carbon neutrality", on the other hand, will come to approximately 740 million euro, while the remainder (approximately 690 million euro) will be related to investments for "Enabling resilience and innovating". Shared-value investments include projects financed by the National Recovery and Resilience Plan (NRRP) and linked to Mission 2, "Green Revolution and Ecological Transition" projects; the amount of contributions obtained from the NRRP to finance the projects proposed by the Group comes to approximately 135 million euro. The projects financed are listed below.

Projects financed with NRRP grants

M2.C1

- **Power to gas** at IDAR in Bologna
- **Rigid plastic recycling plant** in Modena
- **7 BioDriers** in the Padua area
- **Paper and cardboard selector plant** in Pesaro
- **Carbon fibre recovery plant** in Imola
- **Paper and plastic pre-selection plant** in Padua
- **Plastic and paper recovery plant** in Vicenza

M2.C2

- **Smart electricity grids** in the Trieste, Modena and Imola areas
- **Resilient electricity grid** in the Modena and Imola areas
- **Hyter electrolyser** in the Emilia region

M2.C3

- **Efficient geothermal DH** in Ferrara
- **Efficient DH** – Bologna interconnection
- **Efficient DH extension** – Forlì interconnection

M2.C4

- **Efficiency in water networks** in Trieste and Padua
- **Ezit tank** in Trieste

Integrating sustainability in the Group's strategy

In the 2022-2026 Business plan approved by the Hera Group, the strategic references of previous planning are confirmed, with the aim of continuing to create value for all stakeholders and remaining a solid reference point for the areas served. More specifically, this strategic framework is aimed at addressing the complexities found in the external context and orienting the Group's lines of action consistently with EU policies, as a response to the challenges that have been present in the utility sector for years: **ecological transition, innovation, cohesion and social development**.

The contribution of this Plan to the ecological transition lies in a promotion of the **energy transition**, to support the reduction of climate-changing emissions especially through initiatives aimed at developing electrical and gaseous renewables; **resilience**, to improve the reactivity of our assets and ensure service quality and continuity; and finally **regenerating**, to adopt circular models that can "close the circle" in our various businesses and reduce our footprints.

Moreover, the Hera Group's strategy will be developed thanks to a solid contribution coming from **innovation**, through the use of technology as an enabling factor for the digitalisation of our activities and infrastructures, to guarantee the quality, rapidity and efficiency of our services.

The industrial strategy described projects growth in **Group Ebitda** coming to 246 million euro by 2026 (compared to the 2021 figure), reaching **1,470 million euro**. this development will follow a **solid, balanced and sustainable path**, fuelled by both internal and external growth, consistent with Hera's history and its industrial evolution over the years. In addition, **investments coming to approximately 4.1 billion euro over these five years** have been planned. This amount is significantly higher (approximately +53%) than the average of the last five years and is also higher than the amount foreseen by the previous Business plan. These investments will be supported by more than 130 million euro in NRRP funding for tenders that have already been assigned, which will allow for an acceleration in interventions for the ecological transition in the areas served, demonstrating that the Group's strategy is fully in line with national and European policies on sustainability. The margins generated during the period covered by the Plan will make it possible to meet the significant financial commitment required in terms of investments, bringing the Net debt/Ebitda ratio back below the of 3 from 2025 onwards, thus confirming the Group's solidity.

Note that 70% of the Group's investments accumulated between 2022 and 2026 will **respond to the targets set by the UN's Global Agenda 2030**, while about 40% of its investments will go towards **actions to enhance the safety and resilience of the assets managed**, and over 30% will support the **promotion of digitisation and innovation**.

In order to concretely address its long-term objectives and better define its contribution to the pursuit of European policies and UN recommendations, the Group has been lengthening its outlook for some years now by defining a series of **industrial targets to 2030**. The main ones include the Group's carbon footprint target calculated according to the Science Based Target initiative, which aims to reduce carbon dioxide emissions into the atmosphere by 37% by 2030 (compared to 2019).

Other important objectives include those referring to the Group's commitment to the circular economy, with a 150% increase in the amount of plastic recycled by Aliplast (compared to 2017), an increase in the packaging recycling rate to over 80%, and the achievement of 18% of reused wastewater out of total reusable water.

As can be seen in the table below, **Hera's contribution in terms of the number of "What we will do..." (future goals)** contained in this report and consistent with its 2022-26 Business plan (taking into account the SDGs impacted by ten or more goals) preponderantly consists in seven goals: Clean and affordable energy; Decent work and economic growth; Business, innovation and infrastructure; Sustainable cities and communities; Responsible consumption and production; Fighting climate change; Partnership for the goals.

| Sustainable strategy and shared value | Pursuing carbon neutrality

| Regenerating resources and closing the circle

| Enabling resilience and innovating

| Governance and creating value

| Customers

| People

| Suppliers

“WHAT WE WILL DO...” AND THE GOALS ON THE UN'S 2030 AGENDA

	4	5	6	7	8	9	11	12	13	14	17
Shared value	2	2	2	2	2	2	2	2	2	2	2
Pursuing carbon neutrality				8	1	5	3	1	8		
Regenerating resources and closing the circle			7	2	5		7	6	1	4	4
Enabling resilience and innovating	1	1			4	2	2	2	1		2
Governance and creating value					2		1				1
Customers						2		1			
People	2				3	1					
Suppliers					4			3			
Total	5	3	9	12	21	12	15	15	12	6	9

Sustainability integrated into the management incentive system

The balanced scorecard approach enables us to assign “balanced” objectives to our management team in four areas (development, quality and corporate social responsibility, organisational integration and efficiency upgrading) and provides a methodology for defining strategy and turning it into daily activities and goals. The innovative aspect of this approach consists of considering the achievement of social and environmental sustainability goals as a condition for achieving economic and financial objectives over the medium and long term.

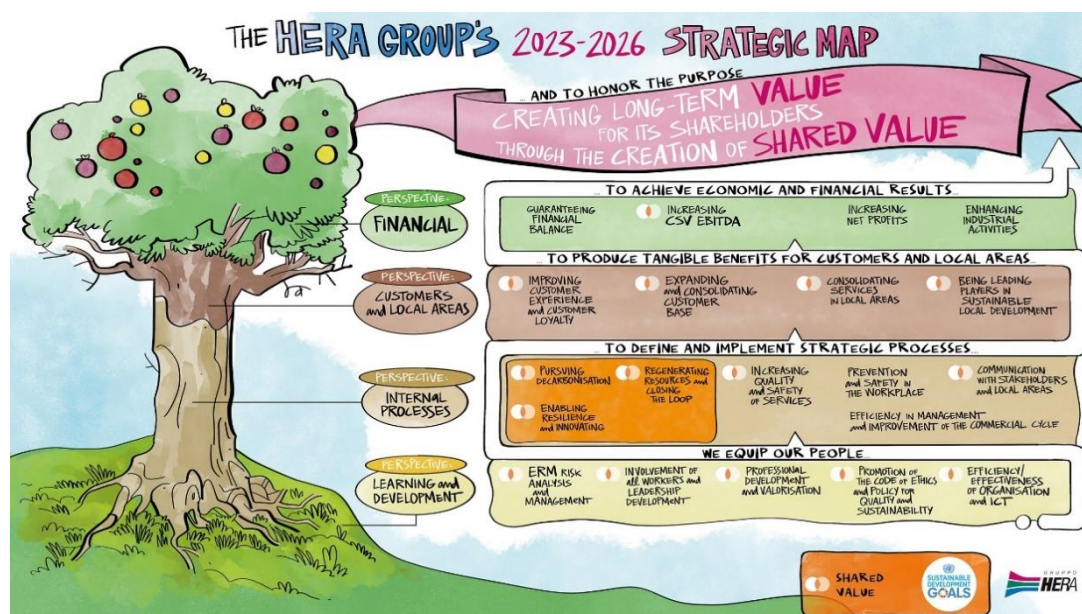
What the balanced scorecard is

The balanced scorecard is a strategic control system based on the link between strategy and the day-to-day management of the company. Devised in the early 1990s by the American academics R. Kaplan and D. Norton, it has also enjoyed considerable success among corporations in the USA and is now being taken up by major European players.

The **Strategic Map** is updated annually based on the contents of the business plan: it provides a **summary of the Group's strategic objectives** and its commitments to stakeholders, set forth in the Sustainability Report.

During the 2022 budget process, **33 priority projects** were defined to achieve the **26 strategic objectives** in the 2022-2025 Strategic Map. Of the 33 priority projects assigned during the year to the members of the Management Review Committee, 20 belonged to areas regarding **creating shared value** for the company, according to the CSV drivers defined in 2020. More specifically, six projects belonged to the area Regenerating resources and closing the circle, five projects to the area **pursuing decarbonisation**, five projects to the area Enabling resilience and innovating, while four projects were not linked to the three CSV drivers, but contributed indirectly to Creating shared value.

In December 2022, consistently with the priorities set out in the 2022-2026 Business plan, the Group's 2023-2026 Strategic Map was defined.



All projects contained in the Balanced Scorecard 2022 system were assigned to a manager and included in the incentive system involving the Groups managers and executives.

Each project identified:

- process and result indicators with targets consistent with the Group's budget and the corporate departments responsible for their achievement;
- the schedule of key actions to achieve the project targets in terms of time and cost.

The target projects identified were monitored on a quarterly basis by the Hera Spa Management Review Committee and in the individual budget units.

The definition of **target projects** and the related **quarterly monitoring system** of project variables are an important management tool that ensures:

- integration of several perspectives of corporate performance evaluation, in addition to traditional economic and financial measures;
- integration of business plan objectives into the daily work of managers and executives;
- implementation of a continuous improvement process on strategic objectives and the related projects and indicators;
- formalisation and tracking of the actions and the sub-goals required to achieve the targeted results;
- highlighting and analysis of critical situations and a definition of rapid corrective actions.

The commitments to stakeholders outlined in this report ("What we will do...") are contained in Hera's balanced scorecard. This guarantees consistency between the various tools used to manage and achieve the Group's strategy: Business plan, Sustainability Report, management reporting and incentive system.

Our commitment to sustainability in national and international networks

[2-28]

Hera's commitment to sustainability has become more concrete in recent years after joining important international networks.

The Hera Group was the second Italian company to become a member of the **Ellen MacArthur Foundation**, an international reference point for the circular economy, which aims to promote awareness of issues related to this issue, exchange experiences and launch partnership projects and collaborations in the field of research and development. 2022 was the fourth consecutive year in which progress was made in reporting on the **New Plastics Economy Global Commitment**, the Foundation's initiative to make the plastics sector more circular, which the Group joined in 2018 with challenging goals.

Sustainable strategy and shared value	Pursuing carbon neutrality	Regenerating resources and closing the circle	Enabling resilience and innovating
Governance and creating value	Customers	People	Suppliers

Furthermore, in August 2022, acting through Hasi, the Hera Group provided a submission to the third edition of “**Circulytics**”, a digital tool developed to measure circularity.

Hera is among the promoters of the **Circular Economy Network (CEN)**, a project established by the **Sustainable Development Foundation** and a group of companies and associations committed to the transition to a new circular economy model. Lastly, Hera is also a member of **ICSEP** (Italian Circular Economy Stakeholder Platform), a platform coordinated by ENEA that brings together Italy’s main players in the circular economy.

Since 2020, the Hera Group has been a member of the **Alliance for the Circular Economy**, a network made up of 12 Italian companies aimed at promoting circularity in business strategies. During 2022, the Group took part in drafting two in-depth documents relating to the principles required to implement a framework that favours circular procurement processes and environmental statements with circularity features.

The Hera Group has been a member of the Global Compact since 2004, and in July 2017 it was included in the **Global Compact Network Italia Foundation**, an Italian network established in 2013 which currently counts more than 500 members from both business and non-business contexts.

Once again as part of the Global Compact, Hera joined the **CEO Water Mandate**, the UN Global Compact initiative promoted to boost companies’ commitment to the sustainable management of water resources.

Hera is also a member of **Impronta Etica**, an organisation promoting corporate social responsibility, and is part of the **CsrEurope** network, and of **Sustainability Makers**, the Italian network of sustainability professionals.

Lastly, Hera supports the **Task Force on Climate-related Financial Disclosure (TCFD)** and is a member of **Valore D**.



The CEO Water Mandate



1.03 CSV and Sustainability KPIs

	2005	2020	2021	2022	2026	2030
Creating shared value						
Shared-value Ebitda (million euro)	-	455.1 ¹	570.6	670.3	906	-
Shared-value Ebitda (% of total Ebitda)	-	40.5% ¹	46.6%	51.8%	62%	70%
Shared value investments (million euro) ²	-	297.4	452.7	510.0	558 ³	-
Shared-value investments (% of total investments) ³	-	55.5%	68.0%	62.3%	70%	-
Creating shared value: Pursuing carbon neutrality						
ISO 50001 energy saving interventions (% savings compared to 2013) ⁴	-	6.2%	6.8%	6.9%	8.6%	10%
Gas and electricity household contracts at the end of the year with at least one energy efficiency solution (% of total free market, protected and gradual protected household contracts)	0%	19.3%	24.5%	27.1%	34%	37%
Renewable electricity sold to customers on the free market (% of total volumes sold on the free market) ⁵	-	36.8%	45.1%	41.1%	44%	>50%
Natural gas with CO ₂ offsetting sold to free market customers (% of total volumes of gas sold on the free market) ⁶	0%	5.0%	11.2%	14.2%	21%	27%
Biomethane produced (million cubic metres)	-	7.8	8.0	7.7	12	30
CO ₂ emissions reduction compared to 2019 with SBTi calculation methodology (%) ⁷	-	-5.4%	-10.3%	-11.7%	-23%	-37%
Creating shared value: Regenerating resources and closing the circle						
Sorted waste (%)	28.9%	65.3%	65.3%	67.8%	77%	-
Plastic recycled by Aliplast (k tonnes)	-	68.8	80.9	79.2	120	149
Reusable and reused purified wastewater (% of total purified wastewater)	-	5.2%	6.0%	7.3% ⁸	13%	18%
Water losses (physical and administrative losses in the civil aqueduct) (m ³ /km of network/day)	-	9.6	9.5	-	9.3	-
Reduction in internal water consumption compared to 2017 (%) ⁹	-	-11.9%	-16.6%	-20.5%	-22%	-25%
Aqueduct users served in areas with a Water Safety Plan (% of total aqueduct users served)	-	12.8%	22.6%	61.9%	90%	100%
Urban agglomerations >2,000 population equivalents complying with waste water treatment legislation (% of population equivalents)	-	97.6%	99.6%	99.6%	100%	100%
Emissions from WTE plants vs legal limits (actual concentrations vs legal limits: optimum value <100%)	22.4%	13.8%	13.8%	13.5%	<20%	<20%
Re-use of soil in infrastructure construction (%) ¹⁰	-	79%	78%	78%	81%	>80%

	2005	2020	2021	2022	2026	2030
Creating shared value: Enabling resilience and innovating						
Value of supplies from local suppliers (% of total suppliers)	62% ¹¹	65%	67%	64,5%	-	-
Workers with permanent contacts (annual average % of total workers)	95.5%	96.6%	96.5%	96.6%	97%	97%
Women in roles of responsibility (%) ¹²	19.9%	29.9%	30.5%	31.1%	>31%	>33%
Employees with digital proficiency (% of total population)	-	44%	49%	54%	65%	90%
Employees with green transition proficiency (% of total population)	-	-	-	21%	50%	60%
Employees with energy transition proficiency (% of total population)	-	-	-	28%	50%	60%
District-based aqueduct (%) ¹³	-	-	48%	51%	70%	-
Gas network sensors to monitor landslides (number)	-	-	10	10	130	-
Remote-controlled plants (thousand)	2.0 ¹⁴	7.2	7.9	9.0	12.3	-

Alongside the protagonists of change

Added value distributed to stakeholders (million euro)	722.1	1,670.0	1,764.4	1,674.1	2,100	-
Average hours of training per capita (number)	18.5	25.8	30.3	30.8	>25	>25
Accident frequency rate (number of accidents/hours worked x 1,000,000)	49.6	12.6	10.3	10.5	10.5	<10
Internal climate index (score from 0 to 100)	50	-	71	-	≥70	≥70
Customer satisfaction rate, residential customers (score from 0 to 100) ¹⁵	67	73	73	72	>70	≥70
Procurement by most economically advantageous bid method: sustainability score (% of total)	-	41	38	39	~35	~35

¹ Aligned with the new calculation criteria introduced by the new CSV framework

² Corporate acquisitions included

³ Average for 2022-2026

⁴ Data referring to Hera Spa, Inrete Distribuzione Energia, AcegasApsAmga, Marche Multiservizi, Herambiente, Hestambiente, Herambiente Servizi Industriali and Frullo Energia Ambiente

⁵ The data for previous years has been updated based on the most recent GSE data available at the time this report was drafted. This data does not include the companies Eco Gas, Con Energia and AresGas

⁶ This data does not include the company AresGas

⁷ Scope 1+2+3 downstream electricity and gas sales. The Scope 3 data for natural gas sales for 2021 and 2022 does not take into account the transitory increases in emissions related to last resort gas services. The Scope 3 data for natural gas sales for 2021 has been aligned with the calculation method used for the 2022 data.

⁸ Data referring to Hera Spa, AcegasApsAmga and Marche Multiservizi

⁹ Data referring to water consumption from civil and industrial aqueducts in the Group's most "water-intensive" business units, served by Hera Spa in Emilia-Romagna

¹⁰ Progressive data from 2018

¹¹ 2007 data

¹² Executives and managers

¹³ Data referring to Hera Spa

¹⁴ 2006 data

¹⁵ Data for 2020 and 2021, excluding Marche Multiservizi

2. Energy – Pursuing carbon neutrality

2.01 Objectives, performance and targets

What we said we would do	What we did	SDGs	Progress*
Promoting energy efficiency			
8% reduction in Group energy consumption by 2025 and 10% by 2030 compared to 2013.	6.9% reduction in energy consumption at the end of 2022, compared to 2013, thanks to the Group's interventions. (see p. 42)	7, 13	●
28% of customers by 2025 and 34% by 2030 with gas and electricity offers having energy efficiency services or the Consumption Log (23.0% in 2021) (including EstEnergy and subsidiaries). Continue to promote energy efficiency solutions for condominiums.	27.1% of customers by 2022 with at least one energy-saving gas and electricity offer, such as the Consumption Log. Energy efficiency solution offers for apartment buildings continued in 2022. (see p. 46)	7, 13	●
Continue with energy efficiency measures in public lighting, including replacement with LED light bulbs (57% by 2025).	Energy efficiency measures in public lighting continued in 2022: 40.8% of light bulbs now LED (vs 39.4% in 2021). (see p. 48)	7, 13	●
Energy transition and renewables			
41% renewable electricity sold on the free market in 2025 and >50% in 2030 (40.1% in 2021). 21% natural gas sold with CO ₂ offsetting in 2025 and 27% in 2030 (excluding wholesalers, last resort and default supply) (9.1% in 2021).	41.1% renewable electricity sold on the free market in 2022 (vs 45.1% in 2021; see p. 65). 14.2% of natural gas sold on the free market with CO ₂ offsetting in 2022 (vs 11.2% in 2021). (see p. 58)	7, 9, 13	●
Begin initiatives to develop hydrogen as an energy vector, including: ■ Trial supply into the gas distribution network of a mixture of hydrogen and natural gas, in Modena. ■ Construction of a "power-to-gas" plant in Bologna. ■ Feasibility study for a Hydrogen Valley in Modena, consisting of two main components: an electrolysis system at the waste-to-energy plant and/or landfill and the Energy Park.	Initiatives to develop hydrogen as an energy vector continued: ■ First national trial of hydrogen for civil use launched. ■ Final design of the power-to-gas plant in Bologna completed and authorisation process ongoing. ■ Partnership agreement signed between Hera, Herambiente and Snam to convert disused industrial areas in Modena into a new "hydrogen valley". (see p.56)	7, 9, 11, 13	●
16.8 million cubic metres of biomethane produced by 2025 and >30 million by 2030 through new anaerobic digestion plants for the organic fraction of sorted waste collection (8.0 million by 2021).	7.7 million cubic metres of biomethane produced from organic waste in 2022. New plant built in Modena. (see p.55)	7, 8, 9, 11, 12, 13	●
Internal and external development of photovoltaics: ■ 68 MW capacity of new photovoltaic panels installed at Group sites by 2025 (landfill sites and water utility plants); ■ Over 3.5 thousand photovoltaic panels sold to Group customers by 2025.	Internal and external development of photovoltaics: ■ Development and installation of the first photovoltaic systems begun on water utility plants and landfills (1 MW under construction and another 35 MW under analysis). ■ Approximately 1,550 photovoltaic panels sold to Group customers by 2022, since the start of the offer. (see p. 58)	7, 9, 13	●

What we said we would do	What we did	SDGs	Progress*
Climate change mitigation			
-28% Scope 1 and Scope 2; 100% electricity from renewable sources for internal consumption (by 2023). -30% Scope 3 from downstream gas sales; -50% carbon intensity index of electricity sales. In brief: -37% reduction in greenhouse gas emissions by 2030 compared to 2019	17.5% reduction of greenhouse gas emissions, Scope 1+2 100% of electricity consumption now comes from renewable sources -2.4% Scope 3 from downstream gas sales (excluding transitory increases in volumes sold in last-resort services); -21% carbon intensity index of electricity sales. In brief: -37% reduction in greenhouse gas emissions by 2030 compared to 2019 (excluding transitory increases in volumes sold in last-resort services) (see p. 68)	11, 13	
* Result achieved or in line with planning; Result with slight variance compared to planning; Result with significant variance compared to planning.			
What we will do		SDGs	
Promoting energy efficiency			
8.6% reduction in Group energy consumption by 2026 and 10% by 2030, compared to 2013.		7, 13	
34% of customers by 2026 and 37% by 2030 with at least one energy savings offer for gas and electricity, such as the Consumption Log (27.1% in 2022).		7, 13	
Continue to promote energy efficiency solutions for apartment buildings, public administrations and industrial customers.			
Continue with energy efficiency measures in public lighting, including replacement with LED light bulbs (59% by 2026).		7, 13	
Energy transition and renewables			
44% renewable electricity sold on the free market in 2026 and >50% by 2030 (41.1% in 2022).		7, 9, 13	
21% natural gas sold on the free market with CO ₂ offsetting by 2026 and 27% by 2030 (14.2% in 2022).			
Continue work on existing initiatives for developing hydrogen as an energy vector:			
- Complete the “power-to-gas” plant in Bologna. - Start up, by 2026, the hydrogen production plant at the decommissioned landfill site in Modena, intended to power public transport and local production facilities.		7, 9, 11, 13	
12 million cubic metres of biomethane produced by 2026 and 30 million by 2030, in new anaerobic digestion plants for the organic fraction of sorted waste (7.7 million by 2022).		7, 8, 9, 11, 12, 13	
Internal and external development of photovoltaics:			
- Over 90 MW installed photovoltaic capacity by 2026. - Over 2.3 thousand photovoltaic systems sold to Group customers by 2026, and development of energy communities (1.5 thousand in 2022).		7, 9, 13	
Develop smart grids to encourage the electrification of consumption, and increase the capacity of Trieste's electricity grid to receive and manage energy from renewable sources.		7, 9	
Climate change mitigation			
		11, 13	

What we will do

SDGs

- -28% Scope 1 and Scope 2;
 - 100% electricity from renewable sources for internal consumption (by 2023);
 - -30% Scope 3 from downstream gas sales;
 - -50% carbon intensity index of electricity sales.
 - In brief: -37% reduction in greenhouse gas emissions by 2030 compared to 2019:
- Launch the Hera Net Zero project in 2023.
-

2.02

Promoting energy efficiency

The Hera Group's primary energy consumption

Hera's energy consumption reflects the multi-business nature of the Group. Hera mainly manages:

- **cogeneration plants** which produce thermal and electrical energy, to cover internal consumption and above all for the district heating service;
- **waste-to-energy plants** that dispose of waste and recover energy;
- **turbo-expanders** that enhance the regulation of pressure in natural gas delivery cabins for distribution in managed local networks;
- low-enthalpy **geothermal heat recovery** systems in the Ferrara district heating plant.

Through its continuous interventions, Hera pursues a policy aimed at **increasing energy efficiency** in all its activities. This energy policy has been made concrete by obtaining the **ISO 50001 energy** certification for Group companies with the highest energy consumption (95.9% of the Group's energy consumption occurs in companies with ISO 50001 energy certification).

[302-1]

The table below shows the **organisation's internal energy consumption**, calculated in terajoules according to the Global Reporting Initiative Sustainability Reporting Standard. This calculation is done on data gathered mainly from measurements, and according to the calculation and conversion methods defined for the application of the regulatory provisions relating to Law 10/1991 (MISE Circular of 18 December 2014).

The following items are taken into account in the calculation:

- energy consumption from purchased non-renewable fuels and sources (diesel, petrol, LPG, natural gas and waste-to-energy for the 49% non-renewable portion);
- energy consumption from purchased fuels and renewables (waste-to-energy for the 51% renewable portion);
- consumption of purchased energy vectors (grid electricity and solar thermal energy);
- self-produced energy not involving consumption of other energy sources (biogas from landfills, digesters and sewage treatment plants, biomethane from organic waste, thermal energy from geothermal, electricity from photovoltaics, thermal energy from solar thermal).

The **portion of produced energy sold or transferred to third parties** (electricity fed into the grid, thermal energy sold through district heating and energy services, landfill biogas transferred to third parties, biomethane from organic waste sold) is then deducted from these items, to obtain the **net energy consumed within the organisation**.

ENERGY CONSUMED WITHIN THE ORGANISATION

Terajoule	2020	2021	2022
Waste (non-renewable share 49%)	6,608	6,338	6,136
Natural gas	5,790	6,216	6,009
Diesel	62	89	59
LPG	3	4	4
Diesel for motor vehicles	382	390	388
Petrol for motor vehicles	12	14	19
Natural gas for motor vehicles	13	15	14
LPG for motor vehicles	7	8	8
Non-renewable fuels purchased for consumption	(+) 12,877	(+) 13,073	(+) 12,636
Waste (renewable share 51%)	6,878	6,196	6,387
Renewable fuels purchased for consumption	(+) 6,878	(+) 6,196	(+) 6,387
Electricity from the grid	4,392	4,484	4,425
Thermal energy from solar thermal	2	2	1
Energy vectors purchased for consumption	(+) 4,394	(+) 4,486	(+) 4,426
Biogas from sewage treatment plants, digesters and landfills	1,297	1,216	1,144

Terajoule	2020	2021	2022
Thermal energy from geothermal energy	206	370	394
Biomethane from organic waste	254	261	249
Electricity from photovoltaics	15	16	16
Solar thermal energy	1	0	1
Self-produced energy not through consumption of other energy sources	(+) 1,773	(+) 1,865	(+) 1,803
Electricity fed into the grid	7,743	7,769	8,064
Thermal energy sold	2,347	2,719	2,440
Biomethane from organic waste sold	254	261	249
Biogas sold to third parties	179	176	166
Self-produced energy sold/transferred to third parties	(-) 10,523	(-) 10,926	(-) 10,919
Total energy consumption within the organisation	15,398	14,695	14,333

This data does not include the companies: Tri-Generazione; Recycla; Vallortigara.

Net energy consumed within the organisation in 2022 came to **14,333 Terajoules**, down **2.5%** compared to the previous year. This reduction was achieved mainly due to lower natural gas consumption (-3.3%) and a higher amount of electricity transferred to the grid (+3.8%).

Consumption of petrol in motor vehicles increased (+38.5%), and less thermal energy was sold (-10.3%). On the other hand, the consumption of waste in waste-to-energy plants (with an increase in the renewable portion and a decrease in the non-renewable portion) and electricity from the grid remained stable.

The portion of internally consumed energy from **renewable sources** (renewable portion found in waste, biogas, geothermal, thermal solar energy, grid electricity and photovoltaics) in 2022 came to **71.7% of total energy** (vs 64.4% in 2021).

[302-2]

Considering the energy that is not consumed within the organisation, but is related to products or services provided by the Group, allows **energy consumed outside the organisation** to be quantified. This calculation includes the consumption of natural gas by customers, the consumption of electricity by customers, in public lighting and in services provided by ASE and HSE, the consumption of fuel in vehicles operated by suppliers for waste collection and transport, and the consumption of natural gas in power generation plants in which the Group has a minority interest.

Energy consumed outside the organisation in 2022 amounted to 207,659 Terajoules, 97.5% of which was energy consumed by customers as a result of the sale of natural gas and electricity.

Energy efficiency within the Hera Group

Energy intensity indices

[302-3]

The Group's energy performance can be represented by a number of indicators that show its evolution and prospective targets and illustrate the company's energy saving strategies. Comparing energy consumption with certain production and management indicators can provide **consumption intensity indices** that reflect the improvements achieved by efficiency measures and corporate energy management.

ENERGY INTENSITY AND EFFICIENCY INDICES

	2020	2021	2022
Aqueduct: electricity consumption (kWh) / volume of water fed into the network (m ³)	0.44	0.46	0.45
Purification: electricity consumption (kWh) / purified water volumes (m ³)	0.42	0.40	0.43
District heating: primary energy consumption (toe) / equivalent energy produced (toe)	0.88	0.87	0.88
Waste-to-energy plants: primary energy consumption (toe) / equivalent energy produced (toe)	2.7	2.3	2.1
Venue management: primary energy consumption (toe) / (site volumes x degree days) (m ³)	3.8	3.7	3.5
Public lighting: electricity consumption (kWh) / lighting points (no.)	297.7	272.3	248.7
Company fleet: fuel consumption (ktoe eq) / fleet trip (km driven)	0.13	0.13	0.14

This data refers to consumption of electricity, natural gas, diesel, LPG, petrol and waste. For district heating, the conversion coefficients provided for in MISE Circular of 18 December 2014 were used. For public lighting, consumption takes place in plants and lighting points owned or managed by public administrations.

The energy intensity indicator for the **aqueduct** remained essentially in line with previous years. An increase was seen, instead, in **purification** (+5.5%), mainly due to lesser rainfall (purifiers thus handling more concentrated water with a higher demand for electricity for the equipment).

The **district heating** sector showed an energy intensity similar to previous years.

For **waste-to-energy plants**, indicators improved (-4.8%). Even though the volume of waste treated decreased, the energy produced increased, especially by the Hestambiente (+16.8%) and Frullo Energia Ambiente (+5.1%) plants.

The indicator for the Hera Spa facilities (which relates total energy consumption to volume and climate, expressed by degree days) in 2022 showed further improvement over previous years, as a result of a higher temperatures compared to 2021.

Public lighting also showed an improvement in 2022 (-8.7%), thanks to the constant energy efficiency measures carried out on the lighting points managed: despite an increase in the number of lighting points managed (+8.6%), energy consumption showed a slight decrease (-0.8%).

Finally, fuel consumption per km travelled by the **corporate fleet** increased slightly (+3.2%).

Energy improvement plans [302-4]

The Group's focus on energy efficiency is demonstrated by **ISO 50001** certification of energy management systems for **11 Group companies**: Hera Spa, AcegasApsAmga, AcegasApsAmga Servizi Energetici, AresGas, Frullo Energia Ambiente, Hera Luce, Hera Servizi Energia, Herambiente, Hestambiente, Inrete Distribuzione Energia, and Marche Multiservizi. Overall, **the ISO 50001 certified companies recorded a primary energy consumption in 2022 equal to 95.9% of the Group total** (stable compared to 2021, which was 96.0%).

The energy improvement plans drawn up since 2014 as part of the **ISO 50001 energy management systems** envisaged the achievement of the objective of reducing energy consumption by 3% (compared to 2013 consumption) by 2017. By virtue of the positive results obtained, Hera has set increasingly challenging objectives; in fact, the Group's industrial plan envisages that **by 2030** interventions will be implemented, to include the achievement of **savings equal to 10% of consumption** compared to the base year of the Plan (8.6 % as of 2026). The objective is calculated as the average of the objectives that Hera Spa, Inrete Distribuzione Energia, AcegasApsAmga, Marche Multiservizi, Herambiente, Herambiente Servizi Industriali, Hestambiente and Frullo Energia Ambiente have defined as part of their certification schemes.

To date, significant energy savings have been achieved in the **water cycle**, attesting to the great attention paid by the Group to the sector; in several cases it is a question of optimising purification plants, which have been the focus of huge investments in recent years. In **district heating**, the focus is on maximising heat recovery on existing cogenerators, including with innovative solutions, such as the installation of heat pumps. In several cases, the interventions of Herambiente and its subsidiaries

concern **waste-to-energy plants**, which constitute a fundamental part of the Group's plant equipment, and consist of solutions and initiatives to maximise heat recovery and increase energy production. Marche Multiservizi also focuses on **public lighting**, replacing numerous light points and traffic lights with lamps and technologies with lower energy consumption and greater efficiency. Inrete Distribuzione's savings are mainly concentrated in the **natural gas distribution**, and are due both to technological interventions (turboexpanders and innovative control devices) and to behavioural measures. Finally, as regards the efficiency of the **corporate offices**, over the last few years various interventions have been implemented to replace the lighting fixtures of external areas as well as to replace refrigerating units and carry out maintenance on heat exchangers.

ISO 50001 ENERGY IMPROVEMENT PLANS (INTERVENTIONS CARRIED OUT AND PLANNED AS OF 2022)

Scope of intervention	Interventions carried out and planned (no.)	Annual savings from completed and planned interventions (toe)	Of which interventions carried out (no.)	Of which savings achieved (toe)	Company
Integrated water service	293	9,426	238	8,841	H-A-M
District heating	56	4,937	56	4,712	H
Interventions on waste-to-energy plants and landfills	48	3,304	45	2,793	HA
Offices	88	744	74	699	H-A-M
Energy networks	42	1,034	36	1,017	H-A-M
Vehicles and environmental services	21	713	20	703	H-A-M
Public lighting	13	657	10	572	A-M
Total	561	20,814	479	19,336	
		Equal to 7.5% of consumption in the base year of the Plan (2022 Target: 7.3%)	Equal to 6.9% of consumption in the base year of the Plan (2022 Target: 6.8%)		

For Hera Spa, Inrete Distribuzione Energia and Marche Multiservizi the base year refers to consumption for 2013, for AcegasApsAmgail 2014, and for Herambiente, Hestambiente, Herambiente Servizi Industriali and Frullo Energia Ambiente 2020. The savings relate to the consumption of electricity and fuel.

The savings achieved from the actions included in the Energy Improvement Plan were quantified by analysing the consumption recorded in the 12 months following the intervention, and comparing them with the historical consumption prior to the intervention being carried out.

The **479 interventions** carried out at the end of 2022, and included in the Energy Improvement Plan from the base year, allowed a **saving of over 19 thousand toe**, equal to 6.9% of base year consumption, thus **reaching the target** set for 2022. The 561 total interventions identified at 31 December 2022 to be implemented in the next few years will allow for a reduction in energy consumption of around 21,000 toe. The interventions identified by the action plan are mainly concentrated in the water cycle, where more than half of the interventions are expected to be carried out, and 45.3% of the overall savings in energy consumption will be achieved.

The initiatives of the ISO 50001 energy improvement plan are complemented by further energy efficiency measures planned by **AcegasApsAmga Servizi Energetici**, **Hera Servizi Energia** and **Hera Luce** on condominiums and other buildings, cogeneration plants at companies, and public lighting systems.

ENERGY EFFICIENCY MEASURES BY ACEGASAPSAMGA SERVIZI ENERGETICI, HERA SERVIZI ENERGIA AND HERA LUCE COMPLETED AND PLANNED BY 2022

Scope of intervention	Interventions carried out and planned (no.)	Annual savings from completed and planned interventions (toe)	Of which interventions carried out (no.)	Of which savings achieved (toe)
Businesses, condominiums and other buildings	698	3,045	537	2,358
Public lighting	109	9,128	59	8,537
Total	807	12,173	596	10,895

The savings relate to the consumption of electricity and fuel.

The 807 planned interventions (of which 596 already completed by 2022, and others in progress) will generate an **expected saving of 12,173 toe per year** (of which around 11,000 have already been achieved).

Overall, the Group's energy efficiency measures implemented from 2013 to today have taken the form of **1,075 interventions**, which have resulted in **savings of approximately 30,000 toe per year**; also considering the interventions identified and not yet implemented, the expected savings rise to 33,000 toe with 1,368 interventions, which can be compared to the annual energy consumption of 22,900 "typical" families (four people consuming 2,700 kWh and 1,200 cubic meters of gas).

White certificates

The mechanism of Energy Efficiency Certificates (Titoli di efficienza energetica, TEE) or **White Certificates** was devised in Italy in 2005 as an incentive tool for energy efficiency, and is based on the theory of tradable permits, which are associated with an economic value and a market. These certificates are obtained as a result of interventions that guarantee **measurable and certified energy savings** (1 TEE is equivalent to saving 1 toe of energy). The system provides for a supply and demand mechanism, with **savings obligations for natural gas and electricity distributors**, which are assigned annual targets to be achieved. The Ministerial Decree of 11/01/2017, last modified by the Ministerial Decree of 21/05/2021, establishes the obligations of the distributors until 2024. These obligations are increasing in the 2021-2024 period, following a trajectory consistent with the expected contribution from the mechanism to the achievement of the **national objectives for the reduction of final energy consumption** by 2030, in line with the strategies at the European level. The market value of 1 TEE over time has reached the limit values currently predefined by the regulatory framework (250-260 €/ TEE).

To fulfil its obligations, Inrete Distribuzione Energia makes use of Hera Spa as its **Energy saving company (Esco)**, which has been procuring white certificates for over fifteen years. In 2022 Hera Spa submitted to the Energy Services Manager (GSE) **six new applications relating to energy efficiency measures**, located mainly in the areas served by the Group. Among those that concern the Group itself, there are efficiency measures on district heating systems and at systems for the management of the water cycle. Furthermore, AcegasApsAmga is active in the submission of public lighting service projects relating to redevelopment works implemented by Hera Luce in the municipalities in which it operates. The Hera Group's energy efficiency promotion activity continues both internally and externally, on the one hand with the implementation and improvement of the ISO 50001 certified energy management system, on the other with the participation at industry events and conferences.

WHITE CERTIFICATE TARGETS

toe	2020	2021	2022
Gas distribution	163,979	56,990	86,203
Electricity distribution	17,209	5,256	8,490
Total	181,188	62,246	94,693

In 2022, the Hera Group submitted to the GSE projects for energy efficiency certificates equal to 14,009 toe; in the same year, the GSE approved projects presented by the Group totalling 11,048 toe.

As part of the **initiatives to promote energy efficiency**, Hera Spa has continued the partnership started in 2019 with researchers from the **Milan Polytechnic University**, who are experts in behavioural psychology and statistical sciences to develop scientifically valid programs for measuring and verifying savings. The partnership provides for the **validation of the energy savings obtained as a result of optimisation interventions** inside homes, in industrial plants, in the tertiary sector and in the public administrations, due to the **induction of virtuous behaviours** achieved with methodologies that refer to Behavioural Sciences.

As part of the initiatives aimed at increasing customers' awareness of the impact of their behaviour, in 2020 Hera Comm launched the "**Consumption Log**" service, which allows customers and residents to receive personalised advice useful for saving energy and, more recently, of water and matter (see the case study "The Consumption Log" in the attachments to this report for further information). The savings results were **certified by the Energy Services Manager**, which assessed a dedicated project presented by the Group eligible for the White Certificates mechanism. During 2022, **417 toe of energy savings were certified thanks to the behaviour of users** making up the initial lot. The perimeter of the project was **extended to additional lots**, for which an estimated 1,713 toe of savings were generated during the year, and are currently undergoing certification by the Energy Services Manager.

Energy efficiency for families

In 2022, the Hera Comm Group's commitment to energy efficiency is confirmed with the offer of various value-added services that allow household customers to **monitor and reduce their consumption**.

All free market customers can request the activation of the **Consumption Log free of charge**, a digital service that allows receiving personalised reports useful for comparing one's consumption not only with consumption in the previous year but also with the numbers of a family similar to one's own by size, type of home, province and energy use. All data are also accessible on the platform and in the dedicated section of the MyHera app. See the case study "The Consumption Log" in the attachments to this report for additional information.

The **Hera Led** option allows purchasing up to **two kits of ten LED bulbs** for each contract with a 30% discount on their market value, and can be combined with numerous free market offers from Hera Comm, both for those signing a new contract both for those who are already customers. Replacing an incandescent light bulb with a highly efficient LED one can lead to **energy savings of up to 80%**. From the technical specifications of the products, it can be seen that a 9 W LED bulb is able to replace a 60 W incandescent bulb: considering an average daily use of four hours a day, the consumption of a LED bulb is equal to about 13 kWh/year against the 88 kWh/year of an equivalent incandescent light bulb, with obvious savings for the bill and for the environment.

Hera Thermo is the option that allows **monitoring gas consumption** by the installation of a smart thermostat, even remotely. Its use leads to greater attention to consumption methods: through a mobile app it is in fact possible to check the temperature set in the house at any time and check the functioning of one's boiler. Such easy monitoring allows customers to become more aware of their consumption and to reduce any waste, for example, by decreasing the set temperature in certain time slots and optimising the system's on and off cycles. The literature has demonstrated that reducing the temperature set in the home by 1°C leads to gas savings in the winter season of **between 5% and 10%** (Source: Enea).

The **Hera Clima**, **Hera Caldaia** and **Hera Scaldacqua** options continued in 2022, offering the sale and "turnkey" installation of high-efficiency heat pump air conditioners, condensing boilers (with access to tax deductions thanks to a discount on the invoice) and water heaters, expanding the range to additional models to meet the different needs of our customers.

At the end of 2022, the range of energy efficiency products was enhanced by the **Hera Hybrid heat pump boiler** option, which allows purchasing high-efficiency hybrid boilers installed by experts, and claiming tax deductions; this "turnkey" service starts from the technical inspection to the management of administrative and tax paperwork.

END-OF-YEAR CONTRACTS WITH ENERGY EFFICIENCY SOLUTIONS

Number	2020	2021	2022
Electricity contracts at the end of the year with at least one solution for saving electricity (% of total household contracts on the free, protected and gradual protected markets)	26.9%	33.1%	35.9%
Gas contracts at the end of the year with at least one solution for saving gas (% of total free market and protected household contracts)	15.0%	19.4%	21.5%
Electricity and gas contracts at the end of the year with at least one energy saving solution (% of total free market, protected and gradual protected household contracts)	19.3%	24.5%	27.1%

The data do not include Eco Gas, Con Energia and AresGas.

At the end of 2022, there were over 762,000 contracts with at least one energy efficiency service, and they represent **27.1% of the total** contracts, **up by 9.8%** compared to 2021 (with approximately 695,000 contracts).

Specifically, the contracts with at least one solution for saving electricity are 35.9% (395,000, +13.2%), while those with at least one solution for saving gas are 21.5% (367,000, +6.3%). The indicator considers contracts in which at least one service is active between the electricity Consumption Log, Hera Led and Hera Clima (for electricity) and the gas Consumption Log, Hera Thermo, Hera Boiler and Hera Water Scald (for gas).

The indicator is calculated excluding contracts relating to safeguarding, default and last-resort supply services since, by their nature, it is not possible to propose offers in line with the Group's commercial strategy in these markets. Including these segments as well, 26.6% of energy contracts includes at least one energy efficiency solution (35.9% of electricity contracts and 20.9% of gas contracts).

In the coming years, the proposal of energy efficiency solutions to customers will continue further by extending these options to the most recently acquired commercial companies that do not yet provide for them.

Energy efficiency for condominiums

The Hera Group, through its subsidiaries **Hera Servizi Energia (HSE)** and **AcegasApsAmga Servizi Energetici (ASE)**, actively operates in the energy efficiency sector with a wide range of services, mainly addressing condominiums, large industrial customers and the public administrations.

HSE and ASE take care of and develop the **thermoregulation and individual heat metering systems in portfolio condominiums**, so as to attribute the relative consumption to each individual user in a transparent and unequivocal way. The **savings** in fuel consumed that can be obtained thanks to the installation of these systems in buildings is on average around **8%**.

HSE is also active in the field of **requalification of thermal plants with high-efficiency systems** which, combined with thermoregulation systems, lead to significant reductions in condominium gas consumption. For these condominiums, **complete heat management** is also envisaged through "Energy Service" contracts. At the end of 2022, there were 236 condominiums with an active energy service (13 with HSE and 223 with ASE, an increase compared to 214 in 2021), and the estimated savings with this integrated solution are equal to **approximately 20% of total gas consumption**.

Condominiums that have simultaneously carried out several energy requalification interventions, individual accounting and transformation of the thermal power plant, have achieved **savings of 20% to 35% of consumption**.

Furthermore, thanks to the transfer of credit and the energy service contract, the interventions did not involve costs for customers at the end of the works. Indeed, the commercial solutions are **integrated with the transfer of credit** relating to so-called 110% Super Ecobonus, Ecobonus and Sismabonus for the energy and structural redevelopment of buildings, leaving the possibility for each condominium to independently choose the solution that best suits their own resources. The customer can choose whether

to bear the cost of the interventions carried out and therefore deduct the amount on his tax return, transfer the tax deduction and pay the excess amount at the end of the work, or opt for the solution that allows no-cost works by integrating the transfer of credit with the financing of the residual amount, also combined with an energy service with a guarantee of energy savings and, therefore, a reduction in heating costs.

The professionalism and experience of HSE and ASE allowed the management of a total portfolio of **approximately 1,200 condominiums** during 2022, divided between energy service and redevelopment works, confirming the trend of previous years (1,200 in 2021 and 971 in 2020). Of these, around 900 are carrying out energy efficiency improvements (so-called 110%), a number that is almost double compared to 2021.

Energy efficiency for companies

Hera offers multi-year energy supply contracts through the creation and management of **renewable photovoltaic energy production or efficient energy in cogeneration and trigeneration set-up** dedicated to guaranteeing all the primary energy needs of customers. In fact, with **cogeneration and trigeneration** it is possible to produce electricity, heat and cooling through the same plant, saving primary energy compared to a traditional consumption configuration, reducing emissions, achieving greater energy efficiency and reducing supply costs. Examples of industries in which this service is offered are plastics, food, pharmaceuticals, ceramics and the large tertiary sector (condominiums, museums, shopping centres, and wellness centres).

The offer envisages the **supply of all energy carriers** by Hera Servizi Energia (HSE), reducing a customer's financial and management commitments. Based on the customer's energy needs, HSE identifies the characteristics of the technological system, takes care of preparing all the permit documents, and runs and manages the system.

At the end of 2022, **21 cogeneration plants managed by HSE** are active, of which six are trigeneration. The **environmental benefits** achieved by these plants in 2022 can be quantified in **lower emissions of around 15,000 tonnes of greenhouse gases** and in primary energy savings of **6,201 toe** (equivalent to the average annual energy consumption of around 4,300 typical households).

Furthermore, Hera Spa enters into **agreements with trade associations** in the areas it covers (four agreements active in 2022), collaborating with companies within the scope of the obligations set out in Legislative Decree 102/2014 regarding energy audits.

Energy efficiency for public administrations

On the **Public administration** customer market, Hera Servizi Energia (HSE) and AcegasApsAmga Servizi Energetici (ASE) operate through tenders for works and integrated services also relating to public-private partnerships. Even for this particular type of contract, the two companies are proposing major **investments aimed at reducing greenhouse gas emissions** through the production of renewable electricity through photovoltaics, the production of efficient thermal energy through solar systems, new condensing boilers and heat pumps, as well as the reduction of the energy necessary to maintain the comfort of buildings by insulating the building structures with the installation of thermal insulation and the replacement of more performing windows. The construction of a **"net-zero emissions" building** represents the most important energy solution offered to customers.

The offer is completed by a modern integrated energy management through the "Energy Service" contract solution. This type of solution makes it possible to finance energy efficiency interventions with the same energy savings that the interventions generate, keeping unchanged the current expenditure of the institution receiving the proposal.

ASE and HSE are also dedicated to public administration tenders in the field of energy service, facility management and operation and maintenance, and as a result of the tenders won, made **investments in energy efficiency for over 11 million euro** in 2022.

Savings from **6 to 49%** can be achieved with several interventions, based upon consumption and interventions already carried out on buildings, and which can be combined with the seismic retrofitting of buildings. Thanks to the demolition and construction of buildings with zero net emissions, even greater savings can be achieved. The environmental benefits achievable in 2023 thanks to the main energy

redevelopment interventions carried out in 2022 can be quantified in **lower emissions of approximately 406 tons of greenhouse gases**.

Energy efficiency in public lighting

Two Hera Group companies, **Hera Luce** and **Marche Multiservizi**, manage over **608 thousand lighting points** (+8.1% compared to 2021) guaranteeing the efficiency of the public lighting service in **197 municipalities**, in 11 regions: Emilia-Romagna, Umbria, Lombardy, Marche, Lazio, Tuscany, Piedmont, Veneto, Friuli-Venezia Giulia, Abruzzo and Sardinia. Traffic light systems are also managed in some areas, totalling about **10,700 traffic lights**.

MANAGED LIGHTING POINTS AND TRAFFIC LIGHTS

Number	2020	2021	2022
Municipalities served (no.)	188	184	197
Lighting points at 31/12 (no.)	571,264	562,775	608,370
<i>of which LED (%)</i>	<i>34.9%</i>	<i>39.4%</i>	<i>40.8%</i>
<i>of which with management systems for optimising consumption (%)</i>	<i>54.2%</i>	<i>80.2%</i>	<i>74.5%</i>
Traffic lights (n.)	10,454	10,402	10,744
<i>of which LED (%)</i>	<i>66.5%</i>	<i>65.6%</i>	<i>58.5%</i>

Management systems for optimising consumption are in place in **74.5%** of the lighting points managed by the two companies (reduction of intensity, partial switch-off, etc.), a ratio down compared to the previous year as a result of both the numerous recently acquired light points (on which these solutions will be progressively installed) and due to the outgoing municipalities on which they were active. The managed lighting points in which **LED lamps** are used has increased (**40.8%**, +1.4 p.p.). Lastly, **low energy consumption lamps** are used in **96.7%** of the light points managed (understood as non-mercury vapor lamps, classifiable in class G according to the application of the energy qualification system developed by Hera Luce on the basis of the minimum environmental criteria), a sharp increase compared to the previous year (they were 51.0%).

Also in 2022, Hera Luce's commercial effort aimed at consolidating the area served and expanding the area of influence, offering potential customers smart solutions for their respective cities. Among these proposals, of particular relevance is the **commitment to energy efficiency**, which is possible thanks to the installation of **low-consumption systems** and, above all, the **latest technology LEDs**. Considering the 190 municipalities managed by Hera Luce in 2022:

- in 80 municipalities **only electricity from renewable sources** is used; the consumption of electricity in these municipalities is equal to 46.4% of total consumption;
- in 99 municipalities electricity consumption is **less than 50 kWh/inhabitant** (calculated considering residents and tourists); 52.6% of total electricity is consumed in these municipalities. The threshold of 50 kWh/inhabitant was defined taking as reference the European average of consumption for public lighting, equal to 51 kWh/inhabitant (Censis Report 2017);
- in 44 municipalities **all the lighting points managed are LED** (12.3% of total consumption).

In total, 124 municipalities served have implemented one or more of these three good environmental practices (use of renewable sources, low electricity consumption, LED lamps) with a consumption equal to 74.4% of the total.

Furthermore, Hera Luce is engaged in the finalisation of numerous public-private partnership projects through the project finance instrument (pursuant to Art. 183, paragraph 15, of Legislative Decree 50/2016). The projects presented provide for the **energy upgrading** and **safety** of public lighting systems, in compliance with the minimum environmental criteria for public lighting (Cam) **for lighting fixtures** (which came into force in 2017) and **for the public lighting service** (entered into force in 2018). Among the criteria for awarding tender procedures, **references to the circular economy** and the preparation of a specific document capable of demonstrating a particular efficiency deriving from the

ability to recycle and dispose of the resources **are becoming increasingly more frequent**. Hera Luce has put forward Project financing proposals for which it has been appointed the Sponsor in seven municipalities.

During 2022, Hera Luce completed the works in seven municipalities and began works in 24 additional municipalities. Overall, the interventions carried out by Hera Luce in 2022 will allow an **annual saving of 10,953 MWh of electricity** (about 2,047 toe). Considering the average electricity consumption of a “typical” family (four people consuming 2,700 kWh per year), it is possible to estimate the annual savings deriving from the interventions carried out by Hera Luce in 2022 in over 4,000 families and **in missed greenhouse gases for about 2,800 tons**.

Hera Luce has also begun awarding and managing works to improve the efficiency of public lighting systems in 33 municipalities.

Hera Luce continues the **development activities** linked to a variety of actions and partnerships established in previous years:

- update of the Minimum environmental criteria for public lighting and definition of the new lighting Services Cam, as a member of the dedicated working group set up by the Ministry of the Environment, and Land and Sea Protection;
- dissemination of the “culture of light”;
- system for monitoring the performance of lighting fixtures in line with the Cams, in collaboration with the Ministry of the Environment, and Land and Sea Protection;
- development of models aimed at offering local administrations tools that allow them to understand the process of analysis and evaluation of energy efficiency activities, obtain information on the actions to be undertaken for an energy requalification programme, and obtain an initial estimate of the costs of the interventions and the achievable benefits;
- analysis of new lighting technologies with evaluation of costs/benefits and future development possibilities in collaboration with various universities;
- development of projects aimed at making public lighting evolve towards the development of smart cities using the public lighting infrastructure;
- development of the project on the circular economy, with the preparation of the specific document capable of demonstrating a particular efficiency deriving from the ability to recycle and dispose of the resources used, for projects presented in the tender, using a tool for measuring the circularity of materials (see the case studies “Hera measures ‘circularity’ with Circulytics” and “The evaluation and measurement of circularity in Hera Luce”, for additional information).

2.03 Energy transition and renewables

Renewable energy production facilities and overall production

The Herambiente Group produces energy from the **combustion of waste** through nine waste-to-energy plants, with a total installed electrical power of 126.6 MW. Eight of these waste-to-energy plants are dedicated to urban waste and, as better described later, their power and the energy they produce can be considered **51% renewable** (equal to the biodegradable portion of the processed waste). Furthermore, thermal energy is also recovered in four of these waste-to-energy plants: three of them are dedicated to feeding the nearby **district heating** networks (in Ferrara, Forlì and Granarolo dell’Emilia), and one feeds the neighbouring waste treatment plant (in Modena).

The Ferrara district heating plant is also thermally supported by **geothermal wells** located in Casaglia, for a potential 14.0 MW, thanks to which heat is drawn from the subsoil: in this case, geothermal energy represents the priority source of the district heating, to which is added the energy supplied by the waste-to-energy plant and, lastly, by traditional back-up boilers.

The Herambiente Group also owns the **anaerobic digestion plants** of Sant’Agata Bolognese and Spilamberto, dedicated to the production of biomethane (14.4 MW in total), and the **biodigestors** in Rimini, Voltana di Lugo and Rimini Ca’ Baldacci, where there are **cogeneration plants biogas** for a total electrical power of 2.5 MW. Some biogas exploitation plants are also active in 11 **landfills** (27.0 MW in total).

As part of the integrated water system, 3.5 MW of electricity are installed in **biogas cogeneration plants** located in seven wastewater **treatment** plants managed by the Group (Bologna, Cesena, Forlì, Modena, Padua, Savignano sul Rubicone and Trieste). The electricity produced is typically self-consumed within the sites themselves.

In the gas distribution branch, Inrete Distribuzione Energia and AcegasApsAmga manage six **turboexpanders** for approximately 8.4 MW of nominal electrical power located in Bologna, Ferrara, Forlì, Padua and Ravenna, which produce electricity starting from the pressure reductions inside some suitable gas cabins.

To these powers are added the **photovoltaic systems** installed at various sites, with a total power of approximately 2.1 MW.

In addition to the aforementioned renewable energy production plants, the Hera group also manages plants that produce energy efficiently, including the **Imola cogeneration plant** (82.0 MW of electricity) and other smaller **cogeneration plants** (another 61,7 MW of total electricity) installed both to serve some district heating networks and industrial customers.

Overall, the Hera Group has 98 electricity and thermal energy and biomethane production plants, for a total of 342.2 MW installed. Of these, 125.6 MW are **renewable sources** (36.7% of the total).

HERA GROUP ENERGY PRODUCTION PLANTS BY LOCAL AREA (2022)

Province	Biogas and biomethane	Photovoltaic	Geothermal	Termoval.	Turboexpand.	Cogeneration
Bologna	7 plants* (24.7 MW)	5 plants (242 kW)	-	1 plant (26.5 MW)	2 plants (1.6 MW)	11 plants (108.0 MW)
Ferrara	-	1 plant (3 kW)	1 plant (14.0 MW)	1 plant (13.1 MW)	1 plant (2.1 MW)	-
Forlì-Cesena	5 plants (3.5 MW)	1 plant (20 kW)	-	1 plant (10.9 MW)	1 plant (1.4 MW)	10 plants (13.4 MW)
Modena	3 plants* (6.2 MW)	1 plant (6 kW)	-	1 plant (18.9 MW)	-	4 plants (5.8 MW)
Padua	1 plant (0.2 MW)	-	-	1 plant (14.0 MW)	1 plant (2.3 MW)	2 plants (0.6 MW)
Pesaro-Urbino	-	1 plant (5 kW)	-	-	-	1 plant (1.0 MW)
Ravenna	4 plants (10.3 MW)	5 plants (882 kW)	-	1 plant (5.0 MW)	1 plant (1.0 MW)	2 plants (2.5 MW)
Rimini	1 plant (1.0 MW)	2 plants (195 kW)	-	1 plant (10.9 MW)	-	-
Trieste	1 plant (0.3 MW)	1 plant (87 kW)	-	1 plant (14.0 MW)	-	1 plant (1.6 MW)
Other provinces**	1 plant (1.3 MW)	3 plants (623 kW)	-	1 plant (13.4 MW)	-	8 plants (10.8 MW)
Total	23 plants (47.5 MW)	20 plants (2.1 MW)	1 plant (14.0 MW)	9 plants (126.6 MW)	6 plants (8.4 MW)	39 plants (143.7 MW)

The data in this table does not include the thermal energy production plants from thermal plants managed by Group companies, and thermal power is considered only for the geothermal plant.

* of which one biomethane production plant

** Florence, Perugia, Isernia, L'Aquila, Piacenza, Pordenone, Treviso, Udine and Vicenza

TOTAL ENERGY PRODUCED

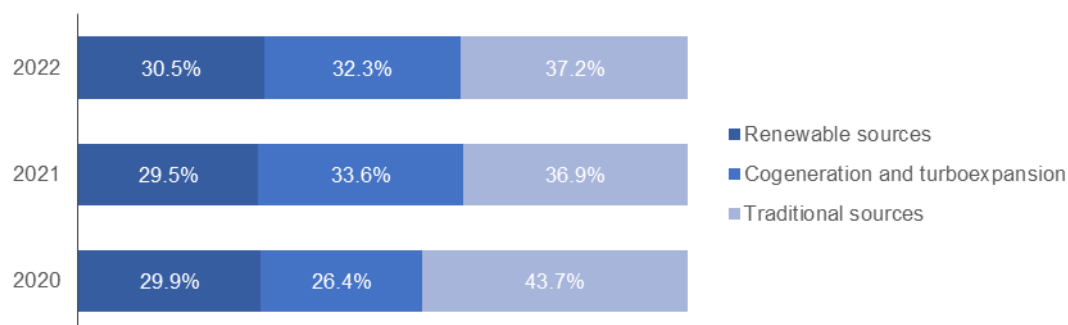
GWh	2020	2021	2022
Waste-to-energy (51% renewable share)	505.5	453.5	474.6
Geothermal	47.7	85.7	91.2
Biomethane	71.1	73.1	69.1
Combustion of landfill biogas	44.5	39.1	35.4

GWh	2020	2021	2022
Biogas combustion from digesters	25.3	25.5	25.2
Combustion of biogas from waste treatment plants	14.0	16.5	15.3
Photovoltaic	2.4	2.2	2.2
Total renewable sources	710.5	695.5	712.9
Cogeneration	374.1	514.1	511.5
Industrial cogeneration at third parties	246.2	268.2	231.9
Turboexpansion	6.2	8.3	12.2
Total cogeneration and turboexpansion	626.5	790.7	755.6
Waste-to-energy (49% non-renewable share)	506.3	455.8	456.0
Thermal power stations	529.9	414.7	414.7
Total traditional sources	1,036.2	870.5	870.7
Total electricity and thermal energy produced	2,373.2	2,356.7	2,339.2

The data shown in the table refer to the items Self-produced energy not through consumption of other energy sources and Self-produced energy sold/sold to third parties of the GRI 302-1 indicator.

The total energy generated by the Group's plants in 2022 (electricity, heat and biomethane) amounted to **2,339.2 GWh**, which is stable compared to the previous year (-0.7%). Of these, **62.8% derive from renewable sources or cogeneration and turboexpansion plants** (practically unchanged compared to 2021: 63.1%).

TOTAL ENERGY PRODUCED



The data in the table refer to the items self-produced energy not through consumption of other energy sources and self-produced energy sold/sold to third parties of the GRI 302-1 indicator.

In detail, the **energy generated from renewable sources** in 2022 is 712.9 GWh, or **30.5% of the total**. This amount increased by 2.6% compared to the previous year thanks to greater energy deriving from the combustion of waste in waste-to-energy plants (+4.7%) and from geothermal energy (+6.3%). On the other hand, the production of energy from the combustion of biogas generated by landfills, digesters and waste treatment plants (-6.4%) and biomethane (-4.8%) decreased. The production of photovoltaic electricity remains stable.

The portion of energy produced by **cogeneration plants and turboexpanders** is 32.3%, down by 4.4% mainly due to lower production from cogenerators installed at third parties (-13.5%). The production from turboexpanders increased significantly (+47.6%) also thanks to revamping interventions carried out. The contribution from cogeneration remains stable.

In future years, a further improvement in the sustainability profile of the Group's energy production is expected, mainly by the construction of **additional plants for the production of biomethane**, as well as the development of **photovoltaics**. In this context, the installation by 2026 of over 90 MW is expected on owned sites (exhausted landfills and water-cycle plants), and at external sites (also with agri-voltaic

plants). As far as the Hera sites are concerned, the objective is to equip the main water cycle plants with photovoltaic self-production, which makes it possible to reduce the withdrawal of energy from the grid; the first plants under development are at the Santa Giustina treatment plant in Rimini and the San Vitale aqueduct plant in Bologna. In the field of landfills, on the other hand, the first plant (1 MWp) built on the Galliera landfill in Bologna will be activated in 2023. Other plants are being planned in Ravenna, Rimini and Castelmaggiore.

Electricity production

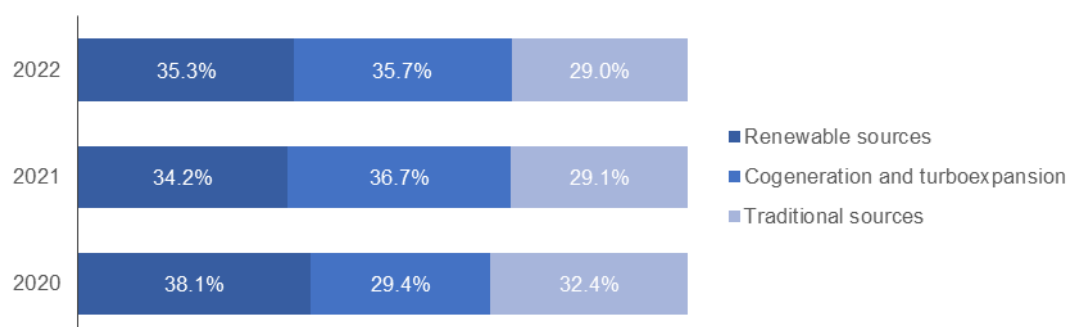
The following table shows the **gross electricity production** of the Group's plants, which also considers the energy necessary to meet consumption that is required for production itself (auxiliary consumption).

ELECTRICITY PRODUCED

GWh	2020	2021	2022	Installed power (2022, MW)
Waste-to-energy (51% renewable)	425.9	386.3	411.2	62.0
Combustion of landfill biogas	44.5	39.1	35.4	13.4
Biogas combustion from digesters	25.3	25.5	25.2	3.0
Combustion of biogas from waste treatment plants	7.1	7.6	7.4	3.6
Photovoltaic	2.4	2.2	2.2	2.1
Total renewable sources	505.2	460.6	481.3	84.1
Cogeneration	233.2	322.2	330.3	112.2
Industrial cogeneration at third parties	150.8	163.2	144.3	30.4
Turboexpansion	6.2	8.3	12.2	8.5
Total cogeneration and turboexpansion	390.2	493.8	486.9	151.0
Waste-to-energy (49% non-renewable share)	429.8	391.2	395.1	64.6
Total traditional sources	429.8	391.2	395.1	64.6
Total electricity	1,325.2	1,345.6	1,363.2	299.8

The total **gross electricity** generated by the Group's plants in 2022 is equal to **1,363.2 GWh**, a slight increase compared to the previous year (+1.3%). **71.0% comes from renewable sources and cogeneration and turboexpansion plants** (stable compared to 2021).

ELECTRICITY PRODUCED



In particular, the production of **electricity from renewable sources** in 2022 is 481.3 GWh, **35.3% of the total**. This value increases by 4.5% thanks to greater production from waste-to-energy plants (+6.5%); on the other hand, the contribution from biogas combustion decreased (-5.9%), and photovoltaic remained stable. Production from **cogeneration and turboexpansion** constitutes 35.7% of the total. Finally, the electricity produced from traditional sources increased by 1.0%, which in 2022 constitutes 29.0% of the total generated; however, this is **highly efficient** production, as it derives from the waste-to-energy treatment for the portion exceeding 51% (considered biodegradable) and, therefore, classified as energy from recovery processes.

The incentive for the production of electricity through **green certificates** is granted to plants fueled by renewable sources, which entered into operation by 31 December 2012, and to cogeneration plants combined with district heating networks, which entered into operation by 31 December 2009. Since 2016, any residual right to the issue of green certificates has been converted into a tariff ("**GRIN**" Tariff), as envisaged by the Ministerial Decree of 6 July 2012.

In the case of electricity obtained from **waste**, the energy allowed for incentive purposes, and to which the aforementioned multiplier coefficients are applied, is limited to the portion produced from the biodegradable fraction of waste, as it is considered a renewable source by European and national standards. The Ministerial Decree of 6 July 2012 defines the criteria for evaluating this quota on a flat-rate basis, set at **51%** in the case of waste-to-energy plants fueled by urban waste downstream of separate waste collection. In calculating the share of energy produced from renewable sources, therefore, 51% of both electrical and thermal energy produced by the waste-to-energy plants was considered by applying the flat-rate criteria. This percentage was hypothetically applied to all the waste disposed of in waste-to-energy plants (urban and special) and for all three years considered, in order to have homogeneous and defined terms of comparison in line with current legislation. An exception is the special waste waste-to-energy plant in Ravenna, whose production, taking into account a practically zero biodegradability coefficient in the special waste disposed of due to its origin from industrial-type processes, is considered entirely non-renewable.

For cogeneration plants, the Ministerial Decree of 4 August 2011, implementing Legislative Decree 20/2007, establishes the methods for calculating the production from cogeneration, and for determining the efficiency of the cogeneration process for the purposes of qualifying **as high-efficiency cogeneration**. The subsequent Decree of the Ministry of Economic Development of 5 September 2011 established the support mechanism for cogeneration: the incentive is part of the **White certificates** market and is recognised by the Energy Services Manager, after the recognition of the qualification of "High efficiency cogeneration", based on the actual primary energy savings. This incentive is valid for 10 years, 15 if the plants are combined with district heating networks. In 2022, there are still three plants covered by the support mechanism (Barca, San Biagio, Bufalini), as the rest have exhausted their incentive period.

Thermal energy production

The following table shows the **production of thermal energy** from the Group's plants.

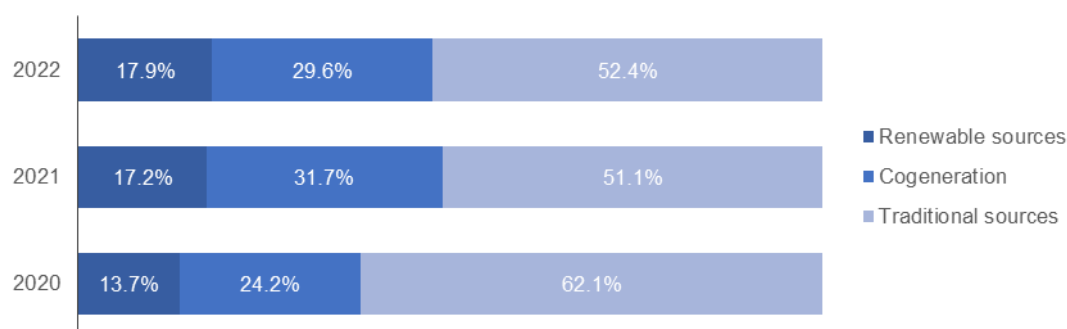
THERMAL ENERGY PRODUCED

GWh	2020	2021	2022	Installed power (2022, MW)
Waste-to-energy (51% renewable)	79.6	67.2	63.4	38.7
Geothermal	47.7	85.7	91.2	14.0
Combustion of biogas from waste treatment plants	6.9	8.9	7.9	1.8
Total renewable sources	134.2	161.8	162.5	54.6
Cogeneration	140.9	191.9	181.2	101.9
Industrial cogeneration at third parties	95.4	105.0	87.6	28.4
Total cogeneration	236.3	296.9	268.8	130.3
Thermal power stations	529.9	414.7	414.7	738.7
Waste-to-energy (49% non-renewable share)	76.5	64.6	60.4	37.2

GWh	2020	2021	2022	Installed power (2022, MW)
Total traditional sources	606.4	479.3	475.6	775.9
Total thermal energy	976.9	938.0	906.9	960.8

The total **thermal energy** generated by the Group's plants in 2022 is equal to **906.9 GWh**, down by 3.3% compared to the previous year. **47.6% comes from renewable sources and cogeneration plants** (in 2021 this share was 48.9%).

THERMAL ENERGY PRODUCED



In particular, the production of **thermal energy from renewable sources** in 2022 is 162.5 GWh (stable compared to 2021), making up **17.9% of the total** generated: the energy produced from geothermal energy is increasing again this year (+6.3%), while contributions from biogas combustion (-10.5%) and waste-to-energy plants (-5.7%) decreased. Thermal production **from cogeneration**, which represents 29.6% of the total, decreased by 9.5%. Finally, the electricity produced from traditional sources remains stable, which in 2022 constitutes 52.4% of the total. However, 12.8% of this production is **highly efficient** as it derives from the waste-to-energy treatment for the portion exceeding 51% (considered biodegradable) and, therefore, classified as energy from recovery processes.

Biomethane development

The excellent performance results of the **Sant'Agata Bolognese biomethane production** plant, launched at the end of 2018, are once again confirmed: in 2022, the plant generated **7.6 million cubic metres** of biomethane compared to approximately 123,000 tons of organic waste and lignocellulosic waste processed, confirming performance results higher than project forecasts. It was also possible to produce around 19,000 tons of **quality compost**. The lower biomethane production in 2022 compared to 2021 is mainly due to some technical problems and consequent maintenance periods that have temporarily slowed down production. However, the problems encountered have been identified and are being resolved.

The biomethane produced in 2022 was introduced into the network and **destined for automotive use** through five distributors in Emilia-Romagna (which can be used by residents with methane-powered vehicles), and two refueling points for the Tperdi Bologna **public transport**, identifiable by signs and graphics specification with the "Biometano Gruppo Hera" logo.

In the wake of this project, already in 2021 the Group had prepared and authorised **two further projects for the production of biomethane**, converting the two existing plants located in Spilamberto (Mo) and Voltana di Lugo (Ra).

In 2022 the **Spilamberto** plant was built and completed through the subsidiary company Biorg. Biorg is the result of the partnership between the Herambiente Group (agent of the Spilamberto plant) and the Inalca Group (owner and manager of the Nonantola plant) which, by pooling their assets and skills, have created in less than two years a standing example of industrial and concrete circular economy. The first injection into the Snam network of the biomethane produced by the Spilamberto plant (**about 60,000 m³**)

was carried out in December 2022. Also in this case, in addition to the renewable fuel, quality compost was also produced (about 230 tons) thanks to the synergy with the Nonantola composting plant, also managed by Bior. The two plants treated a total of around 9,300 tons of organic waste and lignocellulosic waste. Once fully operational, the project involving the two plants will make it possible to produce 3.7 million cubic metres of biomethane and 18,000 tonnes of compost each year, out of a total of approximately 120,000 tonnes of waste treated.

As regards the **Voltana** project, although it was already authorised for partial conversion to produce biomethane, Herambiente had to abandon the revamping of the plant, since the new incentive scheme issued in 2022, which will regulate the incentives starting from 2023, no longer allows incentives for reconverted plants fueled by municipal organic waste (unlike what is instead allowed for biomass plants).

Overall, the Group's goal by **2026** is to **produce 12 million cubic metres of biomethane per year** from organic waste. The goal for 2030 is even more ambitious, and foresees an annual production of 30 million cubic metres.

Hydrogen production

In order for hydrogen to make a significant contribution to the energy transition, it must be adopted in a wide range of sectors, even those in which it is currently almost completely absent. An example of this is mobility and, in particular, **local public transport**, an area in which this gas can make a concrete contribution to improving air quality in urban areas. Or, in the **industrial** field, there are energy-intensive sectors which are difficult to decarbonise (for example, due to the necessary heat requirements) such as steel, aluminium, chemicals, cement, bricks, ceramics, glass, paper and polymers; to mitigate the impact of these industries, alternatives such as biomass, the capture of CO₂ or, of course, hydrogen are being evaluated.

The Hera Group is evaluating new business opportunities in the field of **hydrogen development** precisely in public transport and in "hard-to-abate" sectors, also in partnership with other important economic operators and with various entities in the geographical areas served.

In **Modena**, a partnership agreement was signed between Hera, Herambiente and Snam to participate in the regional tender for the **conversion of abandoned industrial areas into new "hydrogen valleys"**. The project presented to the Region provides for the installation of a platform to generate **over 200 tonnes** of renewable hydrogen every year, more than half of which will be produced by a **photovoltaic system** installed on an abandoned landfill and on a reservoir on the site. For the project, a loan of 19.5 million euro was requested from the Region to partially cover the entire investment. The completion of construction and the commissioning of the plant is expected by 2026. Part of the hydrogen produced can be used to fuel the new Seta and Tper vehicles for local public transport, while the rest can feed the fuel-cell systems of local companies interested in reducing the carbon footprint of their production processes.

Furthermore, still in the Modena area, activities relating to the injection of **hydrogen into the gas distribution networks** continue. In particular, the **first national experiment** of hydrogen for civil use took place in Castelfranco Emilia. The project, which involves around thirty homes, aims to study the best solutions for using a mixture of hydrogen and natural gas in existing gas distribution networks. This approach can concretely contribute to reducing the environmental footprint of household consumption, and reducing the energy dependence that characterises traditional fossil fuels. See the case study "Hydrogen in the Modena gas distribution network" for additional information on this topic.

An innovative power-to-gas plant is being built at the **Bologna** Corticella waste treatment plant, closely integrated with the urban **waste water treatment process**, in order to store renewable energy that can be used to transform hydrogen into synthetic methane thanks to carbon dioxide. The final project was completed in 2022 and the authorisation process is still underway. The power-to-gas technology makes it possible to convert renewable electricity into synthetic natural gas, similar to biomethane. In detail, the installation of a **1 MW electrolyser** for the production of green hydrogen through **water electrolysis** is envisaged; inside a special biological methanator, the hydrogen is then converted into methane by combining it with the carbon dioxide naturally present in the biogas produced in the waste treatment plant itself. The system makes it possible to recover and convert the surplus of renewable electricity, which is difficult to manage for the electricity distribution network, into an easily storable energy source (biomethane). By integrating the electricity grid with the gas grid (sector-coupling), this technology can be exploited to ensure, in the future, greater sustainability and flexibility of the national energy system through the decarbonisation of the production and end-use sectors of energy.

Development of energy communities

During 2022, the Hera Group studied the regulations and the various service models relating to the possibility of widespread self-consumption by renewable source plants, the so-called **renewable energy communities**. The underlying principles are: **renewable sources**, **energy sharing** (between condominiums, companies or public administrations), and **incentives** for the development of this configuration.

To this end, the Group has developed an offer model that supports the various stakeholders in the creation of these configurations, offering support for their creation, and making plants and long-term management available. Starting from the energy balance of the configuration, the most suitable plant for the configuration is defined in terms of size, designed, built and, once made operational, the process is managed to obtain the foreseen incentives; it is therefore necessary to give adequate information to the contact person of the renewable energy community (be it a condominium administrator or a member of the configuration), supporting him in the multi-year management of incoming and outgoing participants and in the distribution of the incentives.

This is what was done in the **first collective self-consumption pilot project** on a block of flats in **Bologna**, one of the first experiences in Emilia-Romagna and one of the few at a national level. In this case, a 20 kW system was installed for 18 apartments and will be put into operation during 2023.

The first tools to support configuration development activities were also built, including a section on the Hera Comm website for the **promotion** of these solutions (and the related environmental, social and economic advantages), and the collection of expressions of interest to participate as founders or members of the communities.

Pending the completion of the regulatory framework, we expect a strong expansion of configurations of energy communities equipped with large plants, probably developed on land made available by individual local communities: these configurations will have to attract the support of a large number of residents to maximize their economic benefits; therefore, they could be more complex to set up and manage. In this scenario, we expected a stronger need for the communities to be supported by a partner that can make its skills available not only in the delicate phases of gathering adhesions and planning the configuration, but also in making new systems available for implementation, in managing the systems over a period of multiple years (a challenging task, requiring more than just running the plants at maximum efficiency), in tracking incoming and outgoing members, and in managing the distribution of incentives collected through algorithms, and the applicable tax legislation.

Over the next few years, Hera will support condominiums, companies and public administrations in the development of plants and in the launch of the first energy sharing projects, trying to seize all the opportunities that will be offered at a national (for example through the PNRR economic recovery plan) or regional level for the development of these configurations.

Renewable energy for the Hera Group

In 2022, the electricity consumption of the main Group companies was **100% covered by energy from certified renewable sources**.

CONSUMPTION OF ELECTRICITY FROM RENEWABLE SOURCES

GWh	2020	2021	2022
Consumption of electricity from the grid from renewable sources (GO)	465.8	471.2	555.4
Total electricity consumption from the grid	561.2	572.8	555.4
Consumption of electricity from the grid from renewable sources (%)	83.0%	82.3%	100%

In 2022, 100% of electricity consumption will come from renewable sources, **anticipating the achievement of the target** set for 2023.

Renewable energy for our customers

As an energy partner, Hera Comm aims to accompany its customers on an integrated path aimed at the conscious use of resources, energy efficiency and sustainability.

Once again this year the company confirms the Group's **sustainability strategy**, guaranteeing **for the entire range of energy offers** the supply of electricity from **renewable sources** certified by the Energy Services Manager (Guarantee of Origin), and the **offsetting of CO₂ emissions** from the consumption of natural gas by customers through the purchase of carbon credits certified by international standards (Gold standard e Verra – Verified carbon standard) that support decarbonisation projects, with a positive impact on the environment and society in general. In 2022, in continuity with 2021, purchases of carbon credits contributed to the completion of the following projects:

- A 280 MW **hydroelectric plant** in Turkey, capable of generating around 800 GWh/year of energy, with an estimated benefit of around 470,000 tonnes of greenhouse gases avoided each year. Support for this project has also made it possible to create jobs for the local community during the construction and management phases, and to avoid floods downstream of the project's activities, contributing, at the same time, to the protection of some animal species in the area, such as migratory waterfowl.
- A 25 MW **wind farm** in India, built by local know-how and which gave employment to and fostered economic development in the local community, with an estimated reduction of around 30,000 tonnes of greenhouse gases per year.

Customers that choose these offers also contribute to reducing paper consumption, thanks to the electronic delivery of bills, and no need to travel, thanks to direct wire transfers.

ELECTRICITY AND GAS CONTRACTS AT THE END OF THE YEAR WITH "GREEN" OFFERS

	2020	2021	2022
Electricity contracts at the end of the year with the supply of renewable energy (% of total electricity contracts, excluding safeguards)	28.0%	36.9%	58.0%
Gas contracts at the end of the year with offsetting of CO ₂ emissions (% of total gas contracts, excluding default and last-resort supply)	9.6%	20.1%	25.7%
Electricity and gas contracts with "green" offers (% of total electricity and gas contracts, excluding safeguard, default and last-resort supply)	16.6%	26.9%	39.4%

The data do not include Eco Gas, Con Energia and AresGas.

At the end of 2022, customers who have chosen the supply of "green" energy are over 1.2 million, and represent **39.4% of the total, an increase of 42.6%** compared to 2021 (884,000 customers). The result was also achieved thanks to the extension of these options **to the entire portfolio of offers**, as well as to the recent acquisition of commercial companies.

Specifically, contracts with the supply of renewable electricity amount to 58.0% (788,000, +60.6%), while contracts with gas offsetting CO₂ emissions amount to 25.7% (472,000 contracts, +20.0%).

The indicator is calculated excluding contracts relating to safeguarding, default and last-resort supply services since, by their nature, it is not possible to propose offers in line with the Group's commercial strategy in these markets. Including these segments as well, 37.4% of energy contracts provide for the supply of "green" energy (57.1% of electricity contracts and 23.7% of gas contracts)

During 2021, the range of offers for renewable energy was enhanced with the **Hera Photovoltaic** option, which allows purchasing photovoltaic panels through a "turnkey" service that starts from technical inspections and extends to the management of administrative and tax procedures. In 2022, 1,297 photovoltaic panels were sold for a total installed power of 6,990 kW. The total since the start of the offer is **1,549 panels**, for a total power of **7,840 kW**.

From 2018 to 2021, Hera Comm purchased electricity from **renewable sources** in quantities such as to fully cover the consumption of all free market customer households, not just those that had opted for the dedicated offer. The operation, which involves the purchase of **Guarantee of Origin** certificates, was

possible thanks to availability and price conditions such as to be able to fully cover the consumption of free market customer families who had not chosen to purchase energy renewable electricity. In 2022, in consideration of the increase in the prices of energy vectors and pending their stabilisation, the operation was not given continuity. However, the business plan objective is to increase the percentage of renewable electricity sold to customers on the free market, up to 44% in 2026 and over 50% by 2030.

In 2022, **4,377.4 GWh of renewable energy** were procured for the free market, equal to **41.1% of the total** (vs 45.1% in 2021). Of these, 3,804.5 GWh were covered by Guarantee of Origin (GO) certificates, while the remainder is represented by the residual share of renewable electricity present in the national complementary energy mix.

RENEWABLE ELECTRICITY SOLD ON THE FREE MARKET

GWh	2020	2021	2022
Renewable electricity sold	3,809.2	4,582.6	4,377.4
Electricity sold on the free market	10,353.6	10,159.5	10,658.2
Renewable electricity sold (% of volumes sold on the free market)	36.8%	45.1%	41.1%

The calculation takes into account the Guarantees of Origin purchased by Hera and, for the remaining part of electricity, the latest GSE data available relating to the national complementary energy mix. The final balances for the years prior to the reporting year have been updated on the basis of the latest GSE data available at the time the Financial Statements were drawn up. The data do not include Eco Gas, Con Energia and AresGas.

Also considering the enhanced protected, gradual protected and safeguarded service markets, in 2022 **a total of 4,506.1 GWh of renewable energy were sold, equal to 36.9%** of the total electricity sold (vs 40.2% in 2021). By their nature, these markets do not allow customers to be proposed offers in line with the Group's commercial strategy: in fact, the law does not provide for the service offered to these customers to include the supply of energy from renewable sources. For the enhanced protected service, the purchase of electricity which is sold to customers is the responsibility of the Single Buyer (also in this case, the share of renewable electricity present in the national complementary energy mix is considered at 8.4%, based on the latest available data).

Sales of **methane gas with offsetting of CO₂ emissions** grew further in 2022, after the start of the marketing of this offer in 2019: the share sold with offsetting of emissions on the free market **increased from 0.8% in 2019 to 14.2% in 2022** (11.2% in 2021).

METHANE GAS sold on the free market with CO₂ emissions offsetting

million sm ³	2020	2021	2022
Natural gas sold with CO ₂ emissions offsetting	127.4	288.3	379.6
Natural gas sold on the free market	2,527.7	2,578.6	2,676.6
Natural gas sold with CO₂ emissions offsetting (% of volumes sold on the free market)	5.0%	11.2%	14.2%

The data do not include AresGas.

Also considering the protected markets and those relating to default services and last-resort supply, the total methane gas sold with CO₂ emissions offset in 2022 was 10.8% (8.6% in 2021).

2.04 Climate change mitigation

Hera for the climate

The challenge of climate change and the Hera Group's commitment

Climate change is one of the greatest challenges humanity must face today. Accepting this challenge means starting an **ecological transformation** of technology, economy and society. Fossil fuels are among the main causes of climate change, and it is, therefore, essential to reduce their consumption to limit the increase in the main gas responsible for the greenhouse effect: carbon dioxide.

The Group's commitment in this area starts from a variety of actions undertaken in terms of **mitigation and adaptation** discussed in this chapter.

The Group's strategy for the mitigation of climate change mainly takes the form of:

- choice of **renewable electricity** to power one's activities;
- increase in the **production of energy from renewable sources** (in particular, biomethane and geothermal energy to support district heating and photovoltaic);
- initiatives and projects to **reduce one's carbon footprint**. For example: ISO 50001 certified energy efficiency plans and lower environmental impact on the Hera fleet;
- offer of solutions for **reducing the carbon footprint of residents and customers** in all segments (households, condominiums, businesses and public administration). For example: sale of electricity from renewable sources and methane gas with offsetting of CO₂ emissions, additional services to households and businesses for energy efficiency, development of district heating, energy efficiency and renewable electricity in public lighting, energy upgrading of buildings, and support for urban electric mobility;
- promotion and implementation of **circular economy** initiatives, such as sorted waste collection, commitments on plastic recycling and production of biomethane from organic waste;
- implementation of **technological and plant innovation projects and initiatives** for a higher environmental sustainability of the activities;
- initiatives under study, also in partnership with other companies, aimed at **developing hydrogen as an energy vector**.

Since 2006, the Hera Group has been a member of CDP, an independent non-profit organisation which offers companies and countries a system for measuring, detecting, managing and sharing information on climate change and the sustainable use of water resources on a global level. Membership of the CDP requires the participants to **measure and report on** all performance and the initiatives and strategies implemented to reduce greenhouse gas emissions. In 2022 Hera was rated as **level B** (on an A-D scale), **in line with the European average and the "Energy utilities network" sector average, and higher than the global average** (level C).

Once again in the context of **reporting**, this assessment contains:

- the results of the process of **alignment with the Recommendations of the Task Force on Climate-related Financial Disclosure (TCFD)**, which began in December 2019 and involved numerous Departments and all the Group's Business Units;
- the reporting of greenhouse gas emissions validated by the **Science Based Targets initiative** in March 2021.

TCFD recommendations

In 2015, the Member States of the United Nations Organisations signed the **Paris Agreement**, by which they undertook to keep the increase in the global average temperature below 2°C compared to pre-industrial levels, and possibly limit its increase to 1.5°C by the end of the 21st century (the latter objective also confirmed by the latest COPs in Glasgow and Sharm El-Sheikh). In the same year, the G20 **Financial Stability Board (FSB)** established the **Task Force on Climate-related Financial Disclosures (TCFD)** with the aim of supporting organisations towards greater transparency about the financial opportunities and risks associated with climate change. In 2017, the TCFD published its reporting recommendations (updated in 2021), which today represent an international reference for the management of climate risks by companies. The **TCFD recommendations** are applicable to organisations across all sectors and classified into four areas: Governance, Strategy, Risk Management, and Metrics & Targets.

The Hera Group has decided to adopt the approach proposed by the TCFD by launching a process of alignment with the recommendations in December 2019, the results of which were published in the 2020 Dnf (Non-financial declaration) and in the **"Hera for climate" report**. The working group dedicated to

TCFD is composed of: Shared Value and Sustainability Department, Enterprise Risk Management, Central Department of Regulation Strategy and Local Authorities, and Energy Management. In some phases the following were also involved: Central Innovation Department, Central Administration, Finance and Control Department, Central Personnel and Organisation Department, Quality, Safety and Environment Department, and the Business Units.

Governance related to climate change

At the level of the **Board of Directors**, the supervision of the risks and opportunities related to climate change is supported by the **Control and Risk Committee**, by the **Risk Committee** and, indirectly, by the **Ethics and Sustainability Committee**, whose duties include monitoring the implementation of sustainability policies and the preventive evaluation of the sustainability report to be submitted to the Board of Directors.

The **Chief Executive Officer** is responsible for ensuring the implementation of the sustainability and shared-value guidelines, through the Shared Value and Sustainability Department, whose duties include the coordination of the **balanced scorecard system**. The **Chair of the Board of Directors**, in addition to presiding over the **Executive Committee**, is responsible for defining the strategic guidelines and for decisions relating to the **allocation of capital**. In fact, the Central Department for Regulation Strategy and Local Authorities reports directly to him.

The **Control and Risk Committee** is the advisory body set up in application of the Self-Regulatory Code, in order to support the decisions and assessments of the Board of Directors relating to the internal control and risk management system, including those deriving from climate change, with adequate preliminary activities.

At management level, the **Risk Committee** defines risk management policies and develops specific guidelines and objectives for the business units. In 2021, its functions were updated by making climate change explicit in the list of significant risks that the Committee must deal with.

The **Shared Value and Sustainability Department** has among its responsibilities some of the key elements to ensure the good management of climate risks and opportunities. In fact, the Management coordinates the process of defining the balanced scorecards, prepares the Company guidelines and reporting in the area of Shared Value and Sustainability, and develops new sustainability projects. Furthermore, the head of the Department is also a member of the Group's **Ethics and Sustainability Committee**.

The **Central Strategy, Regulation and Local Authorities Department** plays a key role in the resilience of the Group's strategy. The Management's prospective and future-oriented analysis skills were fundamental in performing the **first analysis of the Hera Group's climate scenarios**. Among the initiatives identified to seize the opportunities defined through scenario analysis, the most promising have been included in the 2022-2026 Business plan.

The **Central Administration, Finance and Control Department**, as it pertains to the management of climate-related opportunities and risks, in particular for the activities of defining the annual budget and raising capital, and the **Energy Management function**, which supports the Chief Executive Officer in the development of energy saving initiatives, play a role in the organisational structure of the Hera Group.

The internal documents listed below have been updated in the course of 2021, with the aim of **strengthening the governance of aspects related to climate change**: Management system manual, Group risk management policy (guidelines), Management control planning (guidelines), Management system management review (procedure), Investment authorisation process (procedure) and Business impact analysis methodology and risk assessment (procedure). In particular, the reference to the analysis of medium-long term climate scenarios was introduced in the "**Group Risk Management Policy**" guideline, while the "**Management Control Planning**" guidelines specify that the strategic planning process must include the medium-to-long term industrial development in line with the corporate "Purpose" and, therefore, with the pursuit of carbon neutrality, one of the three areas of shared-value creation.

The management system and Enterprise risk management

The quality, safety, environmental and social responsibility **management system** is the set of interrelated or interacting elements that support the implementation of the Hera Group's policies and objectives in a large number of areas, including those relating to climate change.

As regards the processes for **identifying, assessing and managing climate risks**, the organisational structure adopted by the Hera Group makes it possible to manage exposure to risk deriving from its

businesses and, at the same time, to preserve the effectiveness of management along the entire value chain.

In the corporate governance system, the **Control and Risk Committee**, within the Board of Directors, has the task of supervising the operation of the internal control system, the efficiency of corporate operations, as well as compliance with laws and regulations.

The Control and Risk Committee regularly receives information from the **Risk Committee**, which represents the main body for guidance, monitoring and information relating to risk management strategies, including those pertaining to climate. The Risk Committee is responsible for defining the guidelines for the **Enterprise Risk Management** process, the mapping and monitoring of company risks and the definition of the **Risk Policies**, to be submitted to the approval of the Board of Directors.

The specific risk analyses are conducted by the **Enterprise Risk Manager** or by the Risk Specialists, who play an essential role in the identification, assessment and control of risk management methods. Climate-related risks, both physical and transitional, are included among the risk categories for which an analysis has been initiated by the Enterprise Risk Manager.

Starting from 2020, the **climate scenario analysis** conducted by the cross-functional working group has led the Enterprise Risk Manager to define new quantification methodologies in order to estimate the potential financial impact of the most significant climate risks.

Analysis of climate-related scenarios

Scenario analysis is a methodology used to test the **resilience of business plans** under different assumptions of future developments. In the context of climate change, the study of scenarios makes it possible to understand how physical and transitional **climate opportunities** and risks can affect business over time.

To carry out its analysis, the Hera Group selected the **two most relevant scenarios** from the nine taken as a starting point.

The **IEA ETP 2DS transition scenario**, developed by the International Energy Agency, was selected as the “ambitious” climate scenario, which describes a future evolution characterised by strong decarbonisation processes to keep the increase in average temperatures below 2°C.

IEA ETP 2DS TRANSITION SCENARIO: 2050 KEY PARAMETERS

Energy	■ Energy intensity (TWh/GDP): -67% vs. 2013
	■ Production of advanced biofuels: increases 20-fold from 2020 to 2025
	■ Import price of natural gas: \$10.2/MBTU (2017: \$5/MBTU)
Electricity	■ Strong increase in renewable electricity production
	■ Emission factor: <40 gCO ₂ /kWh (2017: 484 gCO ₂ /kWh)
	■ 50% of solar generation from domestic panels (distributed generation)
Greenhouse gas emissions	■ Electricity demand: +68% vs. 2017
	■ CO ₂ emissions: -54% vs. 2017
	■ CO ₂ price: up to 210 dollars/tCO ₂ (2017: 5.8 Euro/tCO ₂)
	■ Carbon capture utilisation and storage (Ccus): 3,500 MtCO ₂ (2017: 2.4 MtCO ₂)

The **IPCC RCP 8.5 physical scenario** was selected as a “pessimistic” scenario, to understand the possible impacts on the Hera Group’s strategy in the event of a “business-as-usual” trajectory and consequent sharp increase in the average temperature (about 4°C). The indicators available in the models that simulate the RCP 8.5 scenario were selected starting from the results of an analysis previously conducted by Enterprise Risk Management, which involved the business units, to identify the climate-related events to which they are most exposed.

RCP 8.5 PHYSICAL SCENARIO: KEY PARAMETERS

Dimension	Parameter	1980-2005	2050 Trends
Rainfall	Days with heavy rainfall	23 days	↘
	Rainy days	90 days	↘
	Consecutive days without rain	25 days	↗

Dimension	Parameter	1980-2005	2050 Trends
Temperatures	Average maximum temperature	17.5°C	↗↗
	Average minimum temperature	8.5°C	↗↗
	Heating degree days	1950 days	↘↘
Sea	Sea level	+8 cm (vs. 1990)	↗↗

Timelines have also been defined in order to distinguish and classify risks, opportunities and impacts among those in the short, medium and long term. This strategic approach makes it possible to go beyond the traditional time frame of the Business plan.

Short term	Middle term	Long term
0 to 5 years	5 to 10 years	10 to 30 years
Business plan time period	Decarbonisation targets time period	European Green Deal time period

Risks and opportunities resulting from climate change

[201-2]

The analysis of the ETP 2DS and RCP 8.5 climate scenarios made it possible to identify **eight physical risks**, **eight transition risks** and **15 opportunities**. Each risk and each opportunity has been associated with:

- a time period;
- a priority level (defined as a combination of the level of probability that the context in which Hera operates will change according to what is described by the risk/opportunity and the impact of the risk/opportunity on the business);
- one or more management methods (for risks) and one or more business initiatives (for opportunities).

Physical risks

The analysis of the RCP 8.5 climate scenario conducted by the Hera Group, combined with the investigations already carried out by Enterprise Risk Management and the support of the business units, made it possible to identify **eight physical risks**. The risks are spread over the two medium- and long-term time horizons, with a higher number of occurrences in the 2031-2050 timespan, in line with the notion that the impacts of climate change will become increasingly evident in the long term. To mitigate, manage or transfer these risks, **21 management methods** have also been identified, which allows the Group to be better prepared in view of possible future changes.

Some of the management methods envisaged in the 2022-26 Business plan are indicated in the following paragraph: Hera's strategy for climate".

RCP 8.5 SCENARIO: OVERVIEW OF PHYSICAL RISKS AND MANAGEMENT METHODS

8 Physical risks		21 Management methods (no. and risk categories)
Change in meteorological phenomena	2 medium term 2 long term	6 Acute 8 Chronic
Temperature rise	2 medium term 1 long run	2 Acute 3 Chronic
Sea level rise	1 long run	2 Chronic

Short-term timespan: 2022-2026; middle term: 2027-2030; long term: 2031-2050

Of the eight physical risks assessed, those characterised by a higher level of priority were subjected to in-depth investigations to simulate the relevant **impacts**. In particular, the risk associated with the **drop in the consumption of gas and district heating** for civil use following the **increase in temperature**

was considered significant in the long term. For further details as to the simulations and quantifications of impacts, including financial impacts, of this risk, see paragraph 1.02 “Risk factors: subjects, methodology and areas of management” in the Director’s report, while for evaluations concerning the positive effects in terms of impairment test, see paragraph 2.02 “Explanatory notes” of the consolidated financial statements.

As part of the risk management activities carried out within the Hera Group, in 2022 the company **assessed the risks correlated with weather-climate events**, with particular reference to floods and their effect on the Group’s assets; in this regard, it completed a risk assessment project called **“Analysis of hydraulic risk in the climate change field”**. See the chapter “Resilience and adaptation” for additional details in this regard.

Transition risks

The climate transition risks have been identified mainly through the analysis of the ETP 2DS scenario of the International Energy Agency. The analysis led to the mapping of **eight transition risks**, mainly concentrated in the medium term and distributed over two of the three categories of the classification suggested by the TCFD. To mitigate, manage or transfer these risks, **13 management methods** have also been identified, which allows the Group to be better prepared in view of possible future changes. Some of the management methods envisaged in the 2022-26 Business plan are indicated in the following paragraph, “Hera’s strategy for the climate”.

IEA 2DS SCENARIO: SUMMARY OF TRANSITION RISKS AND MANAGEMENT METHODS

8 Transition risks		13 Management methods (no. and risk categories)
CO ₂ : -54% by 2050	4 medium term	1 Regulatory policy/Reputation 2 Regulatory policy 1 Market 1 Reputation
Electricity: increase in demand and share of RES	3 medium term 1 long run	3 Technology 3 Market 2 Regulatory policy
Short-term: 2022-2026; Medium term: 2027-2030; Long term: 2031-2050		

The transition risks considered to be priorities were analysed in order to evaluate their **financial impacts**. The risks relating to **energy efficiency** trends and **the electrification of consumption**, and the extension of **carbon pricing systems**, deserve further evaluation. Management methods and monitoring indicators have been outlined for each risk class.

Assessments are also underway on the effects of transitional risks from **electrification of consumption** for the electricity and gas distribution networks, and for the end customer market. For further details as to the simulations and quantifications of impacts, including financial impacts, of this risk, see paragraph 1.02 “Risk factors: subjects, methodology and areas of management” in the Director’s report, while for evaluations concerning the positive effects in terms of impairment test, see paragraph 2.02 “Explanatory notes” of the consolidated financial statements.

Opportunities

The opportunities deriving from the decarbonisation processes have been identified by the Hera Group through the study of the ETP 2DS scenario of the International Energy Agency. The analysis led to the identification of **15 opportunities**, mainly associated with forecasts for the reduction of greenhouse gas emissions produced, the increase in the demand for electricity and greater penetration of renewable energy sources, and the development of advanced biofuels. Most of the opportunities are foreseen in the short term and **37 initiatives** have been identified to seize them.

There are 10 opportunities classified as **relevant in the short term** (by 2025). The initiatives designed to collect the most promising opportunities have been further developed to inform the new Hera Group **2022-2026 Business plan**. The following paragraph describes how the new Plan seizes the opportunities to participate in the decarbonisation process, and which initiatives will be implemented to achieve the objectives.

IEA 2DS SCENARIO: SUMMARY OF OPPORTUNITIES AND INITIATIVES

15 Opportunities		37 Initiatives (number and categories of opportunities)
CO ₂ : -54% by 2050	6 short term 1 long term	6 Resource efficiency 1 Energy sources 6 Products and Services 5 Markets
Electricity: increase in demand and share of RES	3 medium term 3 long term	8 Products and Services 3 Energy sources 1 Resource efficiency
Energy: increase in advanced biofuels	1 short term 1 medium term	6 Energy sources 1 Products and services
Short-term timespan: 2022-2026; Medium term: 2027-2030; Long term: 2031-2050		

Hera's climate strategy

The Hera Group's 2022-2026 Business plan takes the sustainability guidelines of **European policies** as a reference and confirms the **Sustainable Development Goals** at the basis of the creation of shared value.

The reference framework of the new Business plan is made up of **three strategic dimensions** that represent the great challenges of the sector: **ecological transition, innovation and cohesion and social development**. The Group's projects hinge on these strategic dimensions in all businesses supervised, with the aim of combining the industrial development of the multi-utility with that of the context in which the Group operates, promoting well-being for all stakeholders and generating shared value ("Shared-value" Ebitda).

The "Shared-value" Ebitda indicator measures the portion of the Group's consolidated Ebitda generated by business activities that respond to the drivers of change and the related impact areas identified in the shared-value creation model that guides Hera's approach to sustainability.

In the shared-value creation model, updated last year, one of the three drivers of shared value creation is the **pursuit of carbon neutrality**, for managed services and for the benefit of customers and the reference territorial ecosystem. The actions envisaged to combat climate change, therefore, play an important role in the environmental sphere and in the model of creating shared value.

The strategic structure looks beyond the period covered by the Plan, reaching 2030. Here the objectives for reducing greenhouse gas emissions in line with the criteria of the Science Based Targets initiative stand out in particular, in relation to which it is possible to find ample discussion in the following paragraph.

The procedures for managing physical and transition risks and the business initiatives associated with the opportunities included in the 2022-26 Business plan are shown below.

Physical risk	Time period	Priorities	Management method
Floods with consequent landslides and mudslides	Medium term 2026-2030	Medium-high	- Interventions for the infrastructure upgrading of drainage networks, accumulations and purification plants - Increased alert capacity for extreme events in sensitive areas
Rising temperatures	Long term 2031-2050	Medium-high	Market strategies oriented towards the development of strategic environmental assessments (VAS) dedicated to customers to integrate and enrich the offer portfolio
Extreme weather phenomena	Medium term 2026-2030	Medium-low	Grid resilience plan and upgrading of the electricity distribution network in the face of extreme winter events, with interventions on overhead lines and substations

Physical risk	Time period	Priorities	Management method
Changes in the time distribution of annual precipitation and average rainfall quantities	Long term 2031-2050	Medium-low	- Strengthening and expansion of supply sources to increase the resilience of the aqueducts. Creation of interconnections between water networks - Enhancement of the application of advanced leak detection techniques to increase the level of efficiency of network

Transition risk	Time period	Priorities	Management method
Electrification of energy consumption and development of renewable energy sources	Medium term 2026-2030	Medium-high	- Commercial proposal aimed at the development and sale of photovoltaic systems, consumer and utility scale, and the development of sustainable mobility - Acquisition of increasing shares of customers in the electricity sector, as a result of the energy carrier switch - Development of gas networks for flexibility needs in the use of renewable gases - Greater presence in the electricity distribution sector
Limits on the generation of greenhouse gas emissions	Medium term 2026-2030	Medium-high	Reduction of the Group's carbon footprint with energy efficiency projects, increasing the optimised management of consumption and the use of zero-emission energy sources
Introduction of measures that require structural and non-structural efficiency measures	Medium term 2026-2030	Medium-high	- Specific projects activated in the field of energy efficiency - Strengthening of advanced techniques aimed at limiting the use of primary resources, in the field of: - water (reduction of water leaks, reuse of water resources) - waste (initiatives to enhance recovery and recycling)

Opportunities	Time period	Priorities	Initiative
Policies on air quality and urban emissions, with associated incentives intended to promote efficient district heating systems	Short term 2022-2025	Medium-high	- Saturation of production capacity of current district heating systems - Conversion of district heating systems to "Efficient District Heating Systems" - Installation of capture, use and storage of CO₂ for waste-to-energy plants "CLIMA" project for the reduction of leaks in the gas network - Interconnection of district heating systems and geothermal source enhancement
Tax relief for energy efficiency and EU incentives for decarbonisation	Short term 2022-2025	Medium-high	Energy efficiency services for buildings
Customer awareness and growth of green offers by Utility companies	Short term 2022-2025	Medium-high	- Green loyalty programs value-added services for energy efficiency and carbon neutrality - NexMeter metres installation
Technological optimisation and plant efficiency	Short term 2022-2025	Medium-high	Optimisation of plants through revamping

Opportunities	Time period	Priorities	Initiative
Promotion of the circular economy and growth in the demand for recycled plastic and/or bioplastic	Short term 2022-2025	Medium-high	■ Expansion of plastic recycling business
Dissemination of renewable energy communities and environmental communities, and growth in the demand for distributed renewable energy	Short term 2022-2025	Medium-high	■ Promotion of the sale of domestic photovoltaic systems and heat pumps
Development of electric mobility and increased demand for electricity along road infrastructures	Short term 2022-2025	Medium-high	■ Fleet conversion to low-carbon vehicles and installation of electric charge stations
Production of biomethane through recovery processes (possible eligibility for incentives)	Short term 2022-2025	Medium-high	■ Production of biomethane from organic waste ■ Production of biomethane from garden refuse
Production of syngas and/or green gas (hydrogen, biogas) for the decarbonisation of the gas supply chain and for the management of any surplus production of renewable energy	Medium term 2026-2030	Medium-high	■ Construction of a power-to-gas plant for the accumulation of electricity and hydrogen production initiatives ■ Experiments with the injection of hydrogen into the gas network in Castelfranco Emilia (Mo) and extension to other areas
Strengthening of Hera's positioning as a reference for the sustainability of local area and cities	Short term 2022-2025	Medium low	■ Creation of an Energy Park
Development of photovoltaic fields on land available to Hera and not usable for other purposes	Short term 2022-2025	Medium low	■ Installation of photovoltaic panels on exhausted landfills, water service plants and other external sites

Climate performance and targets

The Hera Group's strategy for **seizing the opportunities** associated with decarbonisation and **mitigating the risks** of climate change is also governed by monitoring specifically defined **metrics**.

On the one hand, the indicators relating to **greenhouse gas emissions** and the related **intensity indexes** measure the Company's overall ability to reduce its impact on the climate and minimise risks. On the other hand, the **metrics that influence emissions**, reclassified in line with the guidelines of the TCFD (Guidance on metrics, targets, and transition plans – 2021). These quantitative measurements, which also include economic-financial indicators, capture the ways in which the Hera Group is redesigning its internal processes and, above all, the commercial offer to seize the opportunities offered by regulatory, technological and market evolutions related to decarbonisation.

The following table summarises types and number of indicators envisaged for each monitoring area. The indicators are shown in the attachments to this Report.

Monitoring scope	Indicators	Of which with target / forecasts
Emissions	12	10
Emission intensity indices	6	2
Risks and opportunities	4	0
Investments and use of capital	5	0
Remuneration	2	0
Other TCFD Metrics – Energy	12	9
Other TCFD Metrics – Resources	7	7

Monitoring scope	Indicators	Of which with target / forecasts
Total indicators	48	28

Hera Group's greenhouse gas emissions

The **Group's total greenhouse gas emissions** (Scope 1 + market-based Scope 2 + Scope 3) in 2022 amounted to approximately **13.2 million tonnes of CO₂e**.

In particular, the emissions directly produced by the Group (**Scope 1**) are approximately 937 thousand tons of CO₂e and represent 7.1% of the Group's total emissions. Indirect emissions deriving from the electricity consumed by the Group (**Scope 2**), calculated using the market-based method, are zero thanks to the total coverage of consumption with energy from renewable sources certified by the Guarantee of Origin.

The emissions caused indirectly by the Group's activities (**Scope 3**) are approximately 12.3 million tonnes of CO₂ and, or 92.9% of the Group's total emissions. Scope 3 emissions can be divided into "upstream" (upstream activities in the supply chain) and "downstream" (downstream activities in the supply chain) categories. Scope 3 of the Hera Group includes the following emission categories:

- upstream activities (4.7 million tonnes of CO₂e, 35.3% of total Group emissions): production of fuels used to generate non-renewable electricity sold to customers; production of natural gas sold to customers; production of fuel consumed in industrial cogeneration plants installed at third parties' locations; production of fuels consumed in owned vehicles; production of fuels consumed for the generation of non-renewable electricity consumed internally; network losses of electricity consumed internally; use of suppliers' vehicles for waste collection; use of Herambiente vehicles to transport waste; production and printing of paper bills;
- downstream activities (7.6 million tonnes of CO₂ e, 57.6% of total Group emissions): consumption by customers of methane gas sold; energy production from joint venture plants; and, waste recycling operations from sorted collection.

BREAKDOWN OF GREENHOUSE GAS EMISSIONS

thousands of t CO ₂ e	2020	2021	2022	Delta 2022/2021
Waste treatment (waste-to-energy plants and municipal waste landfills)	580.3	569.7	527.7	-7.4%
District heating	171.7	197.7	195.6	-1.0%
Energy services of ASE and HSE, and other fuel consumption	186.4	170.5	165.8	-2.8%
Gas network leaks	18.2	13.7	16.7	+21.6%
Company fleets	29.7	30.2	30.8	+2.0%
Total direct emissions (Scope 1)	986.2	981.8	936.6	-4.6%
Indirect emissions deriving from energy consumption (Scope 2, market-based)	44.4	46.6	0.0	-100%
Total emissions Scope 1+2 (market-based)*	1,030.6	1,028.4	936.6	-8.9%
Sale of methane gas – downstream emissions*	5,915.0	6,561.6	6,898.4	+5.1%
Sale of electricity*	4,195.8	3,170.3	3,357.1	+5.9%
Sale of methane gas – upstream emissions	769.0	1,122.9	1,175.2	+4.7%
Emissions related to energy production and consumption (not included in Scope 1 and 2)	309.3	359.6	283.0	-21.3%
Other indirect emissions relating to managed services	423.9	509.0	537.5	+5.6%

thousands of t CO ₂ e	2020	2021	2022	Delta 2022/2021
Total indirect emissions (Scope 3)	11,613.0	11,723.5	12,251.1	+4.5%
Total emissions Scope 1+2 (market-based) + Scope 3	12,643.6	12,751.9	13,187.7	+3.4%

The calculation criteria are aligned with the methodology of the Science-Based Targets initiative. The calculation specifications adopted are detailed in the Attachments. The Scope 1 data relating to gas network leaks do not include AresGas. The Scope 3 data relating to the sale of electricity do not include Eco Gas, Con Energia and AresGas. The Scope 3 data relating to the sale of methane gas do not include AresGas. The Scope 3 data relating to the sale of methane gas for 2021 have been aligned with the calculation methodology used for the 2022 data.

*Indicators with validated science-based target. For the sale of electricity, the target relates to carbon intensity (t CO₂e/MWh). See the dedicated paragraph "Reduction of Greenhouse Gas Emissions: Objectives and Results" for additional information.

In 2022, total greenhouse gas emissions (Scopes 1, 2 and 3) recorded an increase of 3.4% compared to 2021.

In particular, direct (**Scope 1**) and indirect emissions from electricity consumption (**Scope 2**) **decreased by 8.9%**. This is due to the lower emissions from the waste treatment plants (-7.4%, due to the shutdown of the waste-to-energy plant for special waste in Ravenna, because of revamping works throughout the year and the physiological reduction of the biogas produced by the landfill), and lower fuel consumption (-2.8%), including gas consumed in district heating plants (-1.0%). On the other hand, methane emissions from distribution networks (+21.6%, however slight in absolute terms) owing to higher dispersions underground compared to 2021, which have a high latency time and therefore a higher impact on the volumes of gas dispersed. On the other hand, fuel consumption in the company fleet (+2.0%, mainly due to greater petrol consumption in vehicles) increased. Excluding the Ravenna plant, Scope 1+2 emissions are reduced by 5.2%.

The Scope 2 emissions of 2022 are **zero** thanks to the total coverage of electricity consumption with certified renewable energy. Scope 2 emissions are calculated with the "market-based" method, making the most of the organisation's specific procurement choices, i.e., the purchase of renewable energy with certificates of Guarantee of Origin and, therefore, zero impact; the emission factor relating to the national "residual mix" is applied to the portion of electricity purchased without certificates (the latest available is equal to 457.6 g CO₂e/kWh). If calculated with the "location-based" method, thus applying a national average emission factor (equal to 255.0 g CO₂/kWh) which does not consider the Company's specific purchasing decisions, Scope 2 emissions amounted to approximately 142 thousand tonnes (154,000 in 2021, -7.9%).

The total indirect emissions of the **Scope 3** type in 2022 amount to approximately 12.3 million tonnes of CO₂ and, **up by 4.5%** compared to the previous year.

Emissions from the sale of methane gas increased by 5.1%, due to the significant increase in volumes sold in last-resort services (more than doubled compared to 2021), as a result of the sharp increase in the prices of energy vectors; the volumes sold relating to Consip tenders also increased (more than doubled compared to 2021).

With regard to the sale of electricity, emissions increased by 5.9% due to lower volumes of renewables sold on the free market in the household segment (-40.7%) and to public bodies served thanks to the award of Consip tenders (-56.6%). Furthermore, the increase in volumes sold on the safeguarded market (+21.1%) had an impact in this case as well; at the same time, overall volumes sold increased (+3.0%).

Indirect emissions relating to energy consumption and production decreased by 21.3% (mainly thanks to the total purchase of renewable electricity for internal consumption, which offsets impacts upstream of the supply chain, and the lower energy produced by the plants in which Hera holds a minor stake).

For a more detailed analysis of the trend in indirect emissions from the sale of methane gas and electricity, see the paragraph below relating to the greenhouse gas reduction objectives.

Greenhouse gas emissions under the EU-ETS program

The **European Union Emissions Trading System (EU ETS)** is a cornerstone of European policies to combat climate change, and represents a key tool for a cost-effective reduction of greenhouse gas emissions. The system covers about 40% of the emissions of the countries involved; its fourth phase of application began in 2021, and will end in 2030. On an annual basis, the plants in the regulated sectors must report the greenhouse gas emissions recorded, then void a number of **emission permits**

("European Union Allowances", 1 EUA = 1 ton of carbon dioxide equivalent) made available on the market in a calibrated measure, and decreasing over time to **encourage a progressive reduction of emissions** in accordance with long-term Community objectives.

The contribution to the achievement of the 2030 greenhouse gas emission reduction objectives (which went from -40% to **-55% on a 1990 basis**, compared to the time of enactment of the current ETS Directive, based on the "European Climate Law"), translates for sectors covered by the EU ETS in a reduction of -62% compared to 2005, a commitment agreed in December 2022 between the EU Parliament and the EU Council. A forthcoming revision of the ETS Directive will support these objectives also through an extension of the sectors involved.

In the Hera Group, there are **nine plants subject to the EU ETS regulation** in 2022, all attributable to the activity of energy production serving the **district heating** networks. Compared to 2021, they have increased by one unit following the acquisition of the energy plant serving the Bologna trade fair sector. Despite the new acquisition, the emissions recorded in 2022 (149,421 t CO₂) were in line with those of 2021 (150,508 t CO₂), thanks also to a milder climate.

To take into account the fact that district heating is a **public utility service** and that it meets environmental sustainability criteria, the burden associated with the final emissions imposed by the System is partly mitigated through the free assignment of emission permits, or a maximum amount of permitted emissions within which no costs are foreseen. For Hera, in 2022 this measurement was equal to a total of 31,644 t CO₂; in particular, the EUA assigned free of charge amounted to 8,391 t CO₂. Both values are up compared to 2021, but down net of the acquisition which took place in line with the **decreasing trajectory over time** that the regulation has envisaged to promote the achievement of long-term greenhouse gas reduction objectives.

In 2022, the emissions of plants under the Eu-ETS regime amounted to 16.0% of the Group's total direct emissions (in 2021 they were 15.3%).

Carbon intensity indices [305-4]

The Group's emissions results can be represented by means of a number of indicators which mark its evolution and prospects, giving an overview of the Company's performance in terms of reducing the impact of greenhouse gases released. By comparing direct (Scope 1) and indirect emissions from energy consumption (Scope 2) with some economic and demographic indicators, it is possible to obtain **carbon intensity indices** that reflect improvements generated.

CARBON INTENSITY INDICES

	2020	2021	2022
Total Scope 1 and 2 emissions (t CO ₂ e)	1,030,620	1,028,381	936,590
Ebitda (mn€)	1,123	1,224	1,295
Carbon intensity index (t CO ₂ and Scope 1 and 2 / gross operating margin in mn€)	918	840	723
Citizens served (thousands)	4,221	4,224	4,194
Carbon intensity index (t CO ₂ and Scope 1 and 2 / thousands of residents served)	244	244	223

The calculation criteria are aligned with the methodology of the Science-Based Targets initiative. The Scope 1 data relating to gas network leaks do not include AresGas.

The emission intensity index calculated by comparing Scope 1 and 2 greenhouse gas emissions to **Ebitda** further improved compared to the previous year (-13.9%) thanks to the GOP increase (+5.8%), but, above all, to the reduction of emissions (-8.9%). The same index calculated with respect to the **value of production** shows a strong improvement going from 94 tonnes of CO₂e in 2021 to 45 in 2022 (-51.6%) due to the strong increase in revenues (+88.3%). The ratio on a **citizen** basis improves by 8.3% thanks to the reduction of Scope 1+2 emissions against a substantially stable number of residents served. Finally, the ratio on a **customer** basis remains unchanged (5.2 tonnes per customer).

CARBON INTENSITY INDEX FOR ELECTRICITY SALES

	2020	2021	2022
Emissions from the sale of electricity (thousands of t CO ₂ e)	4,195.8	3,170.3	3,357.1
Electricity sold (TWh)	12,258.1	11,301.3	11,641.8
Carbon intensity index of electricity sales (t CO₂e / MWh)*	0.342	0.281	0.288

*Indicator with validated science-based target: -50% by 2030 compared to 2019. See the dedicated paragraph "Reduction of Greenhouse Gas Emissions: Objectives and Results" for further information. Scope 3 data relating to the sale of electricity does not include Eco Gas, Con Energia and AresGas.

The **carbon intensity index of the sale of electricity** in 2022 increases slightly to 0.288 t CO₂e/MWh (+2.8% compared to 2021) positioning itself at -21.0% compared to the base year (2019) taken as the reference for setting Science Based Targets. As anticipated, the reason is the lower volumes of renewable electricity sold with Guarantee of Origin out of the total compared to the previous year (-11.7%), especially in the Household (-40.7%) and Consip (-56.6%) segments, and for the simultaneous increase in volumes sold (+3.0%).

Reduction of greenhouse gas emissions: objectives and results

As part of the process of aligning reporting with the TCFD recommendations, the Company evaluated the climate and transition scenarios with a horizon of 2050. On the basis of these insights, 15 development opportunities for the businesses managed by the Group were identified and translated into initiatives during the preparation phase of the Business plan. These initiatives, together with the evolution of the energy and climate scenario, will lead to a reduction in the Group's both direct and indirect greenhouse gas emissions.

On the basis of the above, **objectives have been defined for reducing emissions by 2030** compared to 2019, consistent with the methodology of the **Science-Based Targets initiative** (as regards, in particular, the "Well-below 2°C" level, aimed at limiting the increase in the Earth's average temperature well below 2°C), and included in the **2022-2026 Business plan** approved in January 2023. The scope of the objectives regards both the emissions of the Group (Scope 1 and 2) and those of customers (Scope 3, relating to the sale of electricity and the sale of downstream methane gas) and, therefore, relates to 86.5% of the Group's total emissions for 2019. The objectives thus defined were submitted to the Science-Based Targets initiative at the end of January 2021, and subsequently updated in March 2021 in response to the request of the Science-Based Targets initiative.

The objectives for reducing greenhouse gas emissions consistent with the "Well below 2°C" scenario validated by the Science-Based Targets initiative are:

- Scope 1+2: **absolute reduction of 28%** by 2030 compared to 2019 (includes biogenic emissions deriving from the consumption of bioenergy and from the combustion of the biodegradable fraction of municipal solid waste);
- Scope 2: **to increase the share of certified renewable electricity purchased to cover internal consumption from 83% to 100%** by 2023;
- Scope 3 sale of downstream methane gas: **absolute reduction of 30%** by 2030 compared to 2019;
- Scope 3 electricity sales: **reduction of carbon intensity (t CO₂ e/MWh) by 50%** in 2030 compared to 2019 in line with the Sector decarbonisation approach (Sda).

Based on these objectives, the reduction of greenhouse gas emissions for the defined perimeter is expected to be 37% in 2030 compared to 2019.

These objectives will be achieved thanks both to the reduction initiatives described above and to exogenous aspects made explicit in the Cen energy scenario developed by Terna and Snam and taken as a reference for the definition of the targets: decarbonisation of electricity production, increase in energy efficiency, and electrification of consumption.

Below is a table with the trend for the last three years of the indicators with 2030 targets validated by SBTi. The 2026 forecast is also reported as per the 2022-26 Business plan. To more correctly represent

the trend of emissions with respect to the medium and long-term objectives, the final data from this balance are presented in an “adjusted” version, which sterilizes the increase in emissions associated with gas volumes sold in last-resort services, which, since the end of 2021, have recorded an extraordinary and transitory increase as a result of the sharp increase in the prices of energy vectors.

GREENHOUSE GAS EMISSIONS AND “SCIENCE-BASED” REDUCTION TARGETS

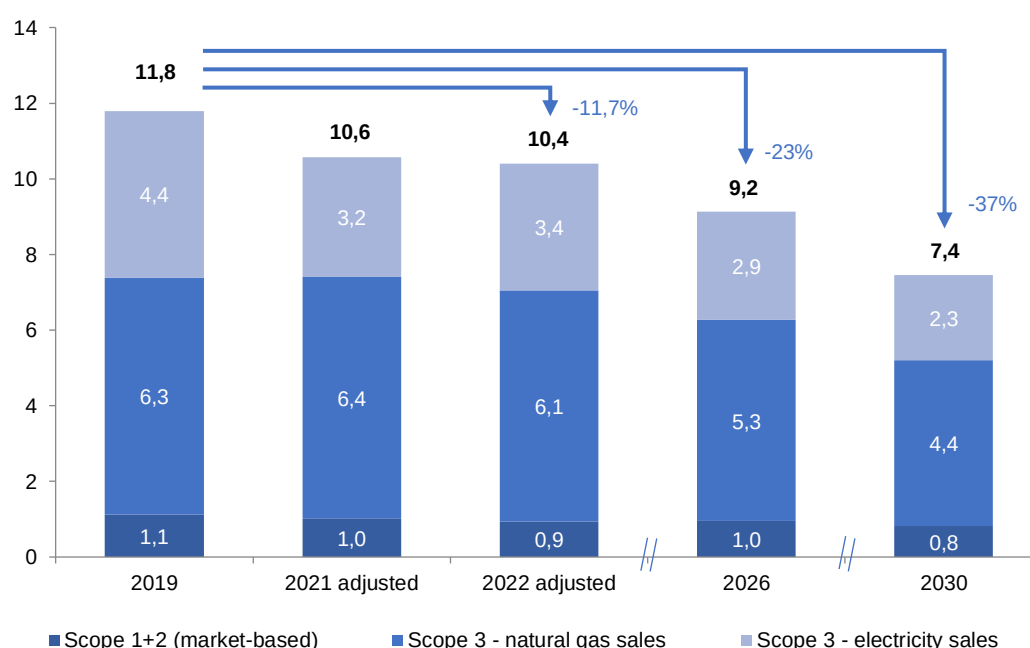
	2019 (base year)	Delta 2021/2019 (adjusted)	Delta 2022/2019 (adjusted)	2026 (forecast)	Targets 2030
Direct and indirect emissions Scope 1+2 (market-based)	1,131.0 kt CO ₂ e	-9.1%	-17.2%	-16%	-28%
Scope 2 indirect emissions (market-based) *	48.4 kt CO ₂ e	-3.7%	-100.0%	-100%	-100%
Indirect emissions Scope 3 downstream from the sale of methane gas	6,263.5 kt CO ₂ e	+1.8%	-2.4%	-15%	-30%
Carbon intensity of electricity sales - Scope 3 upstream	0.365 t CO ₂ e/MWh	-23.2%	-21.0%	-37%	-50%
Total SBT target perimeter	11,781.2 kt CO₂e	-10.3%	-11.7%	-23%	-37%

*corresponding to 100% renewable electricity purchased for internal consumption.

The calculation criteria are aligned with the methodology of the Science-Based Targets initiative. The 2019 figure includes the data relating to EstEnergy, Amgas Blu, Ascotrade, Ascopiave Energia, Blue Meta, Etra Energia, merged into Hera at 31/12/2019. The Scope 1 data relating to gas network leaks do not include AresGas. The Scope 3 data relating to the sale of electricity do not include Eco Gas, Con Energia and AresGas. The Scope 3 data relating to the sale of methane gas do not include AresGas. The Scope 3 data relating to the sale of methane gas do not consider the transitory increases in volumes sold in last-resort services. The Scope 3 data relating to the sale of natural gas for 2021 have been aligned with the calculation methodology used for the 2022 data.

In addition, the following graph shows the greenhouse gas emissions in the 2019-2022 period, those forecast for 2026 on the basis of the business plan and the 2030 targets validated by SBTi.

HERA GROUP GREENHOUSE GAS EMISSIONS (IN MILLIONS OF T CO₂e)



The calculation criteria are aligned with the methodology of the Science-Based Targets initiative. The 2019 figure includes the data relating to EstEnergy, Amgas Blu, Ascotrade, Ascopiave Energia, Blue Meta, Etra Energia, merged

into Hera at 31/12/2019. The Scope 1 data relating to gas network leaks do not include AresGas. The Scope 3 data relating to the sale of electricity do not include Eco Gas, Con Energia and AresGas. The Scope 3 data relating to the sale of methane gas do not include AresGas. The Scope 3 data relating to the sale of methane gas do not consider the transitory increases in volumes sold in last-resort services. The Scope 3 data relating to the sale of natural gas for 2021 have been aligned with the calculation methodology used for the 2022 data.

In the 2019-2021 period, **Scope 1 and 2** emissions recorded a reduction of 9.1%: this result was achieved mainly due to the reduction of emissions from waste treatment plants (also thanks to the closure in 2020 of the waste-to-energy plant for urban waste of Ravenna and the progressive reduction of urban waste sent to landfills) and, to a lesser extent, the district heating service, industrial cogeneration and the gas network in the form of leaks. Compared to 2021, in 2022 Scope 1 and 2 emissions decreased by 8.9% thanks to the zeroing of Scope 2 emissions with the purchase of only renewable electricity for the whole Group, the shutdown of the waste-to-energy plant for special waste of Ravenna (lasting throughout the year), the physiological reduction of emissions from landfills, and lower fuel consumption (deriving in part from energy efficiency measures and in part from climate control), and which also concern the cogeneration plants serving district heating and third-party companies. Excluding the Ravenna shutdown, Scope 1 and 2 emissions decreased by 5.2% compared to the previous year.

Compared to 2019, the 2022 reporting shows a 17.2% reduction in Scope 1 and 2 emissions.

As regards **Scope 3 emissions connected to the sale of methane gas** (downstream), the emissions recorded in 2021 compared to 2019 had increased by 1.8% due to the higher volumes sold in Consip tenders, after the decrease recorded in 2020 due to the milder temperatures and the lower need for thermal energy associated with the health emergency. In 2022, instead, emissions are reduced by 4.1% compared to 2021 as a result of the contraction in volumes sold due to milder temperatures, more efficient habits on the part of customers, households and condominiums, and the decrease in the corporate sector, particularly in the second half of the 2022 due to the sharp increase in the prices of energy carriers. These reductions are only partially offset by the more than double increase in the Consip segment.

Compared to 2019, the 2022 reporting shows a 2.4% reduction in Scope 3 emissions from gas sales. Also considering the volumes sold to last-resort gas services (which went from 96 million cubic metres in 2019 to 485 million in 2022), Scope 3 emissions from gas sales increased by 10.1%.

As regards the absolute **Scope 3 emissions connected to the sale of electricity**, the reduction recorded in 2021 compared to 2019 was 27.7%, mainly due to the higher volumes of renewable electricity sold and, to a lesser extent, the lower quantities of electricity sold. At the same time, the carbon intensity index of electricity sales fell by 23.2%. In 2022, absolute emissions increased by 5.9% compared to 2019, due to the lower volumes covered by renewable sources (-11.7%) and the parallel increase in volumes sold (+3.0%) exclusively due to the increase of the customer base, also in the safeguarding service; consequently, the intensity index also increased, by 2.8%.

Compared to 2019, the 2022 reporting shows a 23.5% reduction in absolute Scope 3 emissions from the sale of electricity and a 21.0% reduction in the carbon intensity index. This result was achieved thanks to higher volumes sold on the free market (from 30.2% in 2019 to 41.1% in 2022) against a decline in volumes sold (-3.1%).

In summary, considering the scope of greenhouse gas emissions for which the reduction objective by 2030 has been defined, the **third annual report** after the validation of the objectives by SBTi allows us to determine, keeping in mind the same volumes sold in last-resort gas services, a **decrease of 11.7%** compared to 2019.

Also considering the increase in volumes sold in last-resort gas services, significantly influenced by the trend of the energy market in the last period, the overall emissions relating to the perimeter of the SBT target are reduced by 5.0% compared to the base year.

Emissions avoided or offset

[305-5]

GREENHOUSE GAS EMISSIONS AVOIDED OR OFFSET

thousands of t CO ₂ e	2020	2021	2022
Direct emissions avoided (Scope 1)	458.5	487.3	474.8
Indirect emissions from energy consumption avoided (Scope 2)	156.2	148.4	162.3
Other indirect emissions avoided (Scope 3)	1,283.7	1,272.0	1,137.0
Compensated emissions	257.6	582.8	765.2
Total emissions avoided or offset	2,155.8	2,490.4	2,539.3

The 2020 and 2021 data relating to direct emissions avoided thanks to district heating have been aligned with the calculation methodology used for the 2022 data.

Thanks to the activities managed by the Group, around **2.5 million tonnes** of greenhouse gases were avoided overall in 2022. Comparing this value to the number of residents served, **605 kilogrammes of greenhouse gases per person were avoided**.

The emissions avoided or offset as a result of the following activities have been considered in the calculation:

- Scope 1: production of electricity and heat from renewable sources compared to the national average production mix; use of district heating compared to traditional heating with methane, LPG and diesel boilers; energy-saving measures compared to a scenario with unchanged consumption; sorted waste collection compared to a scenario with only unsorted waste collection;
- Scope 2: energy saving measures compared to a scenario with unchanged consumption; energy consumption from renewable sources compared to energy consumption as per national average mix;
- Scope 3: energy saving interventions in public lighting compared to a scenario with unchanged consumption; white certificates compared to a scenario with unchanged consumption; sale of renewable energy compared to the sale of energy as per national average mix; sale of recycled plastic from Aliplast vs sale of virgin plastic; to a lesser extent, household self-production thanks to the sale of photovoltaic panels and the use of recycled paper for printing bills compared to bills printed on non-recycled paper.

Furthermore, the **emissions offset** deriving from the sale of methane gas to customers are also included in the calculation (see the paragraph "Renewable energy for our customers" for further information) and, to a lesser extent, the CO₂ absorbed by trees planted as a result of the Group's initiatives.

3. Environment - Regenerating resources and closing the circle

3.01 Objectives, performance and targets

We said what we would do	What we did	SDGs	Progress*
Transition to a circular economy			
76% sorted waste collection by 2025, partially thanks to strong investments focused on the engagement of residents and businesses (77% Hera, 70% AcegasApsAmga, 73% Marche Multiservizi) (65.4% in 2021).	67.8% of sorted waste collection in 2022, up on 2021 (69.0% Hera, 57.2% AcegasApsAmga, 73.1% Marche Multiservizi). (see p. 78)	11, 12	
76% the recycling rate of packaging by 2025 and >80% by 2030 (higher than the EU 2030 targets).	68% packaging recycling rate in 2021. The overall recycling rate is 57% in 2021 (+2 p.p. compared to 2020). The 2022 data will be reported in the "Sulle tracce dei rifiuti" (Tracking waste) report. (see p.356)	11, 12	
Increase in recycled plastic: +125% recycled plastic from Aliplast by 2025 and +150% by 2030 (compared to 2017) + 30% of plastic collected in the municipalities served as part of the commitments made in the "New Plastics Economy Global Commitment" by the Ellen MacArthur Foundation to combat plastic waste pollution. Build an innovative plant in Modena for the production of high-quality recycled polymers for the IT and electronic sector. Start the construction of a new carbon fibre recycling plant in 2022, which is in particular reusable in the automotive sector.	+33% plastic recycled by Aliplast in 2022 (compared to 2017), +42% plastic collected in the municipalities served. The authorization procedure has been launched for the construction in Modena. The authorization process for the construction of a new carbon fibre recycling plant was successfully completed; the design and development phase of the industrial lines has started. (see p.95)	11, 12, 17	
8.5% by 2025 and 15% by 2030 reusable wastewater out of total wastewater.	7.3% by 2022 of reusable wastewater out of the Group's total wastewater. (see p.105)	6, 8, 12, 14	
20% reduction in internal water consumption by 2025 and 25% by 2030 compared to 2017 consumption.	20.5% reduction in household consumption in 2022 compared to 2017 consumption due to specific water saving activities. (see p.108)	6, 8	
260 thousand customers with a "Water Consumption Log" by 2022, equal to 35% of the total (202.7 thousand customers in 2021, equal to 27% of the total).	268,597 thousand household customers with the "Water Consumption Log" at the end of 2022 (35% of resident household customers; they stood at 27% at the end of 2021). (see p. 108)	6, 8, 17	
-2% of linear water losses in 2025 and -8% in 2030 compared to 2019.	-1% linear water losses in 2021 (9.5 m3/km/day) compared to 2020 (9.6 m3/km/day). (see p. 105)	6, 8	

We said what we would do	What we did	SDGs	Progress*
Sustainable management of water resources			
100% urban agglomerations >2,000 p.e. upgraded by 2023 thanks to the continuation of the plan to upgrade the sewage treatment sector. In addition, 239 upgraded agglomerations out of 239 managed with a size of between 200 and 2,000 p.e. at 2025, of which:	99.6% urban agglomerations >2,000 p.e. upgraded at the end of 2022 (99.6% at the end of 2021). In addition, 194 upgraded agglomerations out of 239 managed with a size of between 200 and 2,000 p.e. at 2022, of which: 158 upgraded agglomerations out of 202 managed with a size of between 200 and 2,000 p.e. in Emilia-Romagna;		
202 upgraded agglomerations out of 202 managed with a size of between 200 and 2,000 p.e. in Emilia-Romagna (58 still remain to be upgraded); 37 agglomerations out of 37 managed with size of between 200 and 2,000 p.e. in Triveneto (1 still remains to be upgraded). Implementation by 2030 of a further 26 interventions in agglomerations with a size of more than 10,000 p.e. in relation to the requests of resolution 201/2016 of the Emilia-Romagna Region on the upgrading of the treatment of urban wastewater discharges.	36 agglomerations upgraded out of 37 managed with a consistency between 200 and 2,000 p.e. in Triveneto (1 which will be upgraded by 2026); 27 remaining interventions in agglomerations of between 2,000 and 10,000 and more than 10,000 p.e. (in Emilia-Romagna) in relation to the requirements laid down in resolutions 201/2016, 569/2019 and 2153/2021 of the Emilia-Romagna Region regarding the upgrading of urban wastewater treatment by 2022. (see p. 114)	6, 14	
Complete by 2025 all 14 interventions envisaged by the Rimini seawater protection plan (9 interventions completed by 2021).	Conclusion of the intervention on the southern ridge of the Rimini seawater protection plan for a total of 10 interventions completed out of the 14 planned. (see p. 367)	6, 14	
57% of users served in areas covered by a Water Safety Plan defined by 2025 and 100% by 2030 (22.6% by 2021).	61.9% users served in areas covered by a Water Safety Plan. (see p. 111)	6	
Protection of air, soil and biodiversity			
878,000 square meters of land reused by 2025 in constructions of infrastructures (70% of the total land involved in constructions completed between 2018 and 2025).	604 thousand square meters of land reused in the construction of infrastructures from 2018 to 2022 (77.9% of the total land involved). (see p.132)	8	
11% increase in the volume served by district heating in 2025 compared to 2020 for the benefit of the air quality in the cities served. In Bologna, continue the designing of the CAAB/Pilastro and S. Giacomo headquarters interconnection project aimed at obtaining a substantial reduction in CO ₂ and NO _x emissions.	7.1% increase in the volume served by district heating in 2022 compared to 2020 (+5.9% compared to 2021). In Bologna, having acquired the "Fiera" in line with the project to interconnect the city systems which will be completed by 2026. (see p. 125)	7, 11, 13, 14	
4,000 charging points (public and private) installed by 2025 for electric mobility.	Approximately 1,800 public and private charging points installed by 2022 for electric mobility (it was 1,058 in 2021). (see p. 132)	11, 17	
ECO Trees initiative: 10,000 trees planted and maintained in the three-year period 2022-2024, thanks to the purchase of sustainable solutions by customers.	Additional trees donated to the area thanks to the initiative, for a total of 5,707 since the start of the project. (see p. 370)	7, 11, 12, 17	
*  Result achieved or in line with planning;  Result with slight variance compared to planning;  Result with significant variance compared to planning.			

What we will do	SDGs
Transition to a circular economy	
77% sorted waste collection by 2026 also thanks to a strong investment focused on the engagement of residents and businesses (77% Hera, 70% AcegasApsAmga, 80% Marche Multiservizi) (67.8% in 2022).	11, 12
73% recycling rate of packaging by 2026 and >80% by 2030 (higher than the EU 2030 targets).	11, 12
Increase in recycled plastic: +102% recycled plastic from Aliplast by 2026 and +150% by 2030 (compared to 2017).	11, 12, 17
Complete an innovative plant by 2024, for the production of high-quality recycled polymers for the IT and electronic sector in Modena. Complete a new plant by 2025, for the recycling of carbon fibre, which is especially reusable in the automotive sector, also thanks to PNRR funds.	6, 8, 12, 14
13% reusable wastewater out of total wastewater by 2026, and 18% by 2030.	6, 8
22% reduction in internal water consumption by 2026 and 25% by 2030 compared to 2017 consumption. Extend the water management project to Herambiente.	6, 8
380,000 customers with a "Water consumption Log" by 2026, equal to 52% of the total (260,000 customers in 2022, equal to 35% of the total).	6, 8, 17
-6% linear water leakages in 2026 compared to 2021. 27 thousand km of network analysed for loss research in 2023-2026 (there were 2.8 thousand in 2020-2021).	6, 8
Development of paper and plastic selection/pre-selection plants (Pesaro, Padua, Vicenza): 60 kton/year of paper and cardboard and 40 kton/year of plastic treated in the new plants.	11, 12
Sustainable management of water resources	
100% urban agglomerations >2,000 p.e. upgraded by 2025 thanks to the continuation of the modernisation plan of the sewage purification sector. In addition, upgrade all of the 239 agglomerations managed with a size of between 200 and 2,000 p.e. by 2025, of which: 44 to be upgraded out of 202 agglomerations managed with a size of between 200 and 2,000 p.e. in Emilia-Romagna; 1 to be upgrade out of 37 agglomerations managed with a size of between 200 and 2,000 p.e. in Triveneto.	6, 14
Implementation by 2030 of a further 27 interventions in agglomerations with a size of between 2,000 and 10,000 and more than 10,000 p.e. in relation to the requirements laid down in resolutions 201/2016, 569/2019 and 2153/2021 of the Emilia-Romagna Region regarding the upgrading of urban wastewater discharge treatment.	
Complete by 2025 all 14 interventions envisaged by the Rimini seawater protection plan (10 interventions completed by 2022).	6, 14
90% of users served in areas with a Water Safety Plan defined by 2026 and 100% by 2030 (61.9% by 2022).	6
Protection of air, soil, and biodiversity	
887,000 square meters of land reused by 2026 in infrastructure constructions (over 80% of the total land involved in constructions completed between 2018 and 2026).	8
7% increase in the volume served by district heating in 2026 compared to 2021 to the benefit of the air quality in the cities served.	
75% of energy from district heating from renewable sources, cogeneration and recovery by 2026.	7, 11, 13, 14
In Bologna, continue the construction of the interconnection of four systems (CAAB Pilastro, Sede Berti, Bologna Fiere and Navile) aimed at obtaining a substantial reduction in CO ₂ and NO _x emissions.	
Development of geothermal production in Ferrara and extension of the interconnection of the district heating system in Forlì, also thanks to PNRR funds.	
Over 5,000 charging infrastructures (public and private) installed by 2026 for electric mobility (about 1,800 to 2022).	11, 17
Ecoalberi initiative: 10 thousand trees planted and maintained in the three-year period 2022-2024, thanks to the purchase of sustainable solutions by customers (about 5,700 to 2022).	7, 11, 12, 17

3.02 Transition to a circular economy

The circular economy of municipal waste

Waste management, while not exhausting the measures which are necessary to ensure a transition to a circular economy, represents one of the most urgent areas, on which European directives have been focused for several years.

The Hera Group plays a primary role in managing urban waste, serving **188 municipalities in five regions for a total population of 3.2 million inhabitants**. In Emilia-Romagna, Hera Spa manages the urban cleanliness service in six provinces totalling 136 municipalities. In addition to these municipalities, Hera Spa manages three others in the province of Florence. Furthermore, through Marche Multiservizi, it serves 44 municipalities in the provinces of Pesaro-Urbino and Ancona. It has, since 2013, through AcegasApsAmga, served eight municipalities in the provinces of Padua and Trieste.

TOTAL MUNICIPAL WASTE COLLECTED BY REGION

thousands of t	2020	2021	2022
Emilia-Romagna	1,527.3	1,477.5	1,474.6
Triveneto	241.0	255.3	244.5
Marche	146.9	153.6	153.5
Total	1,915.3	1,886.4	1,872.6
Kilograms per inhabitant	597	586	586

In 2022, the quantities of waste collected by the Group are not perfectly comparable with those of 2021, following an interpretative comparison with the Emilia-Romagna Region regarding the transposition of Legislative Decree 116/2020 for which it was possible to include the volumes relating to inert waste, mitigating the effect of the legislation which last year instead had led to a reduction in the total waste collected. On a like-for-like basis, waste collected would drop by -2.3%. Considering instead the effect of the new interpretation, the volumes relating to waste collected in 2022 recorded a slight decrease of -0.7%. In the Group's Business plan, at 2026, the total urban waste collected is expected to be stable and in line with the volumes of 2022 (1,861 thousand tonnes, excluding the fraction relating to the sandy shores which cannot be estimated).

As previously stated, the data relating to the volumes collected in 2022 in **Emilia-Romagna** are not perfectly comparable with those of 2021. On a like-for-like basis, excluding the supply chains impacted by the decree (corresponding to around 29 thousand tonnes of aggregates), the overall decrease would be -2.2%. While the volume of waste collected taking into account the new interpretation of Legislative Decree 116/2020, remains practically stable, recording a decrease of -0.2% (2.9 thousand tons). Also in the **Triveneto area**, there was a decrease in waste collected (-4.2%, corresponding to 10.8 thousand tonnes), while in the **Marche** the total waste collected remained practically stable, marking a drop of -0.1% (0.2 thousand tons).

The area served by Hera Spa and Marche Multiservizi is characterized by a high level of assimilation which determines an **annual per capita production of waste which is among the highest in Italy**; in these territories about 591 kilograms per inhabitant are produced (603 kilograms per inhabitant in Emilia-Romagna, 586 in the Marche) compared to a 2021 national average of 582 kilograms. While in the Triveneto area the annual per capita production of waste is much lower than the national average: 502 kilograms per inhabitant collected in 2021 (Source: Ispra, Rapporto Rifiuti Urbani 2022).

The Group's waste management system is characterized by five main services:

- **local collections:** these are collections spread throughout the area and are aimed at family users and small non-household users and can be carried out through;
- **streetside containers**, with a deployment oriented according to the basic recycling centre model which provides for the concentration of the main collection chains grouped in individual

locations (sometimes even underground); in recent years, electronic traceability systems for the control of deliveries are becoming increasingly common in combination with roadside containers (e.g. "waste containers with a lid" model for unsorted waste or lock for sorted collection of waste chains);

- **door-to-door collections**, carried out at the user's premises, where the citizen puts out the waste on pre-established days and times for collection.
- **home collections** from "target" users: they are aimed at non-household users who produce specific waste assimilated to urban waste, such as cardboard in shops, glass or cans in bars, organic waste in canteens and restaurants;
- **sorted waste collection centres**: also known as drop-off centres or ecological stations, these are infrastructures present in almost all Hera municipalities which complete the service offer to residents for the sorted disposal of urban waste. The use of collection centres is becoming a real habit for residents: a very wide range of municipal waste categories (even certain wastes that are considered hazardous) can be safely brought in, as well as the dropping off of bulky and heavy waste. Furthermore, in many territories there is a system of discounts which rewards the provision of various categories of differentiated waste.

The system is moreover supplemented by the collection of bulky waste at homes (free of charge by calling or making an appointment), by the collection of green waste, as well as by the collection of some types of hazardous waste such as batteries and medicines, at specific establishments. Finally, the collection of WEEE (waste from electrical and electronic equipment) and used vegetable oils on the streets or in shopping centres is gradually spreading.

To increase effectiveness, collection services are **differentiated by homogeneous territorial area** (historic centres, residential areas, tourist areas, extra-urban areas, industrial areas). For each area, that collection system that best integrates with the urban, environmental and territorial characteristics is identified. The aim is **to maximize the percentage of sorted waste collection** as well as its quality through a technically and economically sustainable service.

MAIN WASTE COLLECTION SYSTEMS USED

Number of municipalities served	2020	2021	2022	2022 (% of the number of residents)
Street collection	79	74	57	38%
Streetside collection with delivery control mechanisms	37	38	37	21%
Mixed system (unsorted household waste and streetside sorted waste collection)	41	44	59	19%
Full door to door	30	33	35	23%
Total	187	189	188	100%

In 2022, the municipalities with a simple **streetside collection** container system dropped from 74 to 57 and the municipalities that provide for a **"mixed" system** (combination of roadside and door-to-door collection for at least two fractions) increased from 44 to 59, mainly as a result the alignment of the waste collection systems in Ravenna and Cesena with that foreseen by the new concessions. Those municipalities that envisage **delivery control systems** that allow the identification of the user at the delivery for the introduction or preparation for the start of unit pricing, fell by one unit, dropping from 38 in 2021 to 37, while those with an **integral door-to-door** system increased by two units (from 33 to 35). In **Emilia-Romagna**, in view of the progressive introduction of quantity-based pricing in the area and therefore of the systems for controlling the deliveries, the reorganization activities of the services are underway and will continue in the coming years to allow the identification and measurement of the deliveries, also through the installation of the newest generation Smarty bins.

Sorted collection

The main types of waste collected in a sorted manner are:

- **packaging and similar**: paper and cardboard, plastic, glass, aluminium and steel cans, wood;
- **durable goods**: iron, waste electrical and electronic equipment (WEEE) and bulky items;

- **compostable waste:** kitchen organic waste and "green" waste from mowing and pruning;
- **other waste:** aggregates from small demolitions (only in the Marche and Triveneto areas which have not yet implemented Legislative Decree 116/2020 cited above), used mineral and edible oils, batteries and accumulators, medicines and other hazardous urban waste.

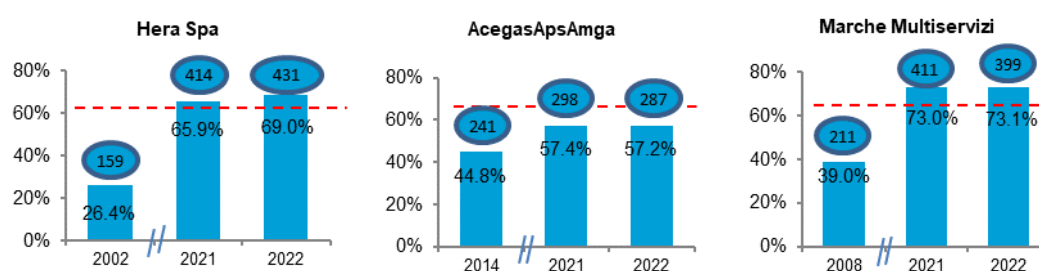
In **Emilia-Romagna** the Regional Law 16/2015 on the circular economy had set the objective of launching the **unit pricing based tariff** throughout the region; this objective was reconfirmed with the new 2020-2025 mandate program of the Region presented in June 2020 and taken up by the Regional Waste Management and Reclamation Plan, which set the sorted waste collection portion in Emilia-Romagna at 80% by 2027. The unit pricing based tariff foresees that the payment of the environmental hygiene service is no longer linked only to the living area and the number of tenants of the house, but also to the quantity of unsorted waste produced.

As regards local collections, which intercept the largest share of flows, the various systems that Hera is implementing in the area are therefore **oriented towards the future application of unit pricing**:

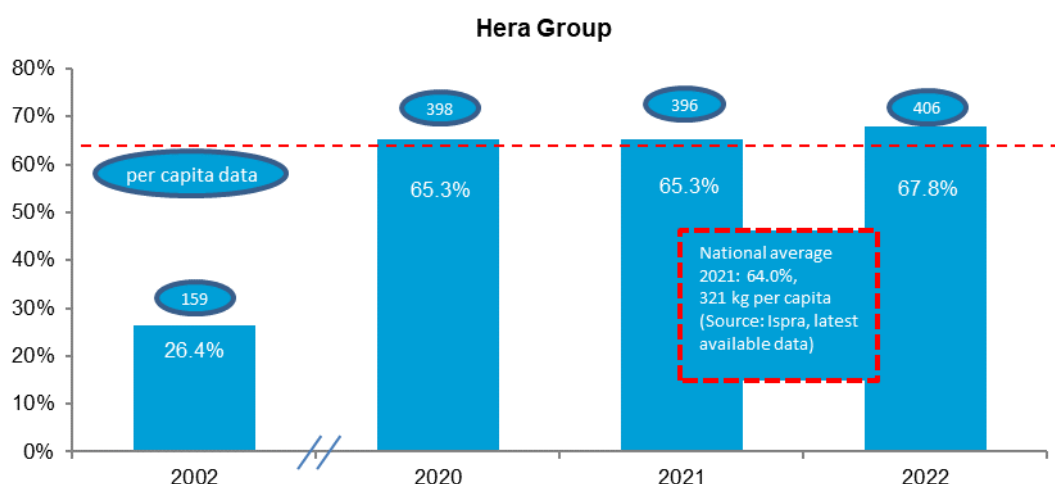
- roadside containers with user control and recognition system (hood);
- home collections with containers equipped with tag-transponders;
- collection centres with weighing systems and user registration.

Also in the other territories, where the Group provides the urban hygiene service, sorted waste collection objectives have been defined through the regional plans. The **Veneto Region** has defined 84% as the portion of sorted waste collection to be reached by 2030, while the Friuli-Venezia Giulia Region has set 74% by 2027. In the **Marche region**, on the other hand, the Region has not updated the territorial plan or approved the provincial one; in the old plan, the sorted waste collection target was set at 70% by 2020.

WASTE SORTING



The baseline indicated in the graphs corresponds to the first year for which data are available.



Sorted waste collection is calculated in accordance with Regional Council Decree 2218/2016: neutral fractions are therefore excluded (flows from sandy shore areas, cemeteries and CERs not admitted as municipal) and include the estimate of household composting waste admitted by the Region. Pursuant to the Decree of the Regional Council.

2218/2016, street-sweeping and recovery is counted as sorted waste collection. Waste similar to municipal waste sent for recovery by the producer and waste collected by voluntary associations or directly by the Municipalities are also considered among the sorted waste collections. The total amount of waste is constituted by sorted collection (CERs admitted initiated for recovery, community composting and household composting allowed) and unsorted (urban solid waste, street sweeping for disposal, bulky waste for disposal and any waste collected which has been sorted but sent for disposal). With the entry into force of Legislative Decree 116/2020, starting from 2021 inert waste is excluded from the municipal waste, with the only exception of inert waste from refuse dumps (waste lying on public land is municipal by definition). More specifically, in the reporting of the 2022 data, the aggregates collected within the municipal hygiene service were considered "neutral fraction", applying the guidelines that the Emilia Romagna Region provided on the occasion of the annual regulatory compliance of the Osservatorio Rifiuti Sovraregionale (Supra-regional Waste Observatory) 2021.

In 2022, **sorted waste collection** volumes increased compared to the previous year, reaching **1,298 thousand tonnes** (21 thousand tonnes more than in 2021). This increase was influenced by the excellent performance of the Ravenna and Forlì-Cesena areas, which in 2022 adjusted the sorted waste collection service in line with the provisions of the new concession, significantly improving their performance (+13.9% compared to 2021).

The increase in volumes of sorted waste collection together with the simultaneous reduction of the unsorted component of around 61 thousand tonnes (-9% compared to 2021), led to an increase in sorted waste collection, given by the ratio between the quantity of municipal waste collected in and total waste (sorted and unsorted urban waste managed and unmanaged), reaching 67.8% in 2022 (+4% compared to 2021), remaining well above the national average of 64.0% recorded from Ispra in 2021 (Source: Ispra, Rapporto Rifiuti Urbani 2022).

In the **eight capital cities managed by the Hera Group**, sorted waste collection stood at 67.4% in 2022 compared to a value of 53.1% in the national capitals (weighted average, Source: processing of Legambiente data, Urban Ecosystem 2022).

In **Emilia-Romagna**, as a result of what has been described above, the percentage of sorted waste collection rose from 65.9% to 69.0%. In the **Triveneto area**, the percentage of sorted waste collection dropped by 0.4% to 57.2%, while in the **Marche** it remained almost unchanged compared to the previous year, settling at 73.1%.

Taking into consideration the entire area served by the Group and analysing it with a greater level of territorial detail, the percentage of sorted waste collection exceeds:

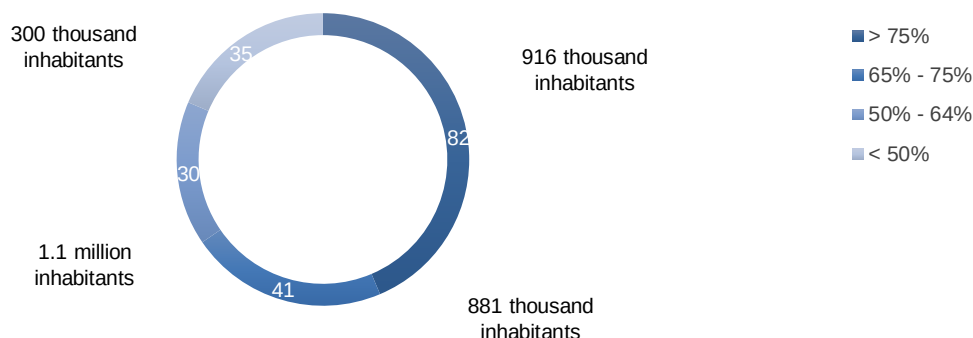
- 85% in the municipality of Ferrara under the unit pricing system as of 2018;
- 70% in the provinces of Ravenna and Forlì-Cesena, and in the Marche;
- 65% in the provinces of Bologna, Modena and Rimini;
- 60% in the province of Padua.

As regards the province of Trieste, the sorted waste collection rate increases by 0.3 p.p. compared to 2021 but remains below the Group average (44.7%).

At the municipal level, the year 2022 closed with **82 municipalities (19 more than the previous year) out of 188 managed with a percentage of sorted waste collection above 75%**; 29% of the total served population resides in these municipalities.

In Emilia-Romagna there are 47 municipalities that can boast of more than 75% of the percentage of sorted waste collection, 18 of which have a unit pricing system. The business plan objective for 2026 is to reach 78.0% as an average of the municipalities served in the region. In Triveneto, 3 out of eight municipalities exceed 75% and the goal for 2026 is to bring the value of sorted waste collection to an average of 68.1%. In the Marche region, on the other hand, there are 32 municipalities that can claim more than 75% sorted waste collection (6 more than in 2021); the sorted waste collection target for 2026 is 80.9%. **The Group's sorted waste collection target for 2026 is 76.9%**, as envisaged in the latest industrial plan approved by Hera Spa's Board of Directors in February 2022.

NUMBER OF MUNICIPALITIES PER SORTED WASTE COLLECTION PERCENTAGE RANGE (2022)



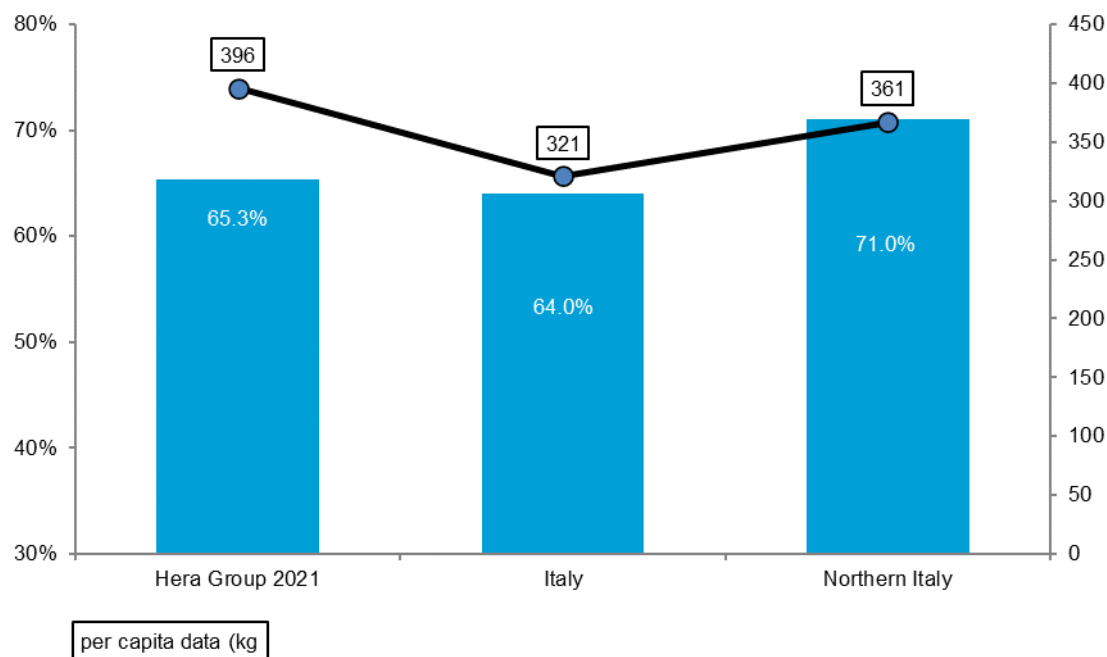
The Group's sorted waste collection, as regards the data relating to Emilia-Romagna, includes assimilated waste sent for recovery by the producer and sorted waste collected by voluntary associations or directly by the Municipalities, as envisaged by the Decree of the Regional Council 2218/2016 and transposed in the municipal and territorial area regulations in force. The situation is very diversified in the territories and depends on the revisions of the regulations of the individual Municipalities.

A useful indicator for evaluating the **effectiveness of sorted waste collection** is the per capita value expressed in kilograms/inhabitant/year, which allows for important analyses of the quantities of waste sent for recovery, both overall and by individual chain; **per capita sorted waste collection**, thanks to the increase in sorted waste collection volumes recorded by Hera, rose from 396 kilograms per inhabitant at Group level in 2021 to 406 kilograms per inhabitant in 2022, an increase of 2.4% compared to the previous year.

At the **per capita** level, sorted waste collection in Emilia-Romagna stands at 431 kg/inhabitant, recording an increase of 3.9% compared to 2021, reaching a total quantity of over 1,053 thousand tonnes. At individual area level, per capita sorted waste collection recorded an increase in **Ravenna** (+19.9%), Ferrara (+5.2%), Forlì-Cesena (+4.9%) and Bologna (+2.4%), while in the other provinces of the area there was a decrease of 2.5% respectively in Modena and 2.4% in Rimini. In the **Triveneto area**, there was a slight increase in per capita sorted waste collection in the province of Trieste (+0.2%) and a decrease in the province of Padua (-5.2%). While in the **Marche**, after a growth of 9.0% in 2021, in 2022 there was a reduction of -3.0%.

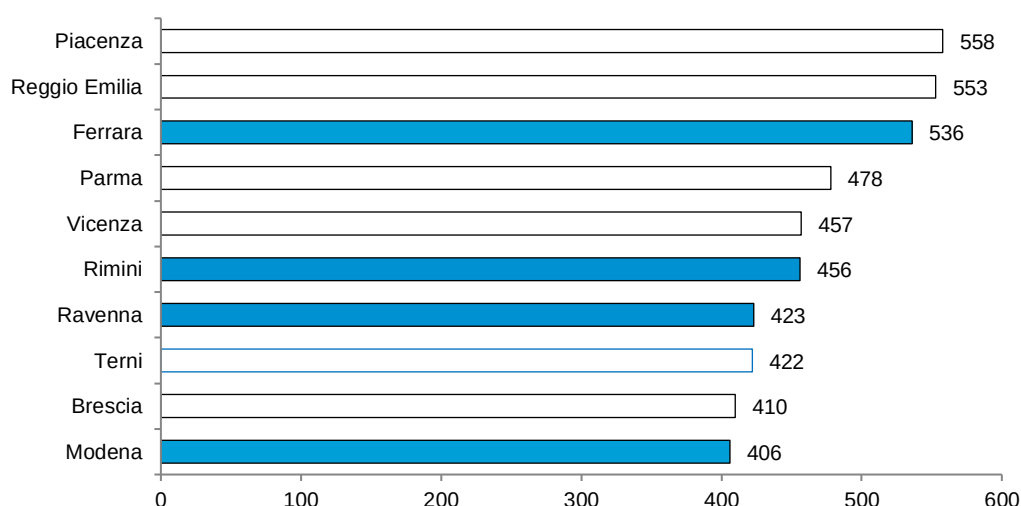
Considering the data for 2021 published by Ispra, the Hera Group records sorted waste collection per capita 23% higher than the Italian average and 10% higher than the average for Northern Italy.

PERCENTAGE AND PER CAPITA SORTED WASTE COLLECTION (2021)



Considering the provincial capitals with a population of more than 100,000 inhabitants, in 2021 **four of the top ten cities with the best performance in Italy** in terms of per capita sorted waste collection were managed by the Hera Group. Of these, Ferrara is also among the top ten Italian cities for sorted waste collection performance (Ferrara with a sorted waste collection rate of 87.3% is in second place in the ranking of all the provincial capitals). As shown by the data, the high levels of assimilation expected in the territories managed by the Group generate important benefits in terms of volumes of waste to be sent for recycling and recovery.

SORTED WASTE COLLECTION PER CAPITA, KILOGRAMS, MUNICIPALITIES WITH MORE THAN 100,000 INHABITANTS (2021)

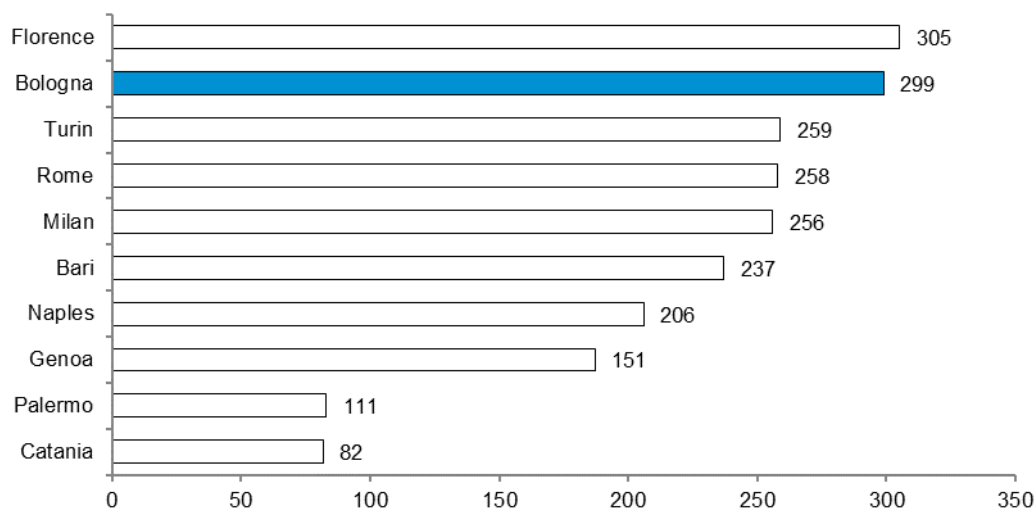


Source: processing of Legambiente data, Urban Ecosystem 2022

On the other hand, considering the provincial capitals with a population of more than 300,000 inhabitants, **Bologna ranks second** in Italy for per capita sorted waste collection (Source: elaboration on Legambiente data, Urban Ecosystem 2022). Also in the classification for sorted waste collection, Bologna

stands at first place. This result was possible thanks to the extension in 2022 of the computerized roadside collection system of the unsorted fraction with the new smarty bins that can be opened with Carta Smeraldo in the Navile and Borgo-Reno residential districts, completing the Carta Smeraldo project and smarty bins throughout the Common.

SORTED WASTE COLLECTION PER CAPITA, KILOGRAMS, MUNICIPALITIES WITH MORE THAN 300,000 INHABITANTS (2021)



Source: processing of Legambiente data, Urban Ecosystem 2022

With regard to the sorted collection by **type of material collected**, note that in 2022 paper, glass, organic and plastic experienced significant growth, while the other fractions showed a decrease. Details with the most significant changes are shown below:

- collection of **plastic** (+10.4%), **organic** (+4.9%), **glass** (+4.8%) and **paper** (+4.8%) rose significantly due to the adaptation of the collection of sorted waste service in the provinces of Ravenna and Cesena in accordance with the provisions of the new concession;
- multi-material** collection decreased by 13.1%;
- collections of **wood** and bulky materials decreased respectively by 2.0% and 2.1%;
- the collections of **iron** and **WEEE** also suffered a decrease of 16.0% and 10.6% respectively;
- the collections relating to the fractions impacted by Legislative Decree 116/2020 (**green and inert waste**) decreased respectively by -0.2% and -39.8%;
- finally, the item **other** decreased (-1.2%).

SORTED COLLECTION BY TYPE OF WASTE

thousands of t	2020	2021	2022
Paper and cardboard	236.1	243.7	255.5
Green scraps	230.2	218.0	217.6
Glass	121.3	126.7	132.9
Organic waste	228.8	237.9	249.6
Plastic containers	112.6	119.2	131.6
Refuse from multi-material collection	49.0	50.3	43.7
Wood	86.9	99.9	97.9
Bulky	52.7	58.3	57.0

thousands of t	2020	2021	2022
Inert	63.0	11.4	6.8
Iron	12.3	12.6	10.6
WEEE	19.5	19.7	17.6
Other	65.9	68.7	67.9
Total	1,278.3	1,266.3	1,288.7

SORTED WASTE COLLECTION PER CAPITA (2021)

kg/inhabitant	Paper	Glass	Plastic	Wood	Metals	Organic and green
Hera Group	76	39	37	31	4	142
Northern Italy	66	45	32	27	8	135
Italy	61	38	28	17	6	125
Best region	89*	54**	55**	52**	15**	179*
Hera Group (2022)	80	42	41	31	3	146

*Emilia-Romagna, **Valle d'Aosta. Source: Ispra, Urban Waste Report 2022

Hera's sorted waste collection levels are due to the widespread coverage of the services provided and to the assimilation rules which encourage the recovery of materials. Hera ranks above the national average as well as the average for northern Italy in all cases with the exception of glass and metals.

Sorted waste collection centres

The collection centres take in, among others kinds of waste, those which, owing to their nature or size, cannot be collected with normal local services, integrating streetside and household-based collections and represent the most sustainable and low-impact environmental solution for sorted municipal waste collection.

There are 168 sorted waste collection centres, or equipped recycling stations, for direct waste disposal by residents. Of these, 138 are located in Emilia-Romagna and is three less than in the previous year (in the year 2022 in the province of Modena two centres were closed while another is no longer under management), 11 in the Triveneto and 19 in the Marche. Many centres are equipped with user weighing and recognition systems that allow the traceability of the deliveries and the application of tariff discounts.

At the Group level, in 2022 waste transferred to sorted waste collection centres decreased, falling from 259,568 tonnes in 2021 to 245,659 tonnes (-5%). This trend was mainly caused by the decrease recorded for the Emilia-Romagna area, which again as a result of Legislative Decree 116/2020, which limits access for delivery to non-household users, saw the amount of sorted waste coming from the Centres decrease by 8%. In the Triveneto area, the volume of waste delivered to collection centres remained practically unchanged compared to 2021 (-0.4%), while in the Marche it grew by 5.6%.

Despite the evident drop in waste delivered, in 2022 the **number of accesses** to collection centres remained stable, recording only a slight drop of 0.5%.

Smaller sorted waste collection

For some time now, the Hera Group has been launching sorted waste collections in those waste fractions which produce so-called "smaller" volumes. The main smaller sorted collections are the collections of WEEE (Waste from electrical and electronic equipment), toner, textiles and edible oils. For the latter collection, see the case study in the attachments.

WEEE collection

Currently, 20 "RAEE Point EVO" points and 20 "RAEE Shop EVO" points are installed in Hera's area, which are distributed throughout the various provinces, mainly in shopping centres, for the collection of small WEEE.

The number of deliveries made by residents to the WEEE Points and WEEE Shops in the area served saw significant growth in 2022, soaring from around 40,000 deliveries in 2021 to over 50,000.

In the Triveneto area, the collection of smaller sorted waste is carried out through ecological stations, the so-called "Ecological Saturdays" and, for some specific types, as well as through dedicated kerbside or unit pricing collections. For example, toner collection takes place through door-to-door collection systems at the premises of non-household users. In smaller municipalities, where there is no collection centre, on specific days of the month, the presence of mobile roll-off containers - called "Eco-Self" sorting containers is guaranteed. These are used for the collection of small WEEE and other fractions that are not able to be transferred to the main circuits.

The collection of toner cartridges

Throughout 2022, the collection and recovery service for used toner cartridges also continued in Emilia-Romagna. Through the use of "Ecobox" containers, distributed to public users such as schools and municipal offices, approximately 160 tons of used cartridges were collected and effectively sent to the re-use market (remanufactured toner cartridges for printers). The quantities are down slightly compared to the previous year in as much as the used cartridges are taking alternative recovery channels, such as, for example, collection by the same supplier companies, within the scope of existing contracts.

The collection of textiles

Lastly, among the initiatives with solidarity contents, it should be noted that in 2022 both Hera and AcegasApsAmga gave continuity to the textile waste collection service, typically referring to used clothes and fabrics, making use of the companies that won the call for tenders announced at the provincial level.

These contracts stipulate that the contracted firms, private operators and Social Coops that were awarded the tender, will carry out the collection service by emptying the containers owned by the Group, and make the best use of the collected material by sending it for recovery in their own facilities, giving a new life to these recoverable textile materials, with a view to the circular economy.

No profit margin is derived from the collection of used clothing for the Group and the economic result obtained, net of the coverage of service costs, is allocated by individual municipalities to the abatement of urban hygiene service costs for the citizen.

In the Marche area there is a collection service for used clothes and clothing accessories which takes place through the special yellow containers positioned in each municipality served. In 2022, more than 840 tons of used clothing were collected which are thus removed from landfill disposal and the best use was made of them, by allocating them for reuse and/or recovery.

Bulky waste collection

Bulky waste is waste which, owing to its type, size or weight, cannot be disposed of in urban waste collection containers. Hera currently offers various options for delivering bulky items and large household appliances, offering the possibility of reusing items in good condition by preventing the production of waste or sending them to the correct recovery or disposal flow:

- **donate the good to the non-profit organization** of the "Cambia il finale" project: if the asset is reusable, in the territories of Emilia-Romagna it is possible to make a gesture of solidarity by assigning it for reuse by donating it to one of Hera's non-profit partner organisations. Non-profit organizations can collect bulky items free of charge, at their headquarters and at home, to give them new life and use them for charitable purposes. In Ferrara, Ravenna, Modena and Cesena it is also possible to allocate reusable goods to non-profit organizations by placing them in the "Reuse Area" located in the sorted waste collection centre;
- **bringing waste to recycling centres** (sorted waste collection centres): if the bulky item is not reusable, it is possible to bring it to the closest recycling centre using the vast and widespread network of recycling centres active in the area;
- **take advantage of Hera's home service**: if the good is not reusable and it is not possible to take it to the recycling centre, you can call the call centre to book free home collection. From 2022 it is also possible to book the collection directly from the **Il Rifiutologo app**.

In 2022, these types of waste, including large household appliances, represented 4% of the total managed collected waste and 5.9% of separate waste collection. These values which, although slightly down in terms of absolute quantities, recorded a slight increase from the viewpoint of percentage

compared to the previous year, in consideration of the fact that the amount of waste decreased slightly compared to 2021 (-2.4%).

In the area served by Hera Spa, 168,754 requests for the collection of bulky waste were registered, a slight decrease compared to the previous year (-2.5%). Of these, around 9,500 were recorded in particular carried out by the II Rifiutologo app, a new channel activated during the year in addition to the traditional one of calling the toll-free number. The quantities of bulky waste collected, also counting those delivered to sorted collection centres and those abandoned without any reporting, amounted to approximately 59,000 tonnes, recording a slight decrease compared to 2021 equal to -4%.

Requests for bulky waste collection, although slightly down, remained consistent among other things with the drop in the quantity of bulky waste and the total amount of waste. The number of o these nevertheless remain high, confirming the great use of dedicated collection services, the good usability of Hera contact channels and a special sensitivity as regards urban decorum.

In the Municipalities served in the Triveneto area, a free-of-charge bulky waste collection service is guaranteed upon reservation via toll-free number. In 2022, a total of over 47,000 bulky waste bookings were made across all the territories served. Domestic and non-household users can also deliver bulky waste to the collection centres located in the territories served. In addition to the service by reservation and to the collection centres, it is always possible to deliver bulky waste on the so-called ecological Saturdays that are active in the Municipalities of Padua (Pd), Albignasego (Pd), Casalserugo (Pd), Ponte San Nicolò (Pd) and in Trieste (Ts).

In the Marche area served, in 2022, through the "Cambia il finale" (Change the ending) project, 1,443 collections were carried out, managing to recover around 125 tons of bulky waste. In the event that the bulky item cannot be reused, it is possible to take it to one of the 15 Sorted Waste Collection Centres active in the area served, or book an appointment for home collection. In 2022, over 12,000 home collections were carried out and a total of almost 3,300 tons of bulky goods were managed overall.

Waste prevention initiatives

Waste prevention is a key element in the transition to the circular economy, which for the Hera Group represents one of the strategic guidelines for future development. For this reason, the role of prevention is at the centre of many actions and projects that Hera has introduced in the area over the years. Hera's commitment is also in line with the new European, national and regional regulations which introduce prevention and reuse objectives as an integral part of integrated waste management.

The European Directive 2008/98/EC relating to waste, transposed into Italian legislation with Legislative Decree 205/2010, defines the following hierarchy on waste prevention and management:

- prevention;
- preparation for reuse;
- recycling;
- other types of recovery, for example energy recovery;
- disposal.

Waste prevention is confirmed as the priority action also with the European package on the circular economy, referred to in one of the case studies in the attachments. In particular, Directive 851/2018, implemented with Legislative Decree 116/2020, gives considerable prominence to the concept of prevention by introducing the obligation for the Member States to adopt measures aimed at avoiding the production of waste. In fact, it is envisaged that actions will be put in place that encourage the reuse of products and the creation of systems that promote repair and reuse activities. A particular focus is dedicated to the prevention of food waste through the promotion of measures aimed at avoiding its production, also by encouraging the donation of food to prevent its waste.

At the regional level in the Regional Law 16/2015 of Emilia-Romagna "Provisions to support the circular economy, the reduction of municipal waste production, the reuse of end-of-life goods, sorted waste collection and amendments to Regional Law of 19 August 1996 n. 31" provisions were introduced to support prevention in the production of waste, including the possibility of providing, within the context of the regulation relating to the fee for the waste management service, facilitations for companies that implement actions aimed at preventing the production of waste.

Finally, the new "Regional plan for waste management and for the reclamation of polluted areas 2022-2027", recalled the importance of prevention as the "key concept" of waste planning, providing for new measures and specific actions aimed at preventing waste along various supply chains.

Below are some of the most significant initiatives implemented by Hera in 2022 in the area of waste prevention. Other important initiatives such as Cambia il finale, Farmaco Amico and Cibo Amico are covered in detail in this sustainability report (see the case studies in the attachments).

Reuse area

The reuse area is a real box, housed inside a recycling centre, where residents can bring furniture (tables, chairs, beds, etc.), tableware, books, electrical and electronic appliances and various objects, provided that it is in good condition and therefore suitable for a new use by other people. Everything brought by residents is, to all intents and purposes, a donation and at the time of delivery, documentation is compiled which serves as a receipt for the contribution. The material is then delivered to one of the Associations adhering to the Cambia il finale project (described in a case study in the attachments) which provides for starting the reuse of those goods which are deemed suitable for this purpose. With this initiative, every time a citizen goes to the recycling centre, he can then choose whether to give his good a second chance at life through the reuse area or whether to use it for material recovery, through the recycling chains. Through the activity of the non-profit organizations involved in the project, the reuse area also has social purposes by offering support to sensitive sections of the citizenry, making used goods available and creating job opportunities for unemployed, disabled or disadvantaged persons.

In 2022 the reuse area was inaugurated in Rimini which joins those of San Pietro in Vincoli (Ra), Ravenna north, Cesena, Ferrara and Modena activated between 2018 and 2020.

A total of 4,604 objects were donated in 2022 (considering a single object the simultaneous contribution of a plurality of goods of small size or value, such as for example books or tableware or small objects) equivalent to a total weight of approximately 11 tons.

Trashware

The project, which saw its realization starting from the year 2011 thanks to the S.P.R.I.Te student association in agreement with the Municipality of Cesena, Hera and the Cesena scientific and educational hub, it represents a point of reference in the area for those who have computer equipment that is dated but still functional that they want to get rid of and for all companies that need reconditioned and computers that are useful for basic computer science. The aim of the project is to recover PCs and IT components in general to stem the phenomenon of dangerous electronic waste. At the same time, it aims to reduce the digital divide of residents by donating PCs with attached peripherals to individuals, associations and schools in the municipality of Cesena. The project is promoted above all through social media and the internet (Facebook as a channel for giving information or receiving requests; Instagram, aimed at younger people, to give visibility to events or the normal laboratory session; trashwarecesena.it as an internet showcase, for those are less accustomed to social networks).

In 2022, there were 149 contacts from interlocutors who were interested in the equipment donation activity (exceeding the number of 3,300 since the start of the project) and the reconditioned PCs that have been delivered amount to 352 (almost 2,000 since the start of the project). 342 of which to schools and associations.

Disposal of municipal waste in Italy and in Europe and comparison with Hera

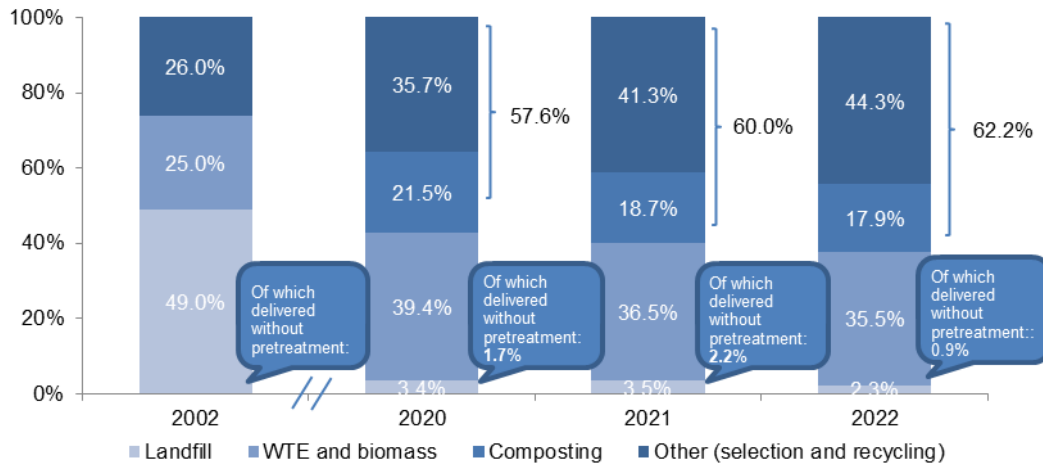
European Union and national legislation defines principles and priorities in waste management which, starting from the minimization of the waste at the origin, provide for the recovery of materials, the recovery of energy and, only as a final and residual system, disposal in landfills.

The Hera Group has worked in this direction over the years, as demonstrated by the comparison between the 2002 data and those of the last three years. In particular, in terms of reducing the use of landfills, the Group managed to improve the already excellent performance achieved in 2021. This is in line with the Group's objectives which, in line with national and European Union regulations and the planning of the responsible bodies, envisage a reduction in the use of landfills and an increase in sorted waste collection.

In 2022, the share of urban waste disposed of in landfills after pre-treatments stood at 2.3% against an Italian average of 23% for 2020 (Source: Eurostat) and therefore lower than the 2035 target set by European directives and equal to 10%. The use of landfills is particularly low in the territories served in Emilia-Romagna, standing at 0.9% in 2022, compared to the Emilia-Romagna average of 8% in 2021, (Source: ISPRA, Urban Waste Report 2022). While a significant reduction was recorded in the Marche areas served in 2022, compared to 2021 (from 29.0% in 2021 to 23.5% in 2022), mainly owing to a gradual return to the situation prior to the health emergency in which it was possible to go back to pre-treating the waste, through biological mechanical treatment plants, before being transferred to the landfill; moreover, there was a general decline in the production of sorted waste as well as unsorted waste which

affected the volumes sent to landfills. In the Triveneto area, the absence of a landfill for the disposal of municipal solid waste was also confirmed in 2022.

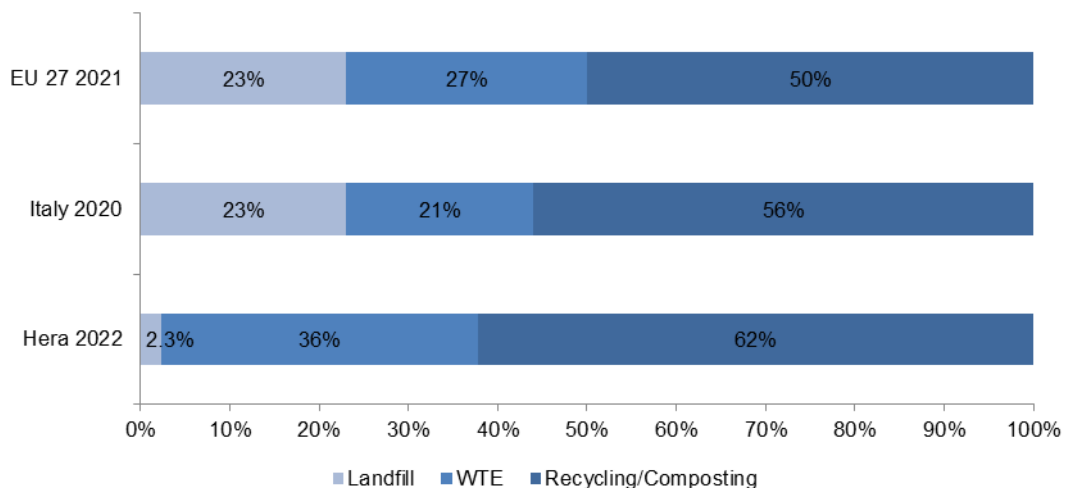
MUNICIPAL WASTE COLLECTED BY HERA BY DESTINATION



Even at European level, the trend of reducing the use of landfills as a form of urban waste disposal continues, although the differences from country to country are significant: in the Europe of 27 members, the value for the year 2021 is equal to 23% (source: Eurostat). In Italy, 23% of municipal waste disposed of in 2020 was sent to landfills, compared with 21% sent to waste-to-energy; both landfill use and waste-to-energy remain stable.

Landfills continue to be the main treatment modality in 11 European countries, with peaks reaching 83% in Malta or higher than 75% in Greece, Romania and Cyprus. Conversely, in Denmark, Belgium, Germany, Finland, Sweden and the Netherlands, the use of landfills stands at between 0% and 1%; in these virtuous countries, waste-to-energy fluctuates from 29% to 67%; while the remainder is sent for recycling. Hera is in line with these countries in terms of recycling with further improvements planned for the next few years.

URBAN WASTE MANAGEMENT IN EUROPE AND ITALY AND HERA'S RANKING (2021)



MUNICIPAL WASTE: EUROPE AT THREE SPEEDS, THE HERA AREA AMONG THE MOST VIRTUOUS (2021)

Country	Landfill	Waste-to-energy	Recycling / Composting
Countries with deliveries to landfills lower than or equal to the European average			
Germany	0%	29%	70%
Belgium	0%	47%	52%
Finland	0%	62%	37%
Denmark	0%	67%	33%
Holland	1%	40%	58%
Sweden	1%	60%	40%
Hera Group	2%	36%	62%
Austria**	2%	39%	59%
Luxembourg	4%	41%	55%
Slovenia	8%	14%	78%
Lithuania	16%	37%	47%
Italy*	23%	21%	56%
European Union (27 countries)	23%	21%	56%
Estonia	20%	49%	31%

Countries with deliveries to landfills less than or equal to 55% but greater than the European average

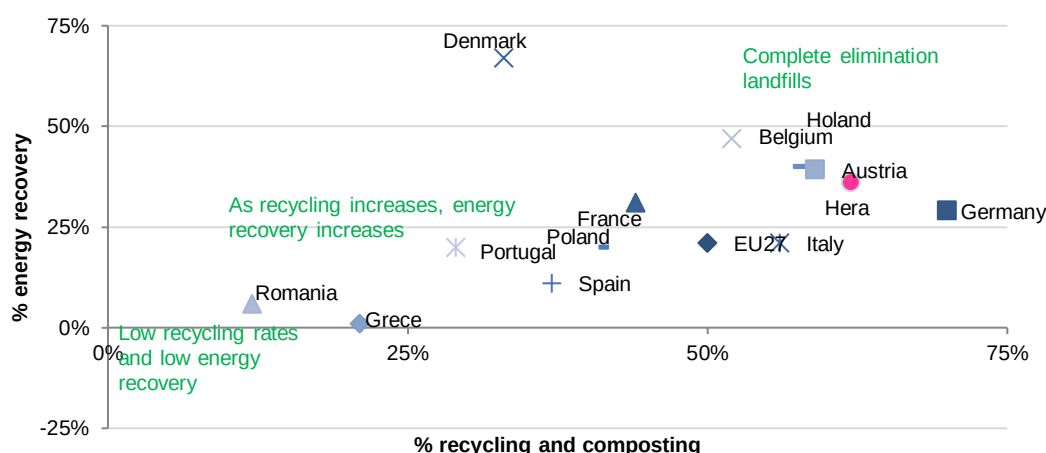
Ireland*	24%	34%	43%
France	25%	31%	44%
Poland	39%	20%	41%
Slovakia	42%	8%	50%
Czech Republic	45%	12%	43%
Portugal*	51%	20%	29%
Spain	52%	11%	37%
Hungary	52%	13%	36%

Countries with deliveries to landfills greater than 55%

Latvia*	56%	3%	42%
Bulgaria***	60%	4%	37%
Croatia	65%	0%	35%
Greece**	78%	1%	21%
Cyprus	78%	3%	19%
Romania	81%	6%	12%
Malta	83%	4%	13%

*2020 Data, **2019 Data, ***2018 Data. Source: based on Eurostat data

MUNICIPAL WASTE DISPOSAL IN EUROPE: CORRELATION BETWEEN RECYCLING/COMPOSTING AND ENERGY RECOVERY. HERA AMONG EUROPEAN BEST PRACTICES (2021)



Source: Eurostat data processing

Recovery of materials and energy in Herambiente's sorting plants

The evolution of the Hera Group's strategy develops in full harmony with the criteria of the circular economy organised into various actions and choices that lead to perceiving the change in the area and in everyday life. The Herambiente Group pursues specific objectives determined by the general strategy of the Group, in particular, new solutions for the recovery of waste as well as waste for the production of biofuels or biomethane, new recycled plastic materials, derived for example from molecular recycling, new recycling options and involvement of residents to improve the quality of sorted waste.

Among the **sorting plants**, 6 (out of the 15 total) treat urban and special waste coming from sorted collection and from production/craft activities mainly in the provincial area in which they are located. The objective of the process, carried out with more or less complex technologies and specific treatment lines for the type of collection to be treated, is to recover the greatest possible quantity of material from the delivered flow and reduce the use of landfills. These plants recover: paper/cardboard, plastic, wood, metals, glass, biodegradable waste (from pruning), tyres, textiles, aggregates. The treatment lines used are specific for the characteristics of each collection, five plants out of six are equipped with particularly performing optical reading lines in the selection of urban plastic and paper collections both in terms of flow rate (hourly quantity of treated waste) and the quality of the material obtained from the selection. The treatment waste, so-called waste and not destined for material recovery, is destined for energy recovery or disposal.

In 2022, Herambiente's sorting and recovery plants treated **433,479 tonnes of waste**, an increase of 1.6% compared to 2021. This increase is mainly due to the increase in waste from sorted waste collection in the area. The quantity **sent for material recovery** represents 73.2%, while the share sent for energy recovery represents 7.4%, leading to an overall recovery of 80.6%, a slight decrease compared to the year 2021; A portion of the excess product is allocated to energy recovery, equal to approximately 27.8% in 2022, an increase of approximately 38% compared to the previous year. The amount of plastic selected and sent for recycling in 2022 increased to **54,790 tons** (+23% compared to 2017). The increase in the quantities of plastic selected and sent for recycling is one of the three objectives of the Group as part of the New Plastics Economy Global Commitment, an initiative with which in 2018 the Ellen MacArthur Foundation aimed to address the problem of plastic pollution worldwide origin and make the whole plastic production chain more circular.

The shredding activity aimed at the volumetric reduction of the large size waste, deriving from the mechanized selection of the separate collection of bulky waste, already present in the Ferrara, Bologna, Coriano and Modena plant was started up and put into operation also on the plant of Voltana, which in 2022 launched the new automatic line for the enhancement of the value of the glass coming from the collection.

DESTINATION OF TOTAL TREATED WASTE - HERAMBIENTE SORTING PLANTS

Tons	2020	2021	2022
Waste sent for material recovery	311,599	323,628	317,161
Irrecoverable in the output	93,379	102,798	116,251
of which energy recovery	18,004	20,732	32,283
Other waste for disposal	56	105	68
Total waste treated in selection plants	405,034	426,532	433,479
of which sent for material recovery (%)	76.9%	75.9%	73.2%
of which sent to energy recovery (%)	4.4%	4.9%	7.4%
of which sent for material and energy recovery (%)	81.4%	80.8%	80.6%

The circular economy at the service of businesses

The Hera Group, through its subsidiary Herambiente, manages over 90 plants for the recovery and disposal of hazardous and non-hazardous municipal, special and industrial waste. The range of facilities includes waste-to-energy plants, composting/digestion plants, sorting and material recovery plants, chemical/physical plants and inertisation plants; several plants are dedicated exclusively to the treatment of special waste in order to provide increasingly comprehensive and punctual services to industries and companies for managing their waste and scrap.

The year 2022 saw the continuation of the initiatives already launched by Herambiente with a view to recovering materials and energy, and was characterized by constant attention to the process of transforming its industrial activities in a **circular economy** logic. In particular, we note:

- the completion of the revamping of the anaerobic digestion plant located in **Spilamberto** (Mo) aimed at its modernisation and conversion to biomethane production. The project, which was developed by the Herambiente-controlled company Biorg, was completed on schedule and made it possible to achieve the challenging objective of performing the first injection of biomethane into the Snam network by 31/12/2022, the deadline set for the obtaining the Certificates of Release for Consumption incentive referred to in the Ministerial Decree 2018. With this second intervention, the production capacity of biomethane in 2023 will be able to reach 12 million cubic meters per year. In 2022, however, Herambiente had to abandon the revamping of the **Voltana** plant, already authorized for partial conversion to produce biomethane, as the new incentive scheme, issued in 2022, which will regulate incentives starting from 2023 no longer allows incentives for reconverted plants fuelled by Forsu (unlike what is admitted for biomass plants).
- the constant focus of the Herambiente Group on the implementation of synergies deriving from its presence throughout the value chain of the recovery of **PE and PET-based polymers**, through the agreement signed between Aliplast and Nextchem for the design and construction of a plant that is capable to regenerate polymers that constitute "rigid" and three-dimensional objects. Please refer to the case study in the attachments for details.
- the completion of **logistics platforms** that operate the storage, characterization and pre-treatment of the waste in such a way as to make it compatible with the recovery and/or disposal systems available in Italy and abroad. From this point of view, the agreement signed in 2020 with the company **Eni Rewind** for the construction, in the "Ponticelle" area, adjacent to the petrochemical pole of Ravenna, of a technologically advanced platform for the treatment of industrial waste, assumes significant importance. It is capable of receiving and pre-treating up to 60,000 tons per year of solid, liquid and sludge like (mainly hazardous) industrial waste. The project was developed in 2020 and was subjected to a single authorization procedure in October 2021; the authorization procedure lasted throughout 2022 and will witness its conclusion in the first months of 2023. Furthermore, again in this area, in 2022 Hasi completed some important interventions to expand its production capacity in the sphere of business services and for the recovery of special waste in the Triveneto areas with the construction of the new Marano Vicentino plant (which has also obtained a PNRR loan), and with the expansion of the

Torrebelvicino and Maniago plants, which will be completed in 2023, by the companies Vallortigara and Recycla respectively (acquired in 2021).

In 2022, the construction sites relating to the "F3" plant in Ravenna and line 2 of the **waste-to-energy plant in Trieste** entered the completion phase; the latter went into operation, according to schedule, in September 2022 and is now in the testing phase, while the construction site relating to the revamping of the F3 plant has suffered from a series of procurement and manpower availability difficulties on the part of the contractors which led to the postponement of the commissioning to the first quarter of 2023.

In 2022, the authorization process for the construction and operation of the project relating to the replacement of lines 1 and 2 of the **Padua waste-to-energy plant** with a new line was successfully completed; the construction site for this intervention is expected in the years 2023 and 2024. The primary objective of these interventions is to give a **long-term perspective to the current waste-to-energy capacity** of these plants, increasing the efficiency of energy recovery, reliability and continuity of operation, and, above all, equipping the plants with better and more innovative fume purification systems in order to further reduce the environmental impact.

In addition to the interventions on individual projects, the feasibility of initiatives is underway aimed at researching **new technologies** that allow the extraction of resources and value from the waste of market segments which today, however, resort to disposal solutions. Like the collaboration with construction companies and the University of Bologna to develop an innovative technology aimed at **recovering carbon fibre**. Please refer to the case study in the attachments for details.

For more information on the progress of the interventions and the expected/obtained environmental benefits, refer to the table in the paragraph "The development of the plant system".

Industrial waste recovery with Herambiente Servizi Industriali (Hasi)

Herambiente Servizi Industriali (Hasi) is the Group company that offers environmental solutions and services dedicated to companies. Today **it represents the largest Italian company dedicated to the treatment of industrial waste** and boasts a plant system that is unique in Italy consisting of 24 plants of different types, located in different areas of the national area, such as Tuscany, Emilia-Romagna, Veneto, Friuli-Venezia Giulia and Molise. The plant system includes:

- 9 storage facilities;
- 6 waste treatment plants (hazardous waste, special waste, sludge);
- 3 chemical-physical-biological treatment plants;
- 2 inertisation plants;
- 3 volumetric reduction plant;
- 1 soil washing plant.

Key elements of Hasi's offer are **maximum traceability**, compliance with all environmental regulations and identification of the optimal recovery and recycling solution that minimizes landfill disposal.

During the year 2022, Hasi acquired the stake in Team (platform for the treatment of industrial liquid waste in Pesaro) from Marche Multiservizi and in November it signed a binding agreement for a long-term partnership which provides for the acquisition of 60 % of the ACR company of Reggiani Albertino, one of the major Italian companies in the reclamation sector, in the treatment of industrial waste, in the decommissioning of industrial plants and in civil works related to oil & gas, with headquarters in Mirandola (Modena). An unprecedented operation which is expected to create the first national operator in reclamation and global service activities, with a widespread presence throughout the Italian peninsula.

In addition to global waste management solutions, Hasi offers O&M (operations and maintenance) services for large manufacturing groups of private waste treatment plants, implementation of improvement/efficiency plans, solutions for maximizing recovery and overall reduction of waste produced, such as managing some streams as by-products.

Some examples of recovery-oriented solutions applied to the customer portfolio are:

- leather scraps that converge for the production of soil conditioners and fertilizers;
- recoverable fractions of paper that are sent to paper mills;
- washed and reclaimed plastic that is reproduced in flakes for future processing;
- wood scraps that are used to make chipboard panels;
- ferrous materials that are selected for recovery in the foundry;
- organic waste from food manufacturing companies destined for composting for the production of energy and compost;

- some types of plastic production waste or poly laminates (which until recently were destined for energy recovery) selected and separated directly in the company and sent for material recovery at proprietary plants or third-party suppliers;
- all non-hazardous unsortable waste, or waste that is not selectable or recoverable in terms of material, directed to energy recovery.

The integration of the waste management offer with that of on-site plant management guarantees the Group effectiveness and notoriety on the market, high customer loyalty and value creation, as well as an element of differentiation compared to competitors.

The traceability of all waste delivered to Hasi is totally transparent. Since 2015, a reserved area dedicated to customers has been active on the Herambiente website, who can remotely view the status of their contributions, the validity of the approvals and the status of the payments. For each contract, information relating to the treatment operations is provided in real time, with evidence of the individual destinations and the percentage of recovery achieved with respect to the total waste delivered. More recently, a new feature has also been introduced that allows customers to book their deliveries online.

In 2022, the volume of waste managed by Hasi and its subsidiaries, through the intermediation service and in its plants, amounted to approximately **1,219 thousand tonnes (-7.5% compared to 2021)** of which 48.6% (approximately 592.3 thousand tons) sent for material or energy recovery or recovered directly as secondary raw material, while the remaining part, 51.4% (about 626.8 thousand tons), sent for disposal.

DESTINATION OF TOTAL MANAGED WASTE - HERAMBIENTE SERVIZI INDUSTRIALI (HASI) AND SUBSIDIARIES

thousands of t	2020	2021	2022
Waste sent for material and energy recovery	264.5	488.4	592.3
Waste sent for disposal	650.7	645.8	626.8
Total waste managed	915.2	1,134.3	1,219.1
Waste sent for material or energy recovery (% of total waste treated)	28.9%	43.1%	48.6%

The 2022 data include the waste managed by Hasi, Recycla and Vallortigara and include the liquid waste treated in treatment plants.

Without considering the volumes of waste managed by Recycla e Vallortigara, for which the acquisition had not been finalized in 2021, the waste managed by Hasi in 2022 would amount to 1,046 thousand tonnes, approximately 90 thousand tonnes less (-7.8%) compared to the previous year, of which 47.6% is sent for recovery, while 52.4% is sent for disposal. The reduction in the volumes of waste managed is mainly caused by a significant reduction in the flows sent for waste-to-energy due to the reduced availability granted to Hasi and the reduction of waste sent for disposal at the Loria landfill.

DESTINATION OF TOTAL WASTE TREATED IN ITS OWN PLANTS - HERAMBIENTE SERVIZI INDUSTRIALI (HASI) AND SUBSIDIARIES

thousands of t	2022
Waste sent for recovery and recovered	325.1
Second raw material produced	27.0
Material recovery start	48.4
Purified water recovered	205.4
Start-up of energy recovery	44.4
Waste sent for disposal	278.1
Of which discharge into industrial sewers	19.0
Total waste treated in the operations area	603.2

thousands of t

2022

Waste sent for recovery and recovered (% of total waste treated)	53.9%

In 2022, within its plants, Hasi and its subsidiaries treated 603.2 thousand tons of waste, of which more than half, 53.9% (corresponding to 325.1 thousand tons), was sent to recovery processes or recovered by generating secondary raw material. Analysing the performance of Hasi with a greater level of detail, it is highlighted that the **recovery of waste waters** in the Malpasso and Ragghianti plants through the innovative osmotisation process, which guarantees the recovery of water bringing it to a high quality level, higher for example, than that drawn from artesian wells, corresponds to about 63.2% of the total recovery; while the volumes of waste sent for **material and energy recovery** amounted to 14.9% and 13.6% respectively. Furthermore, confirming Hasi's propensity towards an increasingly circular business model, we note the **production of secondary raw materials** within the soil washing plant corresponding to 8.3% of the total recovery.

While through the **intermediation service**, Hasi and its subsidiaries, in 2022, managed approximately 615.8 thousand tons with its customers, of which 43.4% (267.2 thousand tons) were sent for material recovery (82.1%, corresponding to 219.3 thousand tons) and energy (17.9%, corresponding to 47.9 thousand tons).

The contribution of the Hera Group to the plastics of the future

The Aliplast Group, acquired in 2017 by Herambiente, owns **eight plants**. The three foreign plants located in Spain, Poland and France, as well as the two Italian plants in Formigine (Mo) and Quinto di Treviso (TV), are dedicated to the procurement and selection of plastics, the plants in Ospedaletto di Istrana (TV) and Borgolavezzaro (No) transform plastic waste into finished products, while the Gualdo Cattaneo (Pg) plant produces finished products starting from semi-finished products in recycled plastic.

Aliplast **manages the integrated plastic cycle**, transforming waste into a finished product, mainly PE film, PET sheet and granules/flakes of the main polymers. Its main commitment is to give sustainability to the life cycle of plastic, by collecting and recycling it to produce new materials, with the minimum possible environmental impact. Through constant research and development and continuous technological innovation (of product, service, process), Aliplast oversees a traceable plastic supply chain, capable of transforming a fractional chain into a virtuous circuit and ensuring a quality, efficient and economical final production cheaper than traditional materials.

Furthermore, Aliplast continues to constantly implement synergies that are aimed at the recovery of base polymers, through the agreement signed with Nextchem for the design and construction of a plant which is capable of regenerating polymers which constitute "rigid" and three-dimensional objects.

WASTE TREATED BY ALIPLAST

tons	2020	2021	2022
Incoming waste (A)	84,987	97,411	99,248
Total incoming waste sent for recycling (B)	74,947	88,284	86,247
Secondary raw material obtained from incoming waste (New plastics economy Global Commitment) (C)	68,848	80,877	79,172
Incoming waste sold (started for recycling at third parties) (D)	6,098	7,406	7,075
Percentage of secondary raw material and waste sent for recycling out of total incoming waste ((B/A)	88.2%	90.6%	86.9%

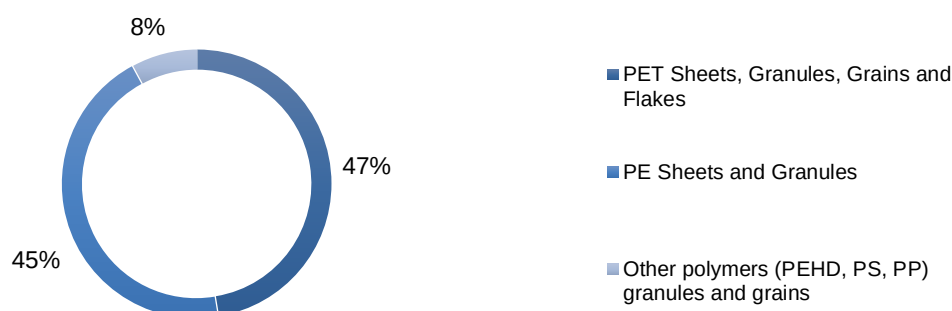
The plants treat **waste from industrial waste and sorted urban waste collection**. This waste was transformed into new products or, to a residual extent, transferred to third-party companies operating in the recycling sector. The Aliplast Group directly recycles a large part of the incoming waste and only a small percentage is discarded because it is made up of non-recyclable polymers or due to weight loss due to the presence of liquids. The percentage of incoming waste sent for material recovery is over 85%,

95

however a reduction was recorded in the last year due to an increase in the quantities of semi-finished products stored in warehouses whose sales decreased during 2022.

The secondary raw material obtained from the incoming waste is sold or used to produce recycled plastic products. The products sold by Aliplast in 2022 contain around 79% of secondary raw material derived from plastic waste. Also in the same year, Aliplast sold around 100 thousand tons of recycled plastic products (there were around 102 in 2021), marking a decrease of approximately 2% compared to 2021. This decline is mainly due to the increase in energy costs, the increase in the cost of recycled PET bottles and the consequent shift in demand from some large companies towards the use of virgin plastic. The aforementioned drop in sales led to a 2.3% reduction in incoming waste sent for recycling, and similarly the **volumes of secondary raw material obtained** slipped from 80,877 tonnes in 2021 to 79,172 tonnes (-2.1%). The combination of the growth in inventories due to the accumulation of unsold semi-finished products and the general contraction in sales also led to a decrease in the ratio between incoming waste and secondary raw material obtained, which stood at 80% in 2022, decreasing by about three p.p. compared to the previous year. These data are the subject of public reporting as part of the **New Plastics Economy Global Commitment** promoted by the Ellen MacArthur Foundation, described in a case study of this report.

PRODUCTS SOLD BY ALIPLAST BY TYPE (2022)



The food industry requires compliance with high safety standards and demands strict compliance with applicable food regulations. The range of Aliplast products, fully **certified at European level for food contact**, consists of polymer granules and flakes, and PET sheets for thermoforming and extrusion, which are ideal for the production of food trays and bottles.

Since 2018, Aliplast has been using its own IT tool to calculate the **carbon footprint** of five types of products, as described in more detail in a case study within this sustainability report.

The development of the plant system

The main interventions

In 2022, the Herambiente Group made operational investments **in the material and energy recovery sector**, as well as in the construction of additional landfill volumes, for a total amount of 127.8 million euro.

The following table shows the construction, upgrading or restoration of the plants completed during the year and under construction. For a description of the main interventions carried out, see the paragraph "The circular economy at the service of businesses".

MAIN CONSTRUCTION/ENLARGEMENT/IMPROVEMENT INTERVENTIONS OF WASTE TREATMENT PLANTS

Plant	State of progress at 31 December 2022	Type of intervention	Expected / achieved environmental benefits
Spilamberto plant (Mo)	Terminated	Realization of the biomethane production section	Estimated biomethane production of 3.6 MSm ³ and treatment of 40 ktons/year FORSU (Organic Fraction of Municipal Solid Waste) (started in mid-December)

Plant	State of progress at 31 December 2022	Type of intervention	Expected / achieved environmental benefits
			2022 about 60,000 Sm ³ produced)
Carbon Fibre Recovery Plant (Bo)	Authorized intervention (during procurement)	New plant (construction of 2 lines for the recycling of carbon fibre from composite materials)	Increase in the range of recoverable waste and production of recycled materials with less energy expenditure than virgin raw materials
Rigid plastics recovery plant of Aliplast (Mo)	In planning (authorization process in progress)	New plant	Increase in the range of recoverable plastic waste
Special waste recovery plant in Marano Vicentino (Vi) of Vallortigara	Under construction	New plant	Recovery of special waste (paper/cardboard, wood, metals, etc.)
Malpasso(Pi) site of Hasi	Osmosis line finished; Evaporation line under construction	New osmosis/evaporation line for wastewater/liquid waste	Recovery of water for industrial use
Torrebelvicino (Vi) plant of Vallortigara	Under construction	Plant expansion	Increase in special waste treatment capacity
Maniago (Pn) plant owned by Recycla	Under construction	Construction of new department	Increase in special waste treatment capacity
Castiglione delle Stiviere plant (Mn)	Completed (plant running)	Modification and revamping of high-quality CSS production line	Reduction of waste scraps from processing that cannot be used as fuel
Castiglione delle Stiviere plant (Mn)	Finished (in testing start-up)	Insertion of 2 abatement towers on the air treatment system	Reduction of odour emissions
Ragghianti (Pi) of Hasi Site	Terminated	Doubling of the tank park for flammable waste	Capacity increase
Ponticelle platform (Ra) of Hasi	In planning (authorization process in progress)	New platform for industrial waste storage and pre-treatment	Capacity increase
Voltana selection plant (Ra)	Terminated	New glass waste treatment line from separate collection	Improved glass recovery system from separate collection
Paper/cardboard, plastic (Pu) sorting plant	In planning (authorization process completed)	New plant	Plant for the treatment of Sorted Waste fractions of paper/cardboard and plastic
Pozzilli treatment plant (Is)	Authorization phase	Purifier expansion	Increased handling capacity
Pozzilli Spillway (Is)	Under construction	Insertion of spillway and first rain accumulation tank on the wastewater inlet pipe via pipe	Adjustment of inflow/load to purifier and spillway management
Trieste waste-to-energy plant	Completed (plant running)	Line 2 revamping	Increase in treatment capacity and energy recovery (expected 20 thousand MWh/year)
Ravenna waste-to-energy plant (F3)	Under construction	Revamping of the F3 hazardous waste incinerator (Ravenna)	Increased treatment capacity (+10 kt/year) and energy recovery (+7,000 MWh/year)
Padua waste-to-energy plant	In planning (authorization process in progress)	Replacement of lines 1 and 2 with new line 4	Increase in energy recovery (expected + 70,000 MWh/year), BAT adjustment and continuity of operation.
Landfill 4th section Ravenna	Terminated	Capping and environmental restoration	Reduction of leachate production and environmental restoration
Landfill 5th section of Ravenna	Authorization phase	Construction of the 5th sector landfill of inertised NP and P waste	Capacity increase

Plant	State of progress at 31 December 2022	Type of intervention	Expected / achieved environmental benefits
Landfill 9th sector Ravenna	Under construction	Capping and environmental restoration	Reduction of leachate production and environmental restoration
Landfill site km 3.8 Ravenna	Authorized intervention	Restoration and renaturation of the area	Renaturation and landscape insertion
Landfill of Loria (Tv)	Lot 6 completed and in the testing phase; Lot 5 under construction	Realization of lots 5 and 6	Capacity increase
Landfill of Civitella (Te)	Terminated	Restoration and renaturation of the area	Restoration and renaturation of the area
Landfill Serravalle (Pt)	Terminated	Realization lot 14	Capacity increase
Landfill Serravalle (Pt)	Terminated	Capping and environmental restoration third phase	Reduction of leachate production and environmental restoration
Landfill leachate treatment plant Cà Asprete (Pu)	Under construction	New plant	Landfill leachate treatment plant using reverse osmosis technology

Environmental impact assessments [2-23]

The **EIA** and **Screening** requests are accompanied by a series of **environmental assessments** aimed at evaluating the effects of the works (both in the construction phase and in the project stage) on the environment and on human health and well-being, based on the characteristics of the project itself and following the analysis of the components involved in the pre-construction work situation. In particular, interferences with the following components are analysed: atmosphere, water resources, soil and subsoil, flora, fauna and ecosystems, noise, human health and well-being, landscape and cultural heritage, settlement system and socio-economic conditions.

The approach used involves the execution, in addition to qualitative and descriptive assessments, of specific **modelling and forecasting simulations** through the use of software and calculation algorithms, in order to obtain numerical data that can be compared with the standards and limits defined by the sector legislation and such as to be able to assess the significance of the impact. The modelling simulations are carried out in particular for the emission of pollutants and odorous substances into the atmosphere, and noise emissions. They are also used for the preparation of the risk analysis in the landfill sites, where it is necessary to request derogations from the admissibility criteria of the incoming waste and in any case necessary during the plant closure procedure phase as envisaged by the recent regulatory updates on landfills.

All the simulations carried out envisage the punctual characterization of the sources and the evaluation of the most disadvantageous scenario for the purpose of carrying out **a precautionary analysis**. In order to evaluate the visual effect of the new work on the surrounding environment, for example, for the construction of new landfill lots/sectors, landscape assessments are carried out through the creation of renderings and photo-insertions. Furthermore, where the planned works fall within or near sites of Community interest (sites belonging to the Natura 2000 network), special assessments are envisaged to analyse the significance or otherwise of the interference that the planned works/activities could have on such sites. Finally, in some cases, the requests are also accompanied by a specific "Health impact assessment and health monitoring plan proposal". Once the impacts have been assessed, specific **mitigation measures** are identified, where necessary, in order to reduce their significance and, where not possible, specific compensatory measures are prepared (construction of photovoltaic systems, planting, creation of electric recharging points for cars, etc.).

Note that the design of the works is always carried out through the identification and use of the best technologies available as required by Legislative Decree 152/2006, art. 29 bis paragraph 3, which, for landfills, are defined by Legislative Decree 36/2003.

During the year 2022, as part of the art. 27-bis of Legislative Decree 152/2006 "Single regional authorization provision" the following Environmental Impact Assessment Procedures (still in progress):

- Cordenons (PN) landfill - Project for the elevation expansion of the existing Cordenons landfill called "former polygon area" for non-hazardous waste, located in Vinchiaruzzo in the Municipality of Cordenons (PN), for which an update of the recovery plan is expected environmental aimed at improving the landscape-environmental value;

- Loria (TV) landfill - Project for the morphological reprofiling of the existing landfill with adaptation of the volumes, relating to the landfill for non-hazardous and non-putrescible waste ex quarry at Ronchi, located in Via Colombara in the Municipality of Loria (TV)".

During 2022, the procedure for verifying the subjectivity to EIA was also activated (so-called Screening) of the morphological optimization project of the 5th lot for the landfill for non-hazardous waste "Il PAGO", located in the Municipality of Firenzuola, SP n. 117 San Zanobi (FI), which was also recently concluded with the exclusion of the project from the EIA procedure.

Also in 2022, Applications for **the Review of Integrated Environmental Authorizations** were activated for adaptation to BAT (Best Available Techniques), with validity of renewal, following the Implementing Decision (EU) 2019/2010 of the Commission of 12/11/2019 which establishes best available techniques (BAT) conclusions for waste incineration.

The main **plants/plant sites** for which the AIA review requests were activated in 2022 are:

- Waste-to-energy plant for municipal and special non-hazardous waste located in Via Errera n. 11, Municipality of Trieste (TS) (in progress);
- Waste-to-energy plant for non-hazardous waste, located in Via Raibano n. 32, Municipality of Coriano (RN) (in progress).

From those evaluations carried out during the presentation of the AIA Review requests, **substantial compliance with the sector BATs** emerged for all of them.

The description of the significant plant intervention concerning the Padua waste-to-energy plant is given below.

The plant equipment modernisation project of the **Padua waste-to-energy plant** entails the replacement of existing lines 1 and 2 (in operation respectively since the 1960s and 1970s) with a new line (line 4) having very similar characteristics to the already existing line 3 and capacity nominal equal to the sum of lines 1 and 2 themselves, in order to improve the environmental and energy performance of the plant as a whole through a technological upgrade.

The Padua waste-to-energy plant is owned and managed independently by the company Hestambiente (70% controlled by Herambiente and 30% by AcegasApsAmga). Over the years, lines 1 and 2 have undergone various partial technological upgrading interventions as part of a continuous improvement process, essentially aimed at increasing environmental performance (fume purification system), also in conjunction with the launch of the line 3 in 2010; however, these interventions could only marginally affect the combustion and energy recovery system. The lines, especially in recent years, have shown a progressive decline in performance especially in terms of availability, reliability and capacity.

Analyses conducted in order to evaluate a possible revamping of the lines showed that for a significant investment, it would be possible to guarantee a recovery of the above-mentioned performance, although it would not allow further improvements in terms of environmental impact over time.

The next logical step was to evaluate an intervention for the construction of a totally new line 4, completely similar in terms of technology and performance to the existing line 3, keeping lines 1 and 2 in operation for the entire duration of the construction site so as to always be able to ensure the continuity of the waste disposal service to the area, even during the entire construction phase of line 4.

In terms of potential, it was decided to remain within the current authorization period of the AIA:

- Line 1 (150 t/day) + Line 2 (150 t/day) + Line 3 (300 t/day) = 600 t/day
- Line 3 (300 t/day) + Line 4 (300 t/day) = 600 t/day

In summary, the objectives of the intervention are therefore essentially:

- recovery of the disposal capacity currently well below that which has been authorised;
- improvement of energy performance in order to increase the recovery of energy;
- increase of availability through a recovery of reliability and a reduction of failures;
- improvement of the environmental performance.

The estimated total amount for the implementation of the intervention is approximately 110 million euro.

In 2020, the authorization process was started by presenting the Veneto Region with the necessary documentation required for a single environmental authorization measure and the Environmental Impact Assessment of the intervention was approved with a positive outcome, albeit with various prescriptions. Among these, the most impactful is the reduction of the maximum authorized annual capacity of the plant which drops to 219,000 tons. There are further provisions aimed at increasing the environmental

performance of the plant (also on line 3) and also the energy performance (transfer of heat via district heating to the future new hospital in Padua). In particular, it concerns the lowering of the limit of emissions into the atmosphere of some parameters compared to the values envisaged by current legislation.

On 18/3/2022 the Decree n.11 of 3/3/2022 was published in the Official Regional Bulletin of the Veneto Region n.38 with which the Single Regional Authorization Provision (PAUR) is issued which includes, among the various also the Integrated Environmental Authorization (Decree n.27 of 2/2/2022).

As part of the PAUR authorization procedure, the documentation for the review of the AIA in force was also presented in accordance with the provisions of the Community legislation which approved the conclusions on the best available techniques (BAT Conclusions) for the incineration of waste. Therefore, during the PAUR procedure, the review of the AIA then in force was also carried out (Veneto Region Decree No. 78 of 6/9/2017) whose contents were then included in the current AIA Decree No. 27/2022.

From a design point of view, Hestambiente has entrusted all the design activities and intends to entrust the construction activities to the company of the HeraTech group.

Note that the plant is EMAS registered, and on 28/4/2022 the EMAS Registration Certificate IT-000089 was reissued which will expire on 3/3/2025.

Sblocca Italia Decree and new waste disposal legislation

Article 35 of the Decree Law 133/2014 converted with amendments into law 164/2014 in the so-called «Sblocca Italia», is aimed at creating an adequate and integrated urban waste management system on a national scale as well at achieving the objectives of separate collection and recycling.

This rule provided for the recovery plants that comply with the environmental limits, present in the environmental impact assessments (EIA) of the individual plants, the possibility of adapting the treatment capacity to the saturation of the thermal load of the plant and the possibility of treating urban waste coming from outside the basin subject to meeting the needs of the reference basin.

Following this legislation, an agreement was signed in 2015 between the Emilia-Romagna Region and the two managers of waste-to-energy plants for urban waste (Hera and Iren). This agreement limited the treatment of municipal waste from outside the region only in the event of a request for assistance in offering solidarity for justified and shareable needs posed for limited periods and with the assent of the territories concerned.

In line with the principles and objectives defined in art. 35, the Hera Group identifies the priority criteria for saturating the capacity of its waste-to-energy plants in the following hierarchical order:

- municipal waste from the local area;
- municipal waste from the regional area;
- any non-regional municipal waste based on decisions by the relevant authorities;
- non-hazardous special waste upon saturation of the residual thermal load (according to the provisions in the integrated authorization of each plant).

On the basis of these principles, between the end of 2015 and during 2016, the Integrated Environmental Authorizations (AIA) were updated, and at the same time, program agreements were signed with the Local Authorities concerned for the waste-to-energy plants of Forlì, Rimini, Modena and Ferrara.

The Bologna, Padua and Trieste plants had already been authorized with a capacity at saturation of the thermal load. The authorizations of the two Padua and Trieste plants, in fact, do not allow the treatment of urban waste coming from outside the basin, since priority access to basin and regional waste must be guaranteed, both municipal waste as well as from treatment of municipal waste, saturating the treatment capacity.

The agreement on the Forlì waste-to-energy plant provides that only urban waste and special waste deriving from the treatment of municipal waste (e.g., waste from the treatment of sorted waste collected) coming solely from the regional basin in compliance with current planning will be destined for this plant and the new AIA released in December 2022. The agreement on the Ferrara waste-to-energy plant was passed in 2021 with the issue of the new Integrated Environmental Authorization which sets the maximum authorized disposal capacity of 142,000 t/year of non-hazardous waste, with priority access to municipal waste produced in the region.

In 2022, in the eight Herambiente **waste-to-energy plants** destined for municipal waste (thus excluding the Ravenna plant), no municipal solid waste coming from other regions was treated on the basis of

determinations by the relevant Authorities. Also as regards **landfills**, solid municipal waste coming from other regions was not treated on the basis of determinations by the relevant Authorities.

Circularity within the Hera Group

Waste produced by the Company [306-1]

The analysis carried out for the definition of the destination of the waste produced by the Group, in 2022, led to a refinement of the calculation criteria which resulted in the exclusion from the total calculation of the waste produced of all the waste or wastewater in leaving the plants, in accordance with the provisions of the fourth part of Legislative Decree 152/2006 ("Regulations on waste management and reclamation of polluted sites"). The second paragraph of article 185 of the decree itself excludes wastewater from the scope of application, as it is regulated by other Community regulatory provisions. For this reason, all wastewater referring, for example, to water deriving from chemical-physical-biological treatment, wastewater from purifiers and part of the leachate from landfills and composting, which were included until 2021, have been excluded.

With the same calculation method in 2022, the waste produced by the Group amounted to **1,640 thousand tonnes, -6% less** than in 2021. 42% of the waste produced was sent for recycling, composting or other recovery operations such as the reuse of certain types of materials, while the remaining 58% was destined for disposal or waste-to-energy (assimilated to disposal as defined by the GRI standard). If water discharges classified as waste were also included in the calculation, the waste produced in 2022 would amount to 2,081,083, a decrease compared to 2021 of -9%.

[306-3]

MAIN WASTE PRODUCED BY THE COMPANY BY DESTINATION

Tons	2021	2022
Non-disposal	747.215	681.216
Disposal	1,005,278	959.417
Total	1,752,493	1,640,632

Water discharges not classified as waste pursuant to Legislative Decree 152/2006 were not considered. The 2021 data have been recalculated in order to align them with the methodology used in 2022.

MAIN WASTE PRODUCED BY THE COMPANY BY DESTINATION (2022)

Tons	Not disposal	Disposal	Total
Bio-stabilised	87,462	1,949	89.412
Compost leachate	-	23,291	23,291
Sewage sludge	113,898	45.086	158,984
Sludge from chemical-physical-biological treatment	2,229	46,631	48,861
Purification leachate	-	4,672	4,672
Leachate from landfills and composting	-	173,300	173,300
Dust from waste-to-energy electrofilters	43,432	7.059	50,491
Fuel production from waste	35,685	44,367	80,052
Liquid waste from purification	2,713	20,866	23,579
Liquid waste from inertisation	-	27,694	27,694
Solid waste from physicochemical treatment	22.040	34,909	56,949
Solid waste from inerisation	22,327	39,831	62,158
Purification sands	2	27,976	27,978
Slag from waste-to-energy	197,523	46,836	244,359

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Tons	Not disposal	Disposal	Total
Non-reusable fractions from sorting plants	20,976	191.418	212.395
Other waste from Herambiente storage and plants	132,926	223,532	356,458
Total	681.216	959.417	1,640,632

Water discharges not classified as waste pursuant to Legislative Decree 152/2006 have not been considered.

In 2022, the waste produced by the Group, sent for recovery operations, amounted to 681,216 tonnes (of which 89% non-hazardous waste and 11% hazardous). Of the total waste sent for recovery, 28% was destined for **Group plants** and the remaining 72% for third-party plants. The waste categories that had a significant weight within the total waste produced and destined for recovery were: **waste-to-energy scoria** totalling 197,523 tonnes (29%), **purification sludge** approximately 113 thousand tonnes (17%) and **bio-stabilised** amounting to 87 thousand tons (13%).

[306-4]

MAIN WASTE NOT INTENDED FOR DISPOSAL BY OPERATION (2022)

Classification	Operation	Group plants	Third-party plants	Total
Hazardous	Recycling	346	23,210	23,557
	Other recovery operations	16,414	37,790	54.204
<i>Total hazardous</i>		<i>16,760</i>	<i>61.001</i>	<i>77,761</i>
Not hazardous	Recycling	42,625	157,693	200.318
	Composting	114.202	22,145	136,347
	Other recovery operations	14,369	252,421	266,790
<i>Total non-hazardous</i>		<i>171.196</i>	<i>432,259</i>	<i>603.455</i>
Total		187,956	493,260	681.216

The item "Other recovery operations" includes the reuse of bio-stabilised material to cover waste dumped in landfills, the reuse of electro-filter powder and the shredding of waste used for the non-reusable fractions of RDF (Refuse Derived Fuel)

The refuse produced by the Group, subsequently sent for disposal, amounted to 959,417 tonnes (of which 87% non-hazardous waste and 13% hazardous), of which **70% was allocated to Group plants** and the remaining 30% to third party systems.

[306-5]

WASTE ALLOCATED TO DISPOSAL BY OPERATION (2022)

Classification	Operation	Group plants	Third-party plants	Total
Hazardous	Transfer to landfill	22,882	12,461	35,344
	Incineration	-	34,149	34,149
	Waste-to-energy	-	2,812	2,812
	Other disposal operations	24.033	28.065	52.098

Classification	Operation	Group plants	Third-party plants	Total
Total hazardous		46,916	77,487	124.403
Not hazardous	Transfer to landfill	147,294	98,913	246.207
	Waste-to-energy	79,267	55.094	134,361
	Incineration	29,705	43	29,748
	Other disposal operations	368,647	56.051	424,698
Total non-hazardous		624,913	210.101	835.014
Total		671,829	287,588	959.417

The item "Other disposal operations" includes the physicochemical treatment of compost leachate, leachate, liquid waste and sludge.

Recovery of waste from waste-to-energy and main types of refuse [306-2]

The development and renewal program for waste-to-energy plants carried out by Herambiente in recent years has had a positive effect on the production of combustion refuse. The new combustion systems and, above all, the "gondola" type "cooling" and extraction systems for scoria combustion, make it possible to have scoria with a very low content of unburnt products and a reduced water content. This determines a smaller quantity of scoria produced, with, above all, a more suitable quality for subsequent recovery.

In 2022, the eight waste-to-energy plants managed by Herambiente destined for urban waste (thus excluding the Ravenna plant) produced 244,359 tonnes of waste, equal to 20.8% of the waste treated in these plants. **81% of the scoria produced was sent to recovery plants**, for example in the production of cement and cement mixes, while the remainder was disposed of in landfills (this percentage was equal to 97% in 2021 and 95% in 2020).

In the Ferrara, Bologna and Rimini plants there is a **system for separating ferrous metals** which allows them to be sent for reuse in the metallurgical industry. In 2022, 4,535 tons of metals were recovered, a figure aligned to 2021 (there were 4,204).

Dust from fume filtration in waste-to-energy plants can be mainly recovered in two ways:

- the sodium powders are collected by Solvay Italia which treats them and recovers the residual bicarbonate they still contain;
- the calcium powders and electro-filter powders are sent to Germany where they allow them to be reused to restore the cavities of disused mines.

In 2022, a total of 50,491 tons of dust were produced, of which 43,432 sent for recovery and 7,056 sent for disposal.

As regards the **sludge produced by physicochemical plants biological**, these are sent abroad where they fall within a process for the production of cement granules which can subsequently be used as raw material for the production of composite mixtures for geoengineering, i.e. levelling, reclamation and surface shaping of areas, formation of embankments or for special applications in areas where mining waste from hard coal mining is found. Furthermore, the granulate can also be used in civil engineering for the construction of the lower layers of foundations, roads or for reclamation activities.

The **bio-stabilised product** is reused as a material for preparing the daily landfill covers and, in some cases, also for their final cover.

The **wastewater from the purifier** is all potentially reusable, as washing water for vehicles or yards.

Finally, through the shredding of waste from selection centres it is possible to produce **Refuse-derived fuel (RDF)** which is then used in boilers and cement factories.

Recovery of sewage sludge

Sewage sludge is considered special waste and must be managed according to the provisions of **Legislative Decree 152/2006**. In 2022, the plants managed by the Group produced 35.0 kilograms of sludge per equivalent inhabitant served, 0.4 kilograms more than the previous year. At Group level, a portion of the sludge produced (45,085 tonnes, approximately 28%) was disposed of through **dedicated**

incineration (29,705 tonnes, 18.7% of the total), **landfilling** (9,145 tonnes, 5.8% of the total against 10.4% in 2021) and a residual part with other treatments (6,236, 3.9%). The remainder was recovered (113,898 tons, about 72%) through **indirect agronomic reuse after composting** (104,325 tons, 65.6%), **direct recovery in agriculture** (9,573 tons, 6.0%). The Group aims to further reduce the transfer of sludge to landfills in the areas served. In particular, in Emilia-Romagna (area served by Hera Spa), the objective for 2030 is to reduce the transfer by up to 1.5%.

With the aim of improving the sustainability in managing the sludge produced by the purification process and minimizing its quantities, in 2022, in the Emilia-Romagna area, the design was completed, and the installation of the centrifuges started in the Ferrara and Imola plants. Furthermore, the experimentation relating to the use of a new generation additive continued on the sludge line of the Cesena plant, with the aim of increasing the production of biogas, and on the lines of the San Carlo (Fe) and Argenta treatment plants (Fe) and Castelfranco Emilia (Mo) with the aim of reducing the production of sludge.

As far as the Triveneto area is concerned, note that in the Padua area, after the installation of the 900-square-meter solar greenhouse in 2020, this was continued with investments aimed at installing additional innovative technology biological dryers. In addition to this, an agreement was signed in the Trieste area between the main operators of the Friuli Venezia-Giulia region for a centralized drying project. Finally, the preliminary design is underway for a 20,000-ton drying plant at the San Giorgio di Nogaro (UD) purification plant. Both the Padua and Trieste projects are financed by the PNRR; therefore, the final testing of these plants must take place by 2026.

In the Marche region, the construction of a new plant is planned for 2023 at the Borgheria di Pesaro purifier, which will allow biological sludge to be transformed into fertilizers directly within the purification cycle.

Waste management in the electricity distribution business

[306-1]
[306-2]

In 2021, from the analysis carried out for the Taxonomy, an in-depth analysis was carried out on the production and management of waste deriving from ordinary and extraordinary management and maintenance activities in the field of electricity distribution, with the aim of verifying compliance with the "Do No Significant Harm" principle in relation to the environmental objective of a "transition towards a circular economy".

Within the Group, the distribution of electricity is an activity carried out by the companies Inrete and AcegasApsAmga; in carrying out internalized activities, residues can be produced from processes such as: cables, metals, plastics, batteries, oils, packaging (wooden and metal), transformers and capacitors.

These are delivered by the shipyard to the company offices and then evaluated and, if unsuitable for subsequent reuse, classified as waste for recovery or disposal.

In 2022, Inrete produced around **90 tons of waste** including mixed metals, plastics, copper cables, aluminium cables and others. 88% was sent for material or energy recovery, and 48% was sent for recovery or disposal at Group plants. In the construction of the new underground infrastructures for the development and renewal of the distribution network, excavations were carried out with restorations in recycled material for over 90% of the cases.

In the year 2022, AcegasApsAmga produced approximately **235 tonnes** of waste (of which 89% was sent for material or energy recovery), entirely sent for recovery or disposal at external supplier plants.

On the other hand, in the construction sites entrusted to suppliers, the waste produced mainly refers to excavated earth and rocks; in some construction sites in the Triveneto, from the replacement of old networks it is possible to find previous asbestos cement pipes which are sent for disposal through the Herambiente company. In these construction sites, waste monitoring takes place through periodic sample checks of the fourth copy of the waste form.

In 2022, the works to allow the circularity of the materials deriving from the massive replacement of the electricity meters in the Inrete and AcegasApsAmga area were completed. The massive replacement, starting in 2022 in the areas of Modena, Imola, Gorizia and Trieste, will therefore see the reuse of materials from the meters being decommissioned while the new meters are manufactured with recycled plastics. The first NexMeter gas meters manufactured with recycled plastic were also introduced on an experimental basis in order to verify their performance in the installation conditions. The final objective of the project is to reuse the plastic recovered from old meters in the manufacture of the new generation NexMeter Gas meters.

With the aim of improving the circularity profile of the electricity distribution service, also in relation to the requirements of the EU Taxonomy, in view of the contractual renewals of supply contracts that will take place in the coming years, the introduction of the following aspects is being considered:

- for the purchase of incoming materials, the insertion of technical specifications or certifications regarding the packaging, the nature/derivation of the products to be supplied and the methods of transport;
- for the treatment of outgoing waste, the introduction of minimum recycling percentages and reports relating to the destination of waste sent for recovery or disposal.

Water circularity

Water losses

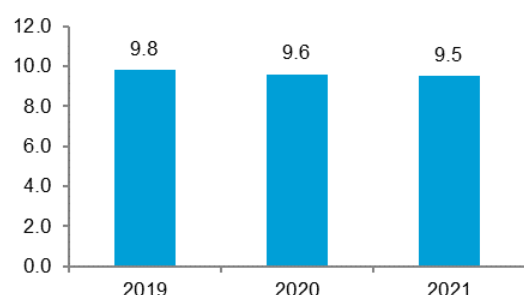
The percentage of water losses compared to the water introduced into the network is due to physical or real losses (due to broken pipes or hydraulic parts, etc.) and to administrative or apparent losses (meter measurement errors, errors in estimating the presumed consumption at 31 December, self-consumption not recorded, illegal consumption); the latter translate into water which is actually delivered to the final customer but which is not counted and therefore invoiced.

Until 2006, network losses were calculated as the difference between the water introduced into the aqueduct network over the year and the water accounted for as delivered to customers in the same period: the latter figure was estimated at 31 December of every year on the basis of customers' historical consumption as it is not possible to carry out a single reading of all the meters at 31 December. This estimate was then supplemented to take into account the correct accrual of sales to customers at 31 December of the previous year calculated after reading all the meters. Since 2007, network losses have been calculated by entering the adjustments deriving from the meter readings in the relevant year, thus ensuring the comparability between the water sold and the related data introduced into the network for each year. The method defined by ARERA in the technical quality regulation (Resolution 917/2017 and amendments Resolution 639/2021 Article 10) is used to calculate water losses; the volume of water lost is calculated as the difference between the volumes entering the aqueduct system and the volumes leaving the aqueduct system; this value is compared to the volumes entering the aqueduct system to calculate the percentage and to the length of the adduction and distribution pipelines to calculate the linear losses, also including the length of the connections. With this approach, however, it is only possible to calculate the final figure for the year approximately four to six months after the closing of the budget (after all meters have been read). For this reason, the following graph does not show the data for the year 2022. Based on the information available at the date of approval of these financial statements, there are no elements to affirm that the final figure for water losses referring to the year 2022 differs significantly from that relating to the year 2021.

At Group level, the data relating to **network losses** for 2021 is **equal to 29.7%**, which is decreasing slightly compared to 2020 (both data have been calculated in accordance with the ARERA resolution). The Group continues to be positioned at a **significantly lower level than the national average** of 40.7% in 2020, also lower than the average of the North-West area, which represents the best performance at national level, equal to 32.2% in 2020 (Source: ARERA, Annual Report 2022), as well as 36% in 2021 **of the average of the provincial capitals** (Source: Legambiente Urban Ecosystem 2022).

The corresponding **linear loss** index (2021 data) is equal to **9.5 cubic metres/km/day**, a decrease compared to 2020. It is believed that the figure for water losses per kilometre of the network is more representative of the effectiveness and efficiency of the distribution system as well as more useful for comparisons with other companies. The figure for linear losses in the Emilia-Romagna area served by the Group corresponds to 8.8 cubic metres/km/day in 2021, substantially in line with the average value of 8.3-8.4 cubic metres/km/day measured by the Agency Commission for the Environment on a group of **32 European utilities** that took part in the study "Performance of water utilities beyond compliance". An even more significant value when compared with the **national average** of 17 cubic metres/km/day reported by ARERA for 2020 (Source: ARERA, Annual Report 2022). The figure is also lower than the **average of the North-East area**, which shows the best performances at a national level, equal to 11.4 cubic metres/km/day in 2019 (Source: ARERA, Annual Report 2022).

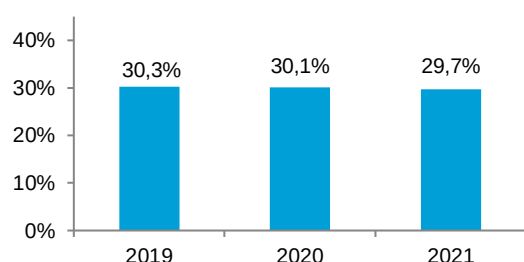
WATER LOSSES PER KILOMETRE OF MANAGED NETWORK (MC/KM/DAY) (PHYSICAL AND ADMINISTRATIVE LOSSES OF THE CIVIL AQUEDUCT CALCULATED WITH THE ARERA METHOD)



2019 2020 2021

Hera	9.1	8.9	8.8
AcegasApsAmga	25.2	24.8	25.3
Multiservice brands	5.2	5.1	5.2

WATER LOSSES (PHYSICAL AND ADMINISTRATIVE LOSSES OF THE CIVIL AQUEDUCT CALCULATED WITH THE ARERA METHOD)



Average Italy:
40.7% (2020)

2019 2020 2021

Hera	29.0%	28.5%	27.8%
AcegasApsAmga	34.2%	35.4%	36.0%
Multiservice brands	33.2%	32.8%	34.0%

The 2019, 2020 and 2021 data are calculated according to the method defined by ARERA in the regulation of technical quality (resolution 917/2017 and amendments to resolution 639/2021 Article 10).

The recovery of purification water for the benefit of local areas

Water management must be increasingly conceived in a holistic vision, in which the point of returning the purified water to the environment is no longer the closure of a system, but rather the passage to another phase of the water cycle. In this vision, a transversal commitment is required to enhance and not risk wasting the resource. For this reason, Hera Spa, since 2018, has undertaken to sign program agreements with reclamation consortia with the aim of increasing the reuse of wastewater treatment. This commitment, albeit in different ways, has also been followed over the years by AcegasApsAmga and Marche Multiservizi.

In April 2018, a **three-year program agreement was signed between Hera Spa and the Emilia-Romagna Region, Arpae, Atersir and Consorzio Bonifica Renana** aimed at recovering the wastewater discharged from the Bologna purification plant (the total reuse potential is 7.5 million cubic metres). The three-year agreement was renewed in 2021, in continuity with the previous one, and made official in 2022 with the Regional Council Resolution of 11 April 2022, n. 534. The agreement provides for the consortium to withdraw around 2,160 cubic metres/h, equal to around 40% of the flow treated in the summer period. In particular, a part of the water purified by the plant is conveyed through a dedicated

pipeline to the “Savena Abbandonato”, letting the corresponding flow, coming from the Reno river, flow towards the “Canale Navile”. This occurs through a modulated management of surface water flows by the Consorzio della Bonifica Renana, in relation to the requests and the degree of drought of the water bodies. Under the agreement, Hera and the Consorzio della Bonifica Renana have invested around 120,000 euro to bring the transfer system (sluice gate and lifting/adduction system) of part of the purified flow rates of the Bologna treatment plant to the network of canals managed by the same consortium. In the course of the activity, supplementary analyses are envisaged on the wastewater discharged from the Bologna treatment plant, to monitor additional parameters to those already envisaged in the authorisation.

This initiative, in addition to the primary objective of protecting the water bodies present in the area, also pursues the principle of reusing water as an asset to be preserved. In 2021, the total flow diverted to the Bonifica Renana plant from the Bologna purifier is **approximately 891 thousand cubic metres**. In 2022, more than 2.2 million cubic metres were diverted in the June-November period.

In 2019, a **Protocol and Memoranda of Understanding was signed between Hera and the Consorzio della Bonifica Renana** for some of the smaller purifiers in the Bologna area aimed at identifying the operating methods necessary so that the water treated by the purifiers located in the consortium's district can be reused downstream of the discharge, and eventually channelled into a basin, in order to improve the hydrological balance of the flow rates passing through the water bodies of the consortium district (the total reuse potential is approximately 2.5 million cubic metres).

During 2020, **the Program Agreement was signed for the reuse of wastewater** from the Sassuolo and Savignano sul Panaro treatment plants, and the agreement was sent to the Municipality of Modena for the treatment plant, with the aim of formalize the reuse practice already in use (final approval resolution expected in February 2021). These agreements aimed at reusing water for irrigation in the Modena area resulted in a potential volume of reuse of around **4.2 million cubic metres**.

In 2022, the VALUE CE-IN research project (“Valorisation of wastewater and sludge from a circular economy and industrial symbiosis perspective”) continued in the **Cesena** area, and in August 2022 it was signed between Hera SpA and the Consorzio di Bonifica della Romagna an agreement with experimental purposes, aimed at evaluating the effects of the use of purified waste water from the Cesena treatment plant on the main tree crops present in the irrigation area served by the same Consortium. This agreement, which saw the participation of the Emilia-Romagna Region, Arpa and Ateris, formalized the reuse of **6 million cubic meters** of purified wastewater for the purposes just described. This contribution made it possible to bring **the volumes of purified wastewater made available to the local area for ecological and environmental reuse purposes to 23.2 million**.

Also in 2022, discussions were initiated in the Romagna area with the Consorzio di Bonifica della Romagna for the finalisation of a reuse agreement that regulates the reuse of purified wastewater discharged from the **Ravenna, Russi and Alfonsine** plants for which the delivery of purified wastewater to consortium channels is a practice already regulated in the authorisations, such as promiscuous use and hydraulic compensation of consortium drains.

The technical discussion tables with the reclamation consortia will also continue for 2023 to share quantitative and qualitative monitoring methods of purified water for irrigation and possible prospects.

In Emilia-Romagna there are also two active contracts for the **external technical reuse** of the purified wastewater of the Ecoeridania (Fc) and Tecnogym (Fc) purifiers. In addition, the measurement and monitoring activity launched in 2022 will make it possible in 2023 to begin monitoring and also enhancing the contribution to reuse given by technical reuse at the treatment plants.

In the Triveneto area, in the province of Padua, initiatives are underway aimed at recovering the wastewater leaving the purification plants. More specifically, even without the presence of formal agreements, for three purification plants (**Abano, Guizza and Cona**), the recovery of water takes place indirectly by discharging it into the canals for irrigation purposes, as defined by the authorization of the provinces of Padua and Venice. Furthermore, in the Trieste area, process water is recovered within the Servola purification plant, which is mainly reused for backwashing of biological filters, for cooling users and for heat exchange for the AHU (Air Handling Units) of the office building. The total volumes of water recovered by AcegasApsAmga in 2022 amounted to approximately **7.2 million cubic metres**.

Even in the Marche region there are small quantities of water reused in small-sized purification plants.

REUSABLE AND REUSED PURIFIED WASTEWATER (% OF TOTAL PURIFIED WASTEWATER)

	2020	2021	2022
Reusable and reused purified wastewater (millions of cubic meters)	14.2	20.7	30.5
Total purified wastewater (millions of cubic meters)	271.2	347.1	420.7
Reusable and reused purified wastewater (% of total purified wastewater)	5.2%	6.0%	7.3%

From the year 2022, the data refer to Hera Spa, AcegasApsAmga and Marche Multiservizi and, for the latter two, also includes industrial reuse within the purification plants.

The value relating to reusable and reused purified waste water, which in 2022 corresponds to 30.5 million cubic meters (+47% compared to 2021), is obtained by comparing the reusable purified waste water indirectly allocated to agriculture (understood as potentially reusable purified wastewater leaving the Emilia-Romagna plants for which agreements have been signed with the authorities for the reuse and purified water discharged into canals for irrigation purposes in the Triveneto area) and the recovered purified wastewater and reused directly in the purification plants with the overall water purified in the plants managed by Hera Spa and AcegasApsAmga, and Marche Multiservizi. The Group's goal is to continue to increase this share and reach 13% by 2026 and 18% by 2030.

The Group's commitment to reduce internal and customer water consumption

Water is a limited resource that must be protected and used sustainably, in terms of both quality and quantity. However, its use in a wide range of industrial sectors places pressure on the availability of this resource. The Group, in line with the long-term European vision aimed at guaranteeing an adequate water supply in terms of quality and quantity, has been engaged in initiatives to reduce and improve consumption efficiency for years.

The Group's water consumption reflects the multi-business nature of Hera and is mainly concentrated in waste treatment plants (70%) and purification plants (16%). 64.8% of total consumption comes from the aqueduct; the use of approximately 8,000 cubic meters of rainwater is highlighted.

In 2022, the Group's total water consumption, corresponding to the total volumes invoiced, amounted to approximately 4.5 million cubic meters of water.

TOTAL WATER CONSUMPTION BROKEN DOWN BY TYPE OF SOURCE

Thousands of cubic meters	2022	%
Aqueduct	2,980.6	64.8%
Surface	605.1	13.6%
Aquifer	960.3	21.6%
Rainwater	8.1	0.2%
Total	4,546.0	100%

The data refer to the consumption of water from the civil and industrial aqueducts, groundwater and rainwater of the most "water-demanding" Group business units served by Hera Spa in Emilia-Romagna, Herambiente's waste treatment plants (excluding the where the water resource does not represent a process consumption), the consumption of AcegasApsAmga (with the exception of Hera Luce, Ase, AresGas, and the Gorizia and Udine offices) and the consumptions of the purification service of Marche Multiservizi.

In 2018, the planning of actions aimed at **saving, reusing and recovering water** was launched ("water management project"). The objective set in 2018 was to **reduce by 10% in four years** (compared to the 2017 final balance) the consumption of water from the civil and industrial aqueducts of the most "water-demanding" Group business units served by Hera Spa in Emilia-Romagna, i.e.:

- the sewage and purification service,
- district heating,
- the Imola cogeneration plant,
- company headquarters,
- the Herambiente waste treatment plants in Emilia-Romagna.

Starting from 2020, the original scope of the project was extended to include all the Departments that use water for process purposes, regardless of their consumption incidence; the activities involved were those relating to managing vehicles, the waste collection service in Emilia-Romagna and the aqueduct service.

Moreover, starting from 2021, the consumption of AcegasApsAmga relating to sewerage and purification services, management of vehicles and consumption of the offices has also been included in the project's scope of analysis. Considering the substantial changes in the scope of analysis, attributable to M&A operations (sale of Padua gas networks) and start-up of new plants (Trieste purification plant) which took place between 2017 and 2018, it was decided to consider consumption as a baseline 2019, and not 2017 as in the case of the original project; for this reason the consumption of AcegasApsAmga is not included in the data shown below as it is reported separately.

The objective outlined in the latest business plan envisages a **reduction in the volumes of water used**, for the activities of the offices and plants in Emilia-Romagna, of 22% compared to 2017 in 2026 and a reduction of 25% in 2030.

With respect to this objective, the interventions carried out allow a saving of about 315 thousand cubic meters of water corresponding to the annual needs of about 7,300 people and equal to 20.5% of the consumption recorded in 2017. This result is mainly due to the continuous work done on searching for areas of improvement in the use of water resources, optimisation of systems, and implementation of interventions to reuse and recover this resource.

More specifically, the main interventions that made it possible to achieve this result in 2022 were:

- for the purification service: the creation of filtration and ultrafiltration sections for the reuse of the purified wastewater at the Imola Santerno and Idar plants in Bologna, the reuse of the purified wastewater thanks to the new membrane line for the thickening and sludge dehydration at the Rimini plant and process adjustments to the purifier aimed at reducing the foam produced and consequently less use of water for abatement at the Imola and Cesenatico plants.
- for the waste collection service: the remodelling and optimization of consumption for sweeping and dust suppression activities;
- for corporate offices: the extension of the rainwater catchment tanks at the Berti Pichat and Cristina Campo offices;
- on district heating networks: the reclamation, search and repair of leaks;
- for the Imola cogeneration plant: the recovery of water for the cooling towers deriving from the purging of the boilers, the modification of the irrigation frequency of the green areas of the site and the modification of the second rainwater transfer circuit for replenishment in cooling towers.
- for waste treatment plants: the management efficiency of some sectors and the reuse of process water for the irrigation of green areas or exhausted landfills.

WATER MANAGEMENT PROJECT

Thousands of cubic meters	2017	Reductions related to specific interventions
Sewage and purification service and aqueduct	571.7	-208.9
Waste collection service	64.1	-20.0
District heating	208.5	-42.6
Imola cogeneration plant	272.5	-5.5
Corporate Headquarters	127.2	-2.1
Waste treatment plants	277.1	-43.3
Vehicle management	13.7	+7.4
Total	1,534.8	315.1

Thousands of cubic meters

Reductions related
2017 to specific
interventions

Equal to 20.5% of 2017
consumption

Overall consumption is calculated on the basis of invoiced consumption using the difference between invoiced volumes and meter reading volumes as a driver for the correction. The correction is applied to prevent the mechanism of estimated readings, which is applied in billing whenever the meters are not read on time, leading to an overestimation or underestimation of the actual volumes used. The data does not include Marche Multiservizi and AcegasApsAmga.

For the next few years, structural projects (i.e., areas of intervention that envisage investments for plant modernisation) and non-structural projects (aimed at creating awareness in the use of water resources) have been planned. In more detail, the main activities that make up the plan are:

- improvement interventions on the main plants (waste-to-energy plants, purifiers, etc.) in order to allow the recovery and reuse of process water, otherwise destined for discharge into the public sewer or surface water body after purification treatment;
- technological modernisation to optimize the systems, thus reducing the consumption of water for the replenishment of the circuits;
- enhancement of the search for hidden losses downstream of the meter.

The reduction in the operating hours of some plants combined with other factors added to the water saving measures, generating real savings of 24% in consumption in 2022 (equal to approximately 1,167 thousand cubic metres) compared to those in 2017.

In 2022, AcegasApsAmga recorded a reduction of approximately 12.5% compared to 2021 (equal to 49 thousand cubic metres), mainly due to the achievement of management efficiencies in the sewerage and purification service and at the Trieste offices. In 2023, the first specific initiatives aimed at reducing consumption will be implemented.

Commitment to
reduce
consumption by
household and
business
customers

At the same time as the launch, in 2018, of the "water management" project within the Hera Group, the importance of extending this project to **external household and business customers** clearly emerged, in the awareness that habits, choices, culture in the use of water resources they evolve only if the company involves the area and the people in its sustainable development.

Consumption analysis campaigns and reduction support campaigns were therefore designed for **household and business customers**, with the aim of stimulating and increasing a virtuous and conscious behaviour in the use of water resources among our customers as well.

The tool introduced in 2019 to support the **reduction of household consumption**, similar to what has already been experimented in the energy field starting from Thaler's behavioural theories, is the "**Consumption Log**". It is an experimental project, developed in collaboration with the "Department of Management, Economics and Industrial Organization" of the Milan Polytechnic, which analyses the behavioural interactions of individuals trying to enhance positive and virtuous behaviours. In 2022, the service was extended to a further 60,000 customers and currently involves 268,597 household customers (about 35% of household customers).

A report is sent to them via e-mail which analyses their consumption methods in a timely manner, comparing the volumes of water used by the individual customer with respect to similar customers and the change in consumption of the customer over time. The report is also complete with tips that help to implement some good functional household practices to save water.

Over the next four years, the Consumption Log will involve all users who have communicated their e-mail address to the Hera Group.

For **business customers**, on the other hand, the "**water management portal**" was created, dedicated to water-intensive users, i.e., with water consumption greater than 50,000 cubic meters/year. The portal is an interface that allows companies to monitor, through trend analyses, the methods of using water and to be able to evaluate process optimization strategies. Also in the year 2022, in continuity with the previous year, the portal saw around 70 companies involved in the area served or more than 9,000 managed drinking water supply points.

3.03 Sustainable management of water resources

The quality of drinking water

The sources of water supply [303-1]

The integrated water service makes the water available in nature, usable for human consumption and returns it to the environment purified. Hera is present in managing **the water service** in 227 municipalities for a catchment area of over 3.6 million inhabitants. In this area, the Hera Group deals with the integrated management of all the phases necessary to make the water usable and available for civil and industrial use and consumption: from its drawing to its purification and to its distribution to users, from management of the sewage systems to purification up to the return of water to the environment.

The management of all the water collection, purification and distribution systems up to the final customer constitutes the so-called **aqueduct service**. The Hera Group's sources of water supply consist of underground aquifers, surface water and, to a lesser extent, springs. In Romagna, the water distributed is purchased wholesale by Romagna Acque - Società delle Fonti.

The sources of supply just mentioned refer to areas identified as areas with moderate water stress according to the WWF Water Risk Filter database (values between 2.6 and 3.4, WWF Water Risk Filter, Overall Risk Layer); the Aqueduct database, on the other hand, identifies the areas served by Hera with moderate water stress with the exception of the areas of Bologna, Romagna and Pesaro. For more information on how the Group deals with and mitigates these potential risks associated with drought in the area, see the paragraph "Resilient management of the aqueduct and water sources".

Potabilisation processes are more or less complex, depending on the quality of the water at source: they range from strong chemical-physical processes, usually carried out on surface water, to simpler filtration and disinfection treatments on water from deep wells and springs with good characteristics from the moment it is drawn.

The treatments carried out guarantee that the water distributed has chemical-physical and microbiological characteristics that are suitable for human consumption, in constant compliance with the limits laid down by current legislation.

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WATER DRAWN AND FED INTO THE NETWORK BY SUPPLY SOURCE

thousands of cubic meters	2020		2021		2022	
Aquifer	206,894	50.5%	207,907	50.2%	210,150	51.4%
Surface water	170,593	41.7%	172,947	41.8%	165,672	40.6%
Springs and minor sources	32,060	7.8%	33,186	8.0%	32,499	8.0%
Total	409,547	100%	414,041	100%	408,321	100%

All sources indicated in the table are fresh water ($\leq 1,000$ mg/l of total dissolved solids).

The data shown show a total volume of water fed into the network is slightly down compared to 2021 (-1.4%). In 2022, withdrawals relating to surface water and springs recorded a slight overall decrease of 1.2% compared to the previous year; while withdrawals from the aquifer, albeit to a limited extent, increased (+1.2%). From a geographical point of view, the composition of the supply sources can be very differentiated: for instance, the importance of groundwater in terms of percentage is low in the Marche Multiservizi area (15.6%), it prevails in the Triveneto region (88.2%), while it stands at 45.7% in the Emilia-Romagna region where the most widely used source is surface water (48.9%).

WATER DRAWN AND FED INTO THE NETWORK BY SUPPLY SOURCE IN ZONES CLASSIFIED AS HAVING HIGH WATER STRESS

thousands of cubic meters	2020		2021		2022	
Aquifer	83,044	33.0%	85,173	33.0%	87,377	34.8%
Surface water	150,440	59.8%	153,238	59.4%	144,755	57.6%
Springs and minor sources	18,231	7.2%	19,541	7.6%	19,199	7.6%

thousands of cubic meters	2020		2021		2022	
Total	251,715	100.0%	257,953	100.0%	251,331	100.0%
Incidence % of total water fed into the network	61.5%		62.3%		61.6%	
All sources indicated in the table are fresh water ($\leq 1,000$ mg/l of total dissolved solids). The withdrawals refer to the provinces of Bologna, Forlì-Cesena, Ravenna, Rimini and Pesaro, classified as having high water stress according to the Acqueduct database.						

The Hera Group's distribution network extends for 35,136 kilometres and, where possible, is interconnected and connected in order to guarantee **supply continuity** even in the event of temporary interruptions on one or more pipelines.

COMPOSITION OF THE WATER NETWORK

%	2020	2021	2022
Plastic material	54.5%	54.7%	54.9%
Asbestos-cement	20.2%	20.0%	19.9%
Steel	15.9%	15.8%	15.8%
Cast iron	8.7%	8.7%	8.8%
Other materials	0.7%	0.7%	0.7%
Total	100%	100%	100%

The composition of the water network continues to point to a slightly decreasing trend of asbestos cement, whose share is 19.9% in 2022 at the Group level. The slight reduction is a consequence of the use of materials other than asbestos cement in the new networks or in those undergoing extraordinary maintenance. In the last three years, the Group has replaced approximately 96.2 kilometres of asbestos cement network. At the territorial level, the asbestos cement network is mostly present in the areas of Ferrara, Padua and Ravenna.

Drinking water controls

[416-1]
[416-2]

In 2022, in order to ensure control over the quality of the water supplied, the Group's laboratories in Emilia-Romagna, Triveneto and Marche carried out **421,223 analyses on drinking water**, including all the analyses carried out for the aqueduct process as a whole (tanks, networks, wells, plants, etc.). Of these, 61% were carried out on samples taken from **distribution networks**. A substantial stability is confirmed in the ratio between the analyses performed on the distribution network and those performed on the plants, a ratio aimed at effective prevention of non-conformities.

On 16 December 2020, the **new EU Directive 2020/2184 on the quality of water intended for human consumption** was published. Within two years of entry into force, Member States must make the necessary changes to comply with the new directive. On March 6, 2023, Legislative Decree No. 18 of February 23, 2023 transposing EU Directive 2020/2184 into Italy was published in the Official Gazette. Therefore, although Italy is on the eve of its implementation, the controls on the quality of water intended for purification and that intended for human consumption are still regulated respectively by Legislative Decree 152/2006 and by Legislative Decree 31/2001 (implementation of the previous EU Directive 98/83/EC).

The checks are carried out by the water service manager and by the Local Health Authorities and are carried out at the **sampling points of the sources**, at the purification and accumulation plants, along the adduction and distribution networks.

Hera has consolidated a Group control plan which shows **the sampling points** and the control methods applied (analytical parameters and frequencies). The control plan is developed on the basis of a chemical, physical and bacteriological characterization procedure of the water, to ensure full compliance with the legal requirements and to guarantee the supply of an optimal quality product.

Water quality also means checking the effectiveness of **treatment processes**. By way of example, the research of chlorites and trihalomethanes are cited, substances resulting respectively from the use of chlorine dioxide and sodium hypochlorite as disinfectant agents. The **concentration of chlorite** and trihalomethanes in the distribution network is kept constantly under control in compliance with the legal limits.

Since 2008, the average data recorded for the parameters **pH, hardness, dry residue at 180°C, chloride, fluoride, sodium, nitrate, nitrite and ammonium** are published on the Group's website for each municipality and updated every six months. Since 2012 this set of parameters has been expanded with four more: **calcium, magnesium, sulphate and total alkalinity**. These 13 parameters are considered representative of the quality **of the drinking water distributed** and allow a comparison with the quality of bottled water on the market. Starting from the second half of 2014, the set of parameters was further expanded with a further 6 parameters as ordered by ARERA: **conductivity, potassium, arsenic, bicarbonate, residual chlorine and manganese**. The parameters to be published are therefore 19, one more than that set by the Authority. Also for the year 2022, it is confirmed that the average water data are comparable with those of mineral waters on the market and that no exceptions have been granted to compliance with the limits set by Legislative Decree 31/2001. The communication concerns 162 municipalities in Emilia-Romagna in which Hera manages the water distribution service.

Also for the municipalities served in the areas of Padua, Trieste and Pesaro Urbino, data on water quality are available, and constantly updated, on the AcegasApsAmga and Marche Multiservizi websites.

Since January 2009 all the drinking water production plants in Romagna have been managed by **Romagna Acque - Società delle Fonti**, the company set up for this purpose by the local administrations of Romagna. Therefore, the water distributed in the areas of Forlì-Cesena, Ravenna and Rimini is largely purchased wholesale by this company and Hera's intervention on its quality is limited to managing **networks and supplementary disinfection stations** along the networks of distribution.

[417-1]

Since 2012, **the labelling of the tap water** has been present in Hera's bills and was subsequently also included in those of AcegasApsAmga. In this way, through the bill, customers can consult the data on the quality of the water distributed in their municipality (data updated every six months).

Furthermore, the water quality parameters are also published on the Hera, AcegasApsAmga and Marche Multiservizi websites through the thematic report **"In buone acque"** (In good waters), so that each customer can easily find the data on the quality of the water distributed by the Hera Group.

Evaluations on the quality of the distributed drinking water, compared to the quality of the mineral water, are carried out on the basis of the values of analytical parameters commonly sought at the representative sampling points of the aqueduct networks: pH, hardness, dry residue at 180°C, sodium, fluorides, nitrates, chlorides. The parameters chosen are largely indicative of the saline components with which drinking water should be equipped.

Application of the new water features of the "Water Safety Plan"

On 23 December 2020, **Directive 2020/2184** of the European Parliament was published in the official gazette of the European Union, repealing the previous Directive 98/83/EC concerning the quality of water intended for human consumption. The latter had already been amended through the publication of Commission Directive 1787/2015, in the content of Attachments II and III, which established the minimum requirements of the control programs for water intended for human consumption and the methods of analysis of the various parameters and introduced the methodology for Water Safety Management Plans (PSA) for structuring prevention and control activities aimed at guaranteeing the best quality of drinking water.

It was a substantial change in approach for the purposes of protecting human health in terms of drinking water, in as much as it marked the transition from a monitoring regime based on the retrospective control of a series of analytical parameters to a **preventive risk assessment**.

The risk-based approach involves the control of emerging contaminants, currently not subject to systematic monitoring, and the verification of the degree of vulnerability of drinking water systems with respect to the direct and indirect impacts induced by climate change.

Italy transposed this directive with the Decree of the Ministry of Health of 14 June 2017.

Hera has always provided for structured prevention and control plans that guarantee its customers good water to drink, in compliance with regulatory requirements, with a constant surveillance carried out through the planning of well-targeted controls on the entire drinking water production chain from supply

sources to distribution. In this regard, the analytical control plan of the integrated water service is drafted annually, substantially in accordance with the risk assessment criteria contained in Directive 2015/1787.

In the light of the new European directive, the member states have two years to transpose it (therefore by the end of 2022) and by 2029 they will have to carry out the first risk assessment and management and achieve the complete regulatory adaptation of the Water Safety Management Plans.

The updating of the quality standards of drinking water, both from a chemical and microbiological point of view, the introduction of new thresholds for some emerging contaminants and the definition of the requirements for assessing the suitability of materials intended for contact with water drinking water will be elements that will have to be included in the definition of the Water Safety Management Plans.

COVERAGE OF WATER SAFETY MANAGEMENT PLANS

Number	2020	2021	2022
End users served (including indirect users) with a water safety management plan (technically closed)	273,907	504,898	1,383,360
Final users served by the manager for the aqueduct service	2,145,266	2,238,343	2,235,110
Users served in areas with a water safety management plan (% of total users served by the aqueduct)	12.8%	22.6%	61.9%

Indirect users: final recipients of the service provided to condominium users and coincide with the property units underlying the supply contract for one or more services of the integrated water system.

Technically closed water safety management plans: plans for which site inspections, checklists, risk analyses have been carried out, improvement actions defined and the risk matrix elaborated and for which ongoing meetings and in-depth analyses have been held with governmental Authorities, in particular Local Healthcare Units and Regional Environmental Protection Agencies a plan can be defined as formally closed when it is sent to the Ministry of Health and the National Institute of Health.

At the end of 2022, there are 106 supply zones that are served for which a water safety management plan for an aqueduct present in the municipal area has been technically closed. The users in these areas are equal to 61.9% of the total users served in areas in which the Hera Group manages the aqueduct service.

In Emilia-Romagna in 2022, the Water Safety Management Plans were developed, completed and shared with the reference bodies for two supply zones in the Emilia area (Primario di Bologna and Gallo Poggio-Renatico) and an additional system in the Romagna area (Forlì- Forlimpopoli-Bertinoro). Through the implementation and closure of these Water Safety Management Plans, Hera Spa has achieved coverage of around 57% of the total end users, thus reaching over half of the entire area served. The schedule of the works in Emilia-Romagna provides for the development of 220 Water Safety Management Plans by 2028.

In the Triveneto region, activities continued in connection with assessments of water plants and the distribution network of the entire drinking water supply chain aimed at compiling risk matrices for the definition of the Water Safety Management Plans. In 2022, the Water Safety Management Plans of the supply areas of Trieste, Piovese and Padua were technically closed (for the latter areas, the transmission to the Ministry will take place in 2023, in a coordinated manner with the other water service operators of the Veneto Region).

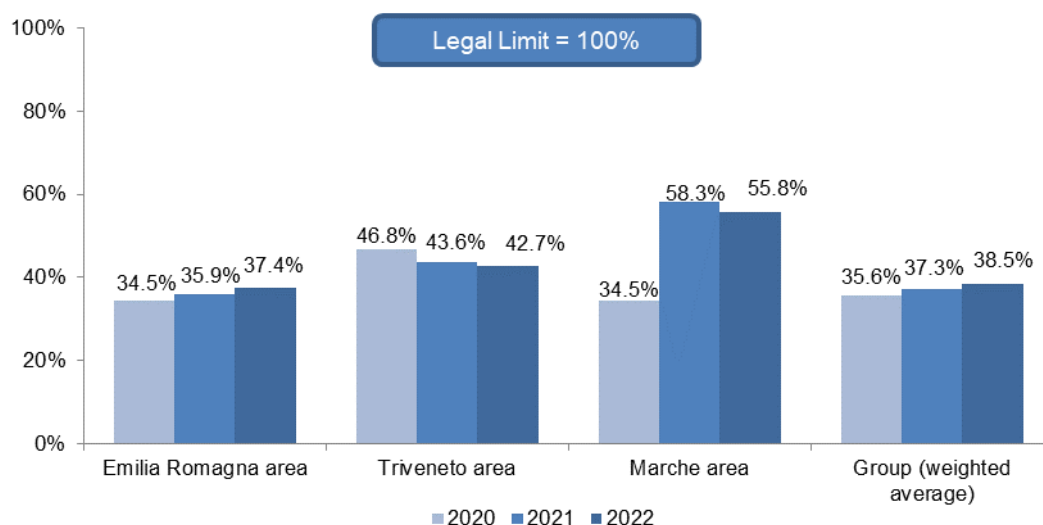
In the Marche region, during 2022, the first pilot Water Safety Management Plan for the supply area relating to the Mercatello sul Metauro aqueduct was brought into a state of "technical closure".

The quality of the purification

In 2022, the Hera Group managed the sewerage and purification service in 227 municipalities, of which 46 through Marche Multiservizi and 16 through AcegasApsAmga.

In 2022, the Hera Group treated a total of **337.4 million cubic meters of wastewater**, which marks a decrease compared to the 2021 data (approximately 364 million cubic metres). Note that these data were affected by the amount of rainfall, which in 2022 was very limited owing to the long period of drought, as the sewer network (equal to 19,031 km) is predominantly of the mixed type (56% of the total).

PURIFIED WATER QUALITY COMPARED TO THE LEGAL LIMITS (OPTIMAL VALUES: <100%)



The indicator relates to plants with more than ten thousand population equivalent (the volumes treated in these plants are 93% of the total effluent treated) and is calculated on the basis of the ratio between the measured concentration of Bod5, Cod, Sst, ammoniacal nitrogen, phosphorus and total nitrogen and the relevant maximum concentrations permitted by Legislative Decree. 152/2006 or by the authorizations in force for the individual plants.

The efficiency of the removal of pollutants with respect to the legal limits, summarized by the indicator shown in the graph, is linked to the purification capacity of the plant and the technologies adopted. Low values of the indicator indicate a better quality of purified water. At Group level, this indicator is on average equal to 38.5% of the legal limits if Bod5, Cod, Sst, ammoniacal nitrogen, phosphorus and total nitrogen are considered and 26.4% if phosphorus and total nitrogen are excluded. While maintaining optimal performance levels with respect to the legal limits, the trend of the indicator that summarizes the removal efficiency of the main pollutants is slightly up compared to 2021.

As regards the area relating to Emilia-Romagna, there is a slight worsening of the indicator mainly due to the scarce rains of 2022 which, in mixed wastewater recovery and treatment systems, resulted in a higher pollutant load in the incoming wastewater to purification plants. However, the purification process has in any case guaranteed its reduction, keeping the indicator below the limits.

As far as the Triveneto area is concerned, the indicator shows an improvement in line with the improvement process started three years ago with the entry into operation of the new biological section of Servola (Ts).

The data relating to the Marche region, which records a significant improvement (2.5 p.p.), is not perfectly comparable with the data relating to the previous year as, in 2021, the Montecchio plant was not part of the large installations. On a like-for-like basis, the indicator would be 57.0%, however a slight improvement when compared to 2021.

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The water leaving the purification plants must comply with current legislation, Legislative Decree 152/2006 and the authorization requirements. For urban wastewater discharges in agglomerations of more than 2,000 population equivalent, required to comply with the tables in Attachment 5 of Legislative Decree 152/2006, a Protocol is stipulated for the correct performance of the control activity between the Arpa/Arpat Manager, aimed at planning the number of annual checks on the discharge, useful for assessing the conformity of the discharge, while for discharges in smaller agglomerations (less than 2,000 population equivalent) limits of acceptability and appropriate treatments are set by the Regions. The controls, anomalies and non-conformities deriving from the legislation and regulations on the subject of the integrated water service are managed and planned through Group procedures, at community, national, regional level, of the individual provinces and municipalities of the area under the jurisdiction of the Hera Group.

The following table shows the main interventions to upgrade and modernise the treatment plants completed during the year, and which are in progress.

THE MAIN INTERVENTIONS FOR THE ENLARGEMENT AND IMPROVEMENT OF THE PURIFICATION PLANTS

Plant	Population Equivalent (no.)	State of progress (end of 2022)	Type of intervention	Post-intervention situation
Ca' Nordio (PD)	197,000	In progress (expected completion 2024)	Enlargement of the Ca' Nordio treatment plant	Upgrading of the purification sewage system in the Padua area also in critical weather conditions and optimization of the purification capacity
Savignano sul Rubicon (FC)	139,000	In progress	Savignano treatment plant - Total Nitrogen and discharges upgrading	Bringing the plant into compliance with the limit for nitrogen
Ferrara (Fe)	120,000	In progress	Revamping of the Gramicia purifier anaerobic digester	Better management of sewage sludge through the reclamation of anaerobic digesters
Massa Lombarda (Ra)	80,000	In progress	Bringing the Massa Lombarda purifier into compliance with the nitrogen limits	Bringing the plant into compliance with the limit for nitrogen
Lido di Classe facility in the municipality of Ravenna (Ra)	30,000	In progress	Upgrading of class Lido purification plant - 1st phase	The intervention provides for an important revamping of the plant and is part of the upgrading required to make it compliant with the Regional Government Decree 201/2016 which will allow compliance with the nitrogen limit
Montecchio (Pu)	20,000	Terminated	Expansion of the Montecchio-Municipality of Vallefoglia purifier	Adoption of an activated sludge scheme with nitrogen and phosphorus removal. The intervention also envisaged the upgrading of the entire sludge treatment line
San Giovanni in Persiceto (BO)	16,000	In progress	Recovery of ex-sugar refinery purifier 3rd round of interventions	Bringing the plant into compliance with the nitrogen limit, also in view of future expansions
Sasso Marconi (Bologna)	12,000	Terminated	Revamping of the Sasso Marconi purifier	Greater efficiency of the system with the possibility of receiving new collection systems from urban infrastructure works
Calcinelli (Pu)	9,000	In progress	Upgrading of the Calcinelli purifier	The intervention foresees the adoption of the biological membrane process
Bentivoglio (Bo)	7,000	Terminated	Upgrading of the Bentivoglio purifier	Greater efficiency of the plant through the implementation of a new activated sludge section and extraordinary maintenance of the existing line of biodiscs
Tavullia (Pu)	3,000	In progress	Upgrading of the Tavullia purification plant	The intervention will include the review of the entire purification process with the construction of entire compartments. This intervention will thus make it possible to satisfy the new discharge limits, which are more restrictive than the current ones
Vergato (Bo)	2,000	In progress	Expansion of the Tolè purification plant	Greater plant efficiency
Cento (Fe)	2,000	Terminated	Construction of a new purification plant in Buonacompra and collection systems of inadequately purified wastewater	The intervention is part of the regulatory adjustments of the DGR 201/2016 and will allow the rehabilitation of the agglomerations of Pilastrello, Alberone di Cento and Buonacompra
Pioppe plant in the municipality of Marzabotto (Bo)	1,300	In progress	Upgrading of the Pioppe agglomeration	The intervention is part of the regulatory modernisations pursuant to the Deliberation of the Regional Government 201/2016 and will allow the renovation of the Pioppe agglomeration

Plant	Population Equivalent (no.)	State of progress (end of 2022)	Type of intervention	Post-intervention situation
Portonovo plant in the municipality of Medicina (Bo)	1,300	Terminated	Sewage/purification modernisation of the agglomerations of Portonovo and Sant'Antonio	The intervention is part of the regulatory modernisations pursuant to the Deliberation of the Regional Government 201/2016 and within it we proceeded with the modernisation of the Sant'Antonio plant and the Portonovo collection system.
Grizzana (Italy)	1,100	In progress	Construction of a new purification plant and collection systems of inadequately purified wastewater	Renovation of the agglomeration of Grizzana
Guiglia (Mo)	1,100	In progress	Modernisation and upgrading of the Guiglia Lama purification plant	The intervention is part of the regulatory modernisations pursuant to Deliberation of the Regional Government 201/2016 and within it we will proceed with the modernisation and upgrading of the Guiglia Lama purifier
Pavullo nel Frignano (Mo)	650	In progress	Construction of collectors and appropriate treatment system	The intervention is part of the regulatory modernisations pursuant to Deliberation of the Regional Government 201/2016 and within it we will proceed with the adjustment of the agglomeration of Verica
Palagano (Mo)	500	In progress	Agglomeration of Monchio Ca' Grande	The intervention is part of the regulatory modernisations pursuant to Deliberation of the Regional Government 201/2016 and within this, an appropriate treatment system will be constructed in the agglomerations of Monchio, Grande and Savoniero
Peglio (Pu)	466	Terminated	Land reclamation because of landslide movement	The intervention made it possible to restore the sedimentation soil area and to make the plant safe

PERCENTAGE OF ANALYSES ON THE WATER LEAVING THE PURIFICATION PLANTS IN COMPLIANCE WITH THE LAW

%	2020	2021	2022
Plants with more than 10,000 population equivalent	99.5%	99.3%	99.6%
Plants with less than 10,000 population equivalent	99.7%	99.3%	99.6%
Weighted average	99.6%	99.3%	99.6%

Considering the 10,937 analyses carried out in 2022 in the 227 managed treatment plants, in 99.6% of the cases the results were found to comply with the legal limits. The final values in 2022 for this indicator represent a very satisfactory situation, with excellent percentages of conformity controls compared to the total monitoring. The only data relating to checks that have confirmed that the authorization limits have been exceeded refer to entirely sporadic situations and substantially compatible with the variability of incoming loads, operating conditions and the structural state of the plants.

The quality of purification can also be represented by monitoring the trend of adaptation of urban agglomerations, understood as territories in which populations and productive activities are concentrated to such an extent as to make the creation of an autonomous purification sewage system technically and economically permissible. As established by Directive 91/271/EEC, Legislative Decree 152/2006 and the Water Protection Plan of the Emilia-Romagna Region, in order to declare an urban agglomeration compliant with the law, the following two conditions must be met:

- the collection of wastewater at least equal to 95%;

- the capacity of the purification plants must be greater than the population equivalent of the agglomeration itself with secondary or tertiary treatment (whenever necessary).

MODERNISATION OF THE SEWAGE-PURIFICATION SYSTEM, URBAN AGGLOMERATIONS

	2020	2021	2022	2026
Agglomerations upgraded in order to bring them into compliance with regulations >2,000 p.e. (no.)	130	132	133	136
Agglomerations upgraded in order to bring them into compliance with regulations for purification >2,000 p.e. (% population equivalent)	97.6%	99.6%	99.6%	100%
Agglomerations upgraded in order to bring them into compliance with regulations for purification <2,000 p.e. (n.)	174	180	194	239
Agglomerations upgraded in order to bring them into compliance with regulations for purification <2,000 p.e. (% population equivalent)	74.5%	81.1%	85.0%	100%
Total agglomerations upgraded in order to bring them into compliance with regulations for purification (no.)	304	312	327	375
Total agglomerations upgraded in order to bring them into compliance with regulations for purification (% population equivalent)	97.6%	99.0%	99.1%	100%

The numbers shown in the table refer to agglomerations in the size range between 200 and 2,000 p.e. and >2,000 p.e. in the territories where the Group provides sewerage and purification service, i.e., Emilia-Romagna, Triveneto, and Marche. It should be noted that there are no agglomerations <2,000 p.e. in the territories served in the province of Padua; while agglomerations <2,000 p.e. related to the Marche region are not counted because the Marche region has not yet issued provisions in this regard.

At Group level, by 2022, **agglomerations with more than 2,000 population equivalent (p.e.)** modernised in order to bring them into compliance with Legislative Decree 152/2006 stand at 133 out of 136 and correspond to **99.6% of the total population equivalent**.

With Resolution 2153/2021, the **Emilia-Romagna** Region updated the timetable for the interventions, the number of population equivalent and the perimeters of the urban agglomerations, which therefore passed through the area served by the Group by a total of 135 agglomerations, accounted for in the previous report of sustainability, to a total of 136.

As regards **Triveneto** and Emilia-Romagna, 100% of agglomerations > 2,000 p.e. served in the area are compliant with the regulations on purification.

In the Marche, in 2020, the perimeters, the loads generated, and the compliance of the agglomerations with at least 2000 p.e. were updated through a regional decree (Decree 173 30 December 2020); this regulatory update led to a slight change in the number of population equivalent in the agglomerations managed by Marche Multiservizi, while the overall number of agglomerations remained unchanged. In 2022, in the Marche area managed by the Group there are three agglomerations > 2,000 p.e. and declared non-compliant for which the infringement procedures 2014/2059 and 2009/2034 have been initiated.

In 2022, interventions were completed for attaining the conformity of the Orciano di Pesaro agglomeration >2,000 p.e., which will resolve the 2014/2059 infringement, while interventions are already planned that will make the other three agglomerations compliant with the dictates of Community and national regulations by 2025, as established by the new planning of the Marche Region Territorial Ambit Authority approved in December 2020. By 2025, therefore, all urban agglomerations with a population greater than 2,000 population equivalent in the areas served by the Hera Group will be in compliance with the legislation.

In addition to what has already been reported, the Emilia-Romagna Region with resolutions 201/2016 and 569/2019, regarding the upgrading of municipal wastewater discharges in order to bring them into compliance with the legislation, has provided for the implementation of some further interventions in **agglomerations with a size of between 2,000 p.e. and 10,000 p.e. and greater than 10,000 p.e.** These are structural modernisations relating, for example, to the modernisation of the network spillways or to more stringent treatment for the abatement of nitrogen, which, although they do not affect the compliance of the agglomerations pursuant to Legislative Decree 152/2006 might locally compromise the achievement of the quality objectives for water bodies. For this reason, the Region of Emilia-Romagna together with the managers of the integrated water service, through the most recent resolution

2153/2021 and the subsequent 2338/2022, has defined times and criteria for adaptation. 9 interventions have already been carried out (Riccione purifier in 2017, Cattolica purifier in 2018, Castel San Pietro and Lugo purifiers in 2019, Budrio, Medicina and Alfonsine purifiers in 2020 and Lido di Classe and Misano purifiers in 2021). A further 3 interventions are planned by 2023 (agglomerations of San Giovanni in Persiceto, Savignano sul Rubicone, Massa Lombarda) out of a total of 12 nitrogen adjustment interventions in 11 agglomerations. To these, one intervention planned for 2025, and 23 by 2030 must be added. Note that in total, there are 22 agglomerations affected by the 36 improvement interventions in as much as some of them envisage several interventions in different years.

As regards **agglomerations of less than 2,000 p.e.** (between 200 and 2,000 for the Emilia-Romagna Region), on which critical elements still remain for subjecting the final waste to appropriate treatments, the Emilia-Romagna Region with the new resolution 2153/2021 and the subsequent 2338/2022 has identified and defined new upgrading time schedules. As of 2022, 158 agglomerations out of 202 have been upgraded, totalling 114,000 population equivalent. The modernisation by 2026 of 44 agglomerations in Emilia-Romagna totalling approximately 22,120 population equivalent is expected, effectively completing the modernisation of all agglomerations of less than 2,000 p.e. In the Triveneto area served, there are 37 agglomerations with a size of less than 2,000 p.e., of which 35 have already been upgraded in order to be brought into compliance with the legislation in 2019, one upgraded in 2021 (Trieste Duino Aurisina with a size of 1,689 p.e.) and one that will be upgraded by 2026.

In summary, considering Emilia-Romagna and the Triveneto there are 239 agglomerations of less than 2,000 p.e. and of which 194 were upgraded in order to be brought into compliance with the legislation at the end of 2022 equal to 85.0% of the population equivalent. By 2026, agglomerations of less than 2,000 p.e. will all be brought into line with the regulations. As regards the agglomerations of less than 2,000 p.e. in the Marche region, the Region has not yet issued provisions on the matter.

At Group level, the total of agglomerations >2,000 and <2,000 which have brought their plants into compliance with the legislation governing purification stand at 327 out of 375 and corresponds to 99.1% of the total population equivalent.

Phytodepuration

Phytodepuration is a natural process for treating polluted water based on taking advantage of the soil-vegetation system as a natural filter for water purification and is made up of biological ponds and macrophyte vegetation. The purification process, which already occurs spontaneously in nature, is completely ecological and does not involve the use of chemical substances. The incoming wastewater flows into a bed of gravel and aquatic plants: here microorganisms come into play that eliminate the polluting substances that are present. The action of plants is fundamental because microorganisms necessary for the entire system are developed in their roots; they absorb the oxygen produced by the plant species and trigger the processes necessary to purify wastewater.

There are various types of phytodepuration using either different plant essences, e.g., algae or floating plants such as water lilies, or rooted plants such as cattails, or swamp reed, and depending on the hydraulic flow they are distinguished into FWS (Free Water Surface) or SFS (Sub-Surface Flow System) systems.

This type of treatment also contributes to the recovery of marginal areas, creating aesthetically pleasing natural environments and landscapes, often chosen as a refuge for various species of birds, amphibians and reptiles.

At the state of the art, phytodepuration is a mature treatment, but in Italy it is not widely used owing to the surface areas required (2-4 square meters/p.e.), although it does find a place as a treatment in small agglomerations (<200 p.e.).

Hera Spa manages seventeen phytodepuration plants of small to medium capacity located in the provinces of Bologna, Florence, Forlì-Cesena, Rimini and Ravenna. These mainly carry out secondary biological treatments, and are placed downstream of a primary sedimentation, or tertiary treatments used as final refinement of the wastewater before final discharge. Marche Multiservizi operates five phytodepurators with a capacity of between 80 and 180 population equivalents.

3.04 Protection of air, soil and biodiversity

Atmospheric emissions from waste-to-energy plants

Every waste-to-energy plant of the Hera Group is equipped with **fume purification and process and emission control systems**, designed, and built with the aim of obtaining:

- high flue gas purification performance in all process conditions;
- high managerial versatility;
- high reliability of emission control systems.

In order to pursue these objectives, the **plant engineering standards** adopted in the Group's plants are characterized by:

- **double reaction and filtration system** for reducing concentrations of dust, hydrochloric acid, hydrofluoric acid, sulphur dioxide, heavy metals, dioxins and furans, and polycyclic aromatic hydrocarbons (with the exception of the Pozzilli plant, which is equipped with a single reaction and filtration system);
- **double reaction system** (non-catalytic and catalytic) for the reduction of nitrogen oxide concentrations (with the exception of the Pozzilli plant, which is equipped with a single non-catalytic reaction system);
- **dual fume monitoring system** for process control (with the sole exception of the Padua, Trieste and Pozzilli plants equipped with a single system): the two systems measure the concentrations of the main pollutants leaving the furnace and downstream of the first reaction and filtration stage. On the basis of these concentrations, the quantity of reagents required to achieve purification performance that guarantees compliance with the regulatory emission limits is regulated and stand at values that are on average 80-90% lower compared to them;
- **double continuous monitoring system** of chimney emissions: one in reserve to the other in order to guarantee the continuity of analysis of the concentrations in the emissions into the atmosphere.

The possibility of having dual purification and monitoring systems in series (or in parallel, as regards chimney monitoring) makes it possible to effectively pursue the objectives described above.

Furthermore, in terms of **emissions and environmental impact control**, the following are performed annually:

- **spot checks on stacks** for parameters that cannot be detected continuously, with frequencies defined in the Integrated Environmental Authorization and using certified laboratories;
- **controls on the impact of pollutants on the ground**: through external monitoring programs prescribed in the individual authorisations, analyses are carried out on the deposits on the ground (on soil, plants, etc.) in collaboration with universities and research bodies in order to ascertain that the emissions, although within the restrictive limits of the law, they do not have any significant impact on the surrounding environment.

The **renewal of the plants** has led to a significant improvement in the percentage of abatement of polluting emissions: since the beginning of 2008, the two new lines of the Ferrara waste-to-energy plant became fully operational; since the beginning of 2009, the new plant in Forlì has been fully operational; in April 2010, the new line 4 of the Modena waste-to-energy plant became fully operational; and since October 2010, the new line 4 of the Rimini waste-to-energy plant has been fully operational. In 2022, the revamping of Line 2 of the Trieste waste-to-energy plant was completed, which will improve energy production and business continuity. The revamping of the F3 furnace of the Ravenna waste-to-energy plant is still underway, while the construction of line 4 in the Padua waste-to-energy plant is in the tender phase, which will replace the current lines 1 and 2 and will be equipped with a double fume monitoring system.

This paragraph reports data on the nine waste-to-energy plants managed (Bologna, Ferrara, Forlì, Modena, Padua, Pozzilli, Ravenna, Rimini, Trieste) as well as data on the biomass plant in Faenza (managed by the company Enomondo, 50% owned by Herambiente and not consolidated on a line-by-line basis), equipped with a dual reaction system (non-catalytic and catalytic) for the reduction of nitrogen oxide concentrations.

The Legislative Decree 152/2006 provides for **continuous monitoring of stack emissions** for seven parameters: dust, hydrochloric acid, nitrogen oxides, sulphur oxides, carbon monoxide, hydrofluoric acid, total organic carbon. Mercury is also continuously monitored in the Ferrara, Forlì, Modena, and Rimini plants.

[305-7]

ATMOSPHERIC EMISSIONS FROM WASTE-TO-ENERGY PLANTS, PARAMETERS MONITORED CONTINUOUSLY

tons	2020	2021	2022
Dusts	4.8	5.3	5.9
Hydrochloric acid	20.3	20.7	20.7
Nitrogen oxides	718.6	663.8	667.3
Sulphur oxides	19.9	19.1	19.5
Carbon monoxide	81.1	75.1	82.2
Hydrofluoric acid	0.6	0.6	0.7
Total organic carbon	9.8	7.8	9.5
Waste treated in plants (thousands of t)	1,371	1,304	1,263
Gross electricity produced (MWh)	894.813	852.379	880.884
Thermal energy produced (MWh)	259,995	244,182	226,872

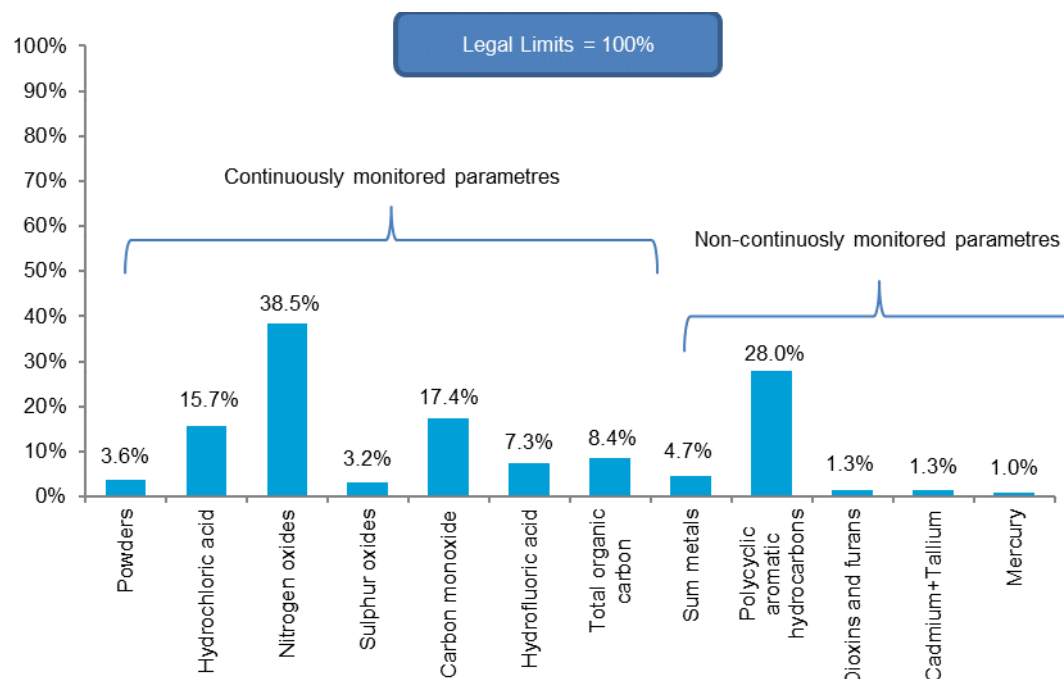
The data are calculated using the continuous measurement systems approved by the control bodies at the time of authorization for plant operation. The systems of the individual plants use collection and calculation procedures for the partially non-uniform emitted substances.

The analysis of the mass flows of the last two years shows a worsening with reference to almost all the emissions from the waste-to-energy plants (with the exception of hydrochloric acid which remains stable) despite the lower volumes of waste treated (-3.1%) and the complete inactivity of the special waste treatment plant in Ravenna. However, these are limited deviations which depend on the composition of the waste treated.

As regards the **pollutants that are not continuously monitored** (sum of metals, polycyclic aromatic hydrocarbons, dioxins, and furans), the total emissions can be estimated from the results of the analyses carried out during the year: 183 kg of metals were emitted in 2022 (165 kg in 2021), 0.5 kg of polycyclic aromatic hydrocarbons (0.6 in 2021) and 10.9 mg of dioxins (8.6 in 2021).

The results of the measurements carried out on the emissions of the Hera Group's waste-to-energy plants confirm also in 2022 that, being equipped with the best technologies available and operated at their best, they record emissions that are **much lower than the limit values permitted by law**.

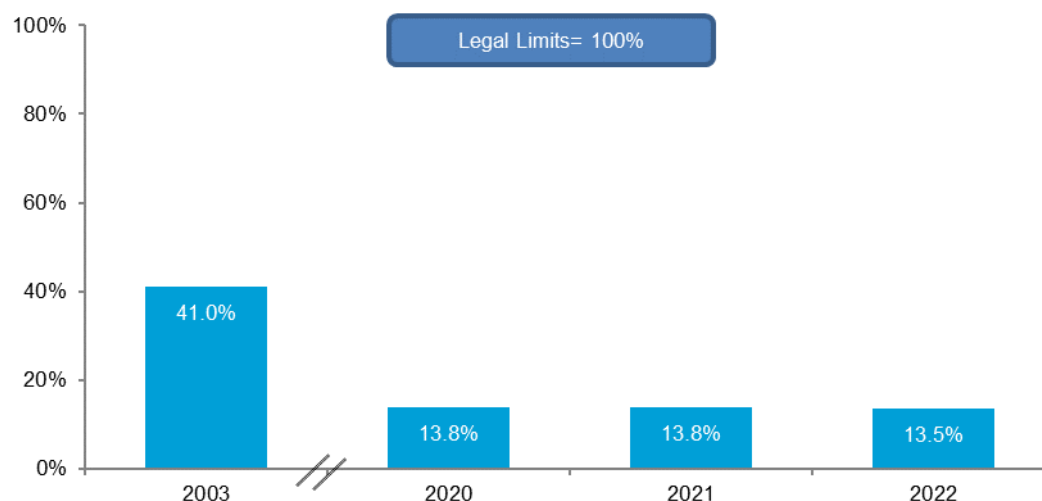
ATMOSPHERIC EMISSIONS FROM WASTE-TO-ENERGY PLANTS COMPARED TO LEGAL LIMITS (OPTIMAL VALUES: < 100%) (2022)



Including the Enomondo waste-to-energy plant. * Legal limits refer to Legislative Decree 152/2006.

For all those pollutants that are **continuously monitored**, the average concentrations in the stack were below the limits by **at least 61.5%** (data relating to nitrogen oxides) **up to 96.8%** (in the case of sulphur oxides). Even for the **non-continuously monitored** parameters, all values are well below the legal limits of at least 99.0% (mercury), up to 72.0% (polycyclic aromatic hydrocarbons).

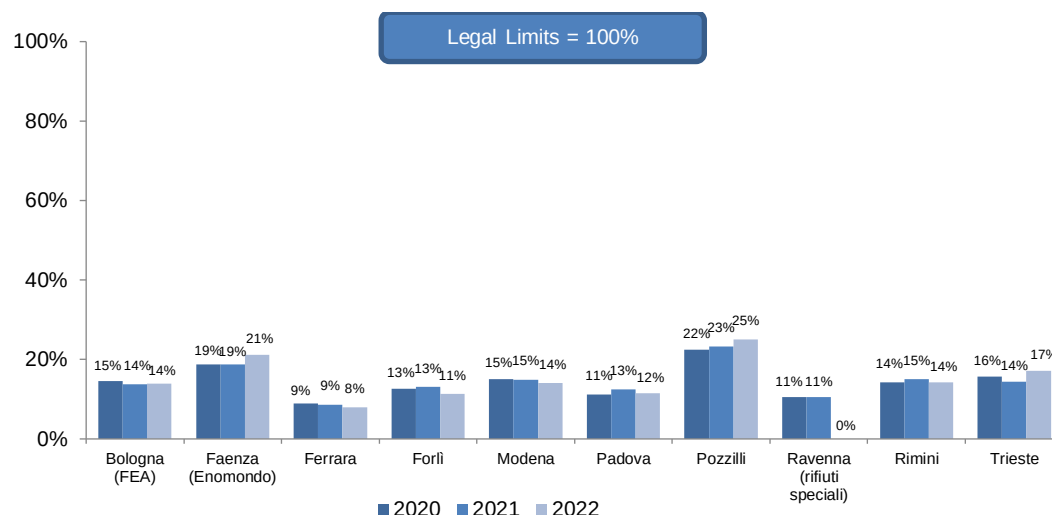
ATMOSPHERIC EMISSIONS FROM WASTE-TO-ENERGY PLANTS WITH RESPECT TO THE LEGAL LIMITS - CONTINUOUSLY MONITORED PARAMETERS (OPTIMUM VALUES: < 100%), WEIGHTED AVERAGE ON THE VOLUMES OF WASTE TREATED BY THE PLANTS MANAGED



Including the Enomondo waste-to-energy plant. * Legal limits refer to Legislative Decree 152/2006.

Considering all the pollutants that were monitored continuously, in 2022 the **concentrations of emissions into the atmosphere** from the waste-to-energy plants were on average 86.5% lower than the permitted limit (13.5% of the legal limits), when in 2003 this percentage was 59%.

EMISSIONS INTO THE ATMOSPHERE FROM WASTE-TO-ENERGY PLANTS COMPARED TO LEGAL LIMITS - CONTINUOUSLY MONITORED PARAMETERS (OPTIMUM VALUES: < 100%), DETAILS BY PLANT



* Legal limits refer to Legislative Decree 152/2006.

The same indicator was calculated for the six plants with authorization limits more stringent than those established by Italian legislation for the year 2022 (for the seven continuously monitored parameters, the limits established in the authorizations correspond on average to 70% of the present limits set out in Legislative Decree 152/2006); the data are shown in the following table.

EMISSIONS INTO THE ATMOSPHERE FROM WASTE-TO-ENERGY PLANTS COMPARED TO THE AUTHORIZATION LIMITS - CONTINUOUSLY MONITORED PARAMETERS (OPTIMUM VALUES: < 100%)

%	2020	2021	2022
Bologna waste-to-energy plant (Fea)	24.9%	21.9%	21.1%
Ferrara waste-to-energy plant	9.4%	8.9%	11.4%
Forlì waste-to-energy plant	49.3%	49.5%	43.6%
Modena waste-to-energy plant	18.6%	17.5%	17.7%
Ravenna waste-to-energy plant (special waste)	12.4%	10.8%	-
Faenza waste-to-energy plant (Enomondo)	23.3%	21.4%	24.2%
Average compared to authorisation limits	23.0%	21.5%	19.7%

The integrated environmental authorizations relating to the Ferrara, Forlì, Modena, and Faenza (Enomondo) plants also provide for the continuous monitoring of mercury.

In this case as well, the results were **excellent**: the concentrations were on average 80.3% **lower than the most restrictive limits**. Note that the limits set by the individual authorisations differ from plant to plant, which does not allow for comparability. It should also be noted that the new authorisation for the Ferrara plant came into force in 2022, and that the Ravenna special waste plant was inactive for the entire year.

Transparency on emissions from waste-to-energy plants

Since 2008, the average values of the previous day and the "semi-hourly averages" of emissions from the Group's waste-to-energy plants **can be consulted** on the Group's website (the online data is updated every half hour with the average values recorded over the last 30 minutes). The data is transmitted automatically by the detection systems, operating 24 hours a day on all the plants, located in the provinces of Bologna, Ferrara, Forlì-Cesena, Modena, Ravenna, Rimini, and Isernia.

Furthermore, as a further **guarantee of transparency**, Hera ensures:

- the daily or weekly transmission to the control body (ARPA) of reports containing the semi-hourly and daily averages;
- the annual transmission to the competent Authority of the report on the operation of the plant, by 30 April of each year;
- in the case of EMAS registered plants, the publication of the results of the checks in the "Environmental Declaration";
- the publication of the annual data in the Group's sustainability report, compared with the legal limits and the limits established by the authorisations.

Since 2015, data from the Padua and Trieste plants have also been available on the Group's website, according to the methods provided (semi-hourly average updated in real time).

Finally, since 2018, the average annual data of the periodic self-monitoring relating to metals and organic micro-pollutants have also been available for all plants.

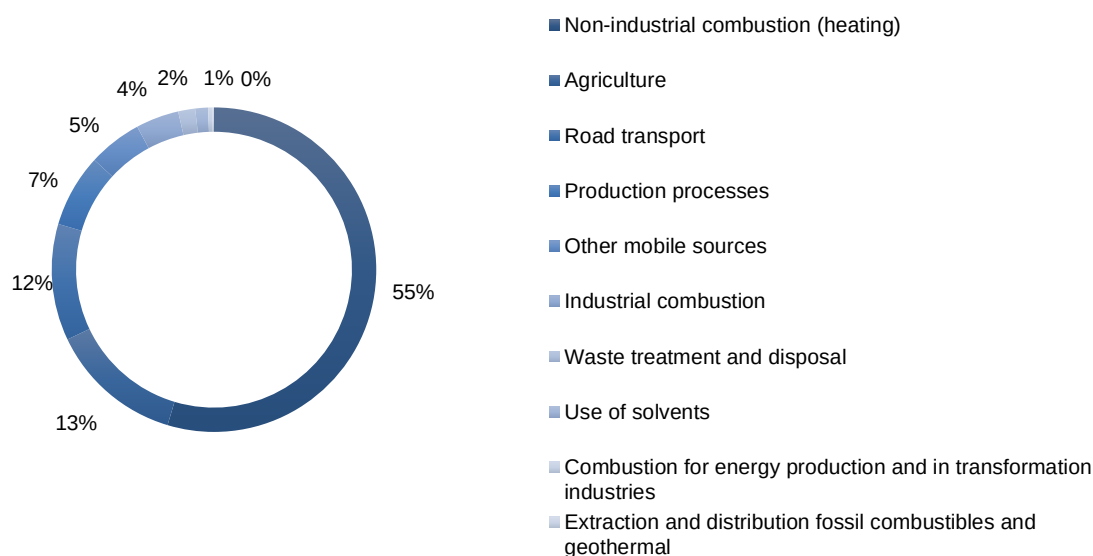
Studies on the environmental impacts of waste-to-energy plants

The activity linked to waste-to-energy has, for many years, been the subject of numerous **studies and monitoring** as well as important technological improvements also linked to the definition of increasingly stringent plant engineering and management criteria by Community and national legislation. The technology has achieved very high performance in terms of **containing emissions and impacts on the environment**.

If we consider the **total annual emissions of dioxins** into the atmosphere as the sum of all the waste incineration plants present on the national area from 1990 to 2020, it can be seen that following the regulatory and technological evolution there has been a 99% reduction of emissions (Source: Sinanet – Ispra – SNAP database). By contextualizing the analysis to the various production sectors, it can be seen that since 2001 waste incineration has been the least representative source in terms of dioxin and furan emissions, contrary to the iron and steel industry and the entire residential sector (such as home heating).

With regard to **PM10** emissions from waste incineration plants throughout the national area these stand at **values of approximately three orders of magnitude lower** than those from non-industrial combustion (heating). The main sources of PM10 at a national level are in fact represented by the residential sector, agriculture, vehicular traffic, and production processes, as shown in the graph below.

PM10 EMISSIONS BY SECTOR



Source: : Ispra, Italian emission inventory 2022, PM10 emission trend from 1990 to 2020

Air quality surveillance and monitoring projects

The authorizations of the **waste-to-energy plants of Ferrara, Modena, Forlì, Rimini, Bologna, Padua, and Isernia** require the Hera Group to carry out studies on the potential impact that these plants have

on the surrounding environment. A description of the studies underway in 2022 is provided below and reference is made to the previous sustainability reports for those already completed relating to the Bologna, Ferrara, Modena, Padua, Pozzilli and Rimini plants.

In the industrial area where the **Forlì** plant is located, Hera has installed an air quality monitoring station, which has been active since 2009 and managed by Arpae Forlì. The station provides continuous data validated by Arpae and published on the institution's website. In addition to this, periodic campaigns are carried out at the control unit for the **search for micro-pollutants and metals in the particulate matter**. The findings show no substantial difference between an urban site and the area surrounding the plant, indicating the presence of a homogeneous background significantly influenced by urban realities rather than the presence of the plant. These results were **also confirmed in 2022**, when Arpae Forlì made available the data from the air and soil quality monitoring campaigns carried out in the previous year.

For over a decade, environmental monitoring has been conducted on the **Modena** plant relating to various matrices: air quality, soils, biomonitoring, and total deposition. Since 2013, the monitoring network has been managed by the territorial Arpae which has therefore been entrusted with all the investigations envisaged by the requirements of The Hague for the waste-to-energy plant.

Environmental and health surveillance protocols are also conducted on the **Ferrara** waste-to-energy plant, coordinated by the CNR and the university. Studies have confirmed on several occasions (2010-2012 and 2013-2015) that the contribution of the plant, in terms of air quality and accumulation in the soil, **cannot be differentiated from the environmental background**. There has been an active collaboration with CNR-IIA and La Sapienza University since 2015 aimed at ensuring the continuity of the air quality study, which has been carried out with **four monitoring campaigns each year** (winter, spring, summer, and autumn). Moreover, in 2016 an agreement was signed with Arpae for the continuation of the **three-year soil monitoring**. As in the previous studies, no correlations with the presence of the plant were found. The study was carried out in 2019, and the results confirmed that the plant has a very limited influence on the environmental framework of the investigated area and is and is hardly distinguishable from the environmental background. The study was also replicated at the end of 2022 and the results will be made available in 2023.

Consistent with the provisions of the "Agreement for monitoring the fallout of the San Lazzaro waste-to-energy plant" signed by Arpav, the Province of Padua, the Municipality of Padua, and the Municipality of Noventa Padovana, and financially supported by Hestambiente, **quality monitoring** is carried out of the air in the Padua waste-to-energy plant area through two fixed stations in Viale Internato Ignoto and Via Carli in Padua (APS1 and APS2). The relative results are then compared with the values measured in the stations of Mandria (urban background) and Arcella (urban traffic), belonging to the Arpav regional air quality monitoring network. Furthermore, in 2022 the Official Bulletin n.38 of the Veneto Region published Decree n.11 03/03/2022 of the Director of the Territorial Protection and Security Area, with which the single regional authorization measure (PAUR) is issued which includes, among the various deeds, the Integrated Environmental Authorisation and a series of environmental conditions to be complied with which are currently being followed up. In particular, before the construction work, work in-progress and after the construction work environmental monitoring plans are envisaged for Line 4, as well as the execution of an epidemiological survey to be carried out in agreement with ULSS 6 Euganea with the support of the University of Padua and taking into account the indications of the Municipality of Padua.

The area surrounding the waste-to-energy plant site in **Granarolo dell'Emilia** (Bo) is subject to air quality monitoring by means of two fixed monitoring stations that measure particulate matter (PM10 and PM2.5), polycyclic aromatic hydrocarbons (PAH) and metals.

District heating: a response to protect air quality

Hera manages **district heating systems** in the areas of Bologna, Cesena, Ferrara, Forlì, Imola and Modena.

District heating is a service which consists in the sale to the customer of heat for heating and household hot water. It is an **alternative system to the traditional autonomous or condominium boilers**, which allows the production of heat to be concentrated in **more efficient and better controlled** production centres compared to household boilers. From these plants, the heat, in the form of hot water, is brought to the customers' homes through a distribution network made with insulated pipes. The heat then feeds the heating system of the houses through heat exchangers, without emissions of pollutants.

The advantage for the customer is having **greater safety** and lower operating and maintenance costs, while maintaining the possibility of independently regulating the temperature in the home.

District heating is a **response to the problems of air pollution** in the city in as much as it makes it possible to replace the more numerous household boilers distributed throughout the city (sometimes even oil-fired ones) and to use high-efficiency centralised forms of production for heat generation, renewable energy or recovered energy from other processes.

New initiatives took shape in 2022, the main ones being:

- Ferrara: interventions to improve efficiency and optimize managing **geothermal wells** which have made it possible to obtain an increase in production;
- Ferrara: the connection campaign continues along the via Bologna axis following the **connection to the main grid** of the Corti di Medoro system (which took place at the end of 2021);
- Bologna: commissioning of the operation of four **heat recovery heat pumps** on the cogeneration cycle at the Berti power plant;
- Bologna: taking charge of managing the "Fiera" district heating system. The acquisition is part of the broader interconnection project of the four city systems Frullo-CAAB-Pilastro, Sede Berti, Fiera and Navile;
- Casalecchio: general revamping of the Ecocity cogeneration plant;
- The implementation of 160 sub-stations in a smart perspective was completed and the experimentation on the lowering of the climatic curves was extended throughout the Bologna area, which allowed electricity savings at the network pumping stations of around 317 MWh.

Over the period of the 2023-2026 plan, various technical-economic efficiency and technological innovation initiatives have been identified aimed at reducing emissions into the atmosphere in terms of greenhouse gases and pollutants. The main initiatives are related to:

- interconnection of the city systems of Bologna Frullo-CAAB-Pilastro, Berti Headquarters, Fiera and Navile;
- interconnection of the city systems of Forlì waste-to-energy plant and Centre-Campus;
- doubling of the thermal power of the Ferrara geothermal power plant;
- revamping of cogeneration engines and installation of heat pumps aimed at evolving the current systems into efficient district heating systems.

ENERGY SOLD AND VOLUME SERVED WITH DISTRICT HEATING

	2020	2021	2022
Thermal energy sold (MWh)	453.318	510.040	442.137
Volume served (thousands of cubic meters)	21,700	21,938	23,238
Equivalent residential units served (no.)	90.415	91.410	96,825

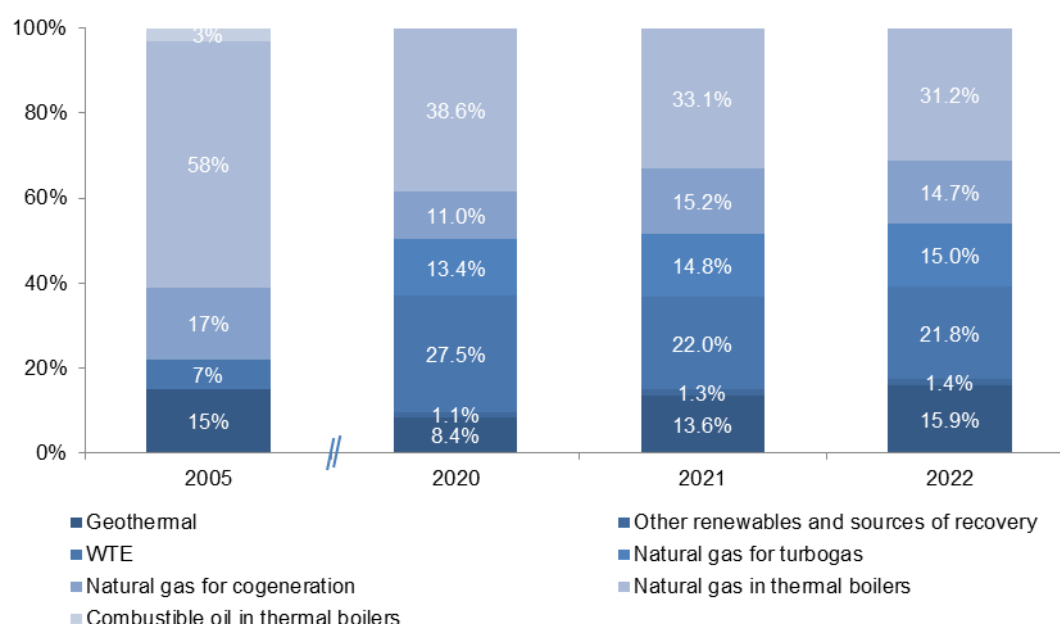
The equivalent residential units were calculated considering an apartment with an average volume of 240 m³.

The thermal energy sold in 2022 amounted to **442,137 MWh**, a decrease of 13.3 % compared to 2021 due to less heat during the year, the increase in the tariffs of energy services and the building efficiency interventions of recent years. The volume and the equivalent residential units served, on the other hand, both increased by 5.9% (mainly in Bologna following the acquisition of the "Fiera" system).

Systems that in 2022 meet the definition of **efficient district heating** (systems that use, alternatively, at least: 50% renewable energy, 50% waste heat, 75% cogenerated heat, or 50% of a combination of the previous ones) are Bologna Frullo-CAAB-Pilastro, Casalecchio San Biagio, Ferrara, Forlì waste-to-energy plant, and Imola Casalegno. Overall, these systems sold 272,899 MWh (**61.7% of the total**) and served 55,828 equivalent units (57.7% of the total).

The **areas most covered by the district heating service** are the areas of Bologna (35.4% of the volumes served), Ferrara (28.2%) and Imola-Faenza (20.1%).

SOURCES USED FOR DISTRICT HEATING



As regards the **sources used for district heating**, note that the percentage of thermal energy produced from **renewable, recovery or high-efficiency sources** has been steadily increasing over the last three years: **68.8% in 2022** compared to 66.9% in 2021 and 61.4% in 2020. In particular, the contribution of **heat from geothermal energy** has been increasing (+6.3% compared to 2021) owing to the greater efficiency of the Ferrara plant, with a consequent reduction in the drawing from the Ferrara waste-to-energy plant (-11.3%).

[302-5]

ENVIRONMENTAL BENEFITS OF DISTRICT HEATING

	2020	2021	2022
Primary energy saved (toe)	34,518	43,435	41,296
Greenhouse gases avoided (t)	54,988	68,866	63,270
Avoided nitrogen oxides (t)	108	122	126

Calculated as the difference between a traditional system (electricity park with national average emissions and household boilers made up of 90% natural gas boilers, 6% LPG boilers and 4% diesel boilers with efficiency respectively equal to 90%, 85 % and 85%) and Hera's district heating systems for the same quantities of energy (thermal and electric).

Thanks to district heating systems, compared to a traditional system in 2022 **over 41,000 tonnes of oil equivalent, 63,000 tonnes of greenhouse gases, and 126 tonnes of nitrogen oxides were saved.**

Furthermore, in 2020 the Ferrara district heating plant obtained **carbon footprint certification**, which expresses the total greenhouse gas emissions directly or indirectly associated with the service in CO₂ equivalent. According to this certification, the Ferrara system has a carbon footprint of **0.122 kg of CO₂e per thermal kWh sold** to the end user. This value is 56% lower than the calculation referred to, employing the same methodology, to a traditional household boiler. The figure is of absolute importance and has led to the estimation of an **annual saving of over 22 thousand tons of CO₂e** equivalent by the district heating of Ferrara.

Cogeneration serving district heating

Cogeneration consists in the **combined production of electricity and heat** in a single integrated system, using a single fossil or renewable source. It is made in particular thermoelectric plants which recover heat from the fumes produced by an engine, obtaining **significant energy savings** (about 40%) compared to the separate production of electricity and heat.

The cogeneration plants of the Hera Group as well, thanks to the connection with **the district heating networks**, contribute to the improvement of the air quality in the urban centres in which they are located: thanks to them, numerous boilers are replaced with modern and efficient heating and supply systems of hot water to the buildings. With district heating, control is continuous, both in the combustion processes and in relation to emissions into the atmosphere.

Hera Spa manages 12 cogeneration plants, four of which are trigeneration, for a total nominal electrical power of over 113 MW which in 2022 produced **approximately 170 thousand MWh of thermal energy** for district heating in all the areas served, half of which (85,872 MWh) from the Imola cogeneration plant.

Emissions into the atmosphere from district heating

In 2022, the district heating systems produced a total of 899,091 MWh of electricity and thermal energy, an increase of 5.6% compared to 2021. In relation to this production, a total of 133.3 tonnes of nitrogen oxides were generated, an improvement over the previous year as a result of a lower use of thermal boilers. These emissions, in relation to the energy produced, result in 2022 in approximately **148.3 grams per megawatt hour**, a ratio that is decreasing by 3.1%.

EMISSIONS INTO THE ATMOSPHERE FROM DISTRICT HEATING

	2020	2021	2022
Nitrogen oxides (t)	104.0	145.6	133.3
Electricity and thermal energy produced (GWh)	792.9	952.2	899.1
Specific emissions (g NOx / MWh)	130.2	152.9	148.3

The nitrogen oxide data were calculated with the following sources: data from manufacturers for the cogenerators, Eu-Ets calculation method for the Imola gas turbine, Emep/Eea inventory for the boilers.

Emissions from the Imola cogeneration plant

[305-7]

The **Imola** cogeneration plant, serving the **city's district heating**, is characterized not only by high-yield performance from the point of view of energy production but also from an environmental point of view as it combines significant energy savings with low levels of emissions into the atmosphere.

In 2022, the power plant generated approximately **229,706 MWh of gross electricity** (222,508 that fed into the grid) and 85,872 MWh of thermal energy thanks to an installed capacity of 82 electrical MW and 65 thermal MW. Production compared to the previous year was respectively +7.4% and -9.5%, with Line 2 of the plant shut down from April to October for maintenance of the gas turbine.

187 thousand cubic meters of industrial water were consumed, of which 113 thousand for replenishing the cooling tower, in compliance with the 210,000 cubic meters authorized by the AIA.

Even in 2022, the **absolute specific emissions** of the Imola cogeneration plant will remain at **extremely low levels**. The environmental authorisation of the Imola plant foresees limits for the most common pollutants in the flue gas (NOx and CO) that are 75-80% lower than the national standard. Since 2019, the AIA has changed the limits on emissions channelled into the atmosphere by introducing compliance with the daily limit instead of the hourly limit for continuously monitored pollutants.

EMISSIONS INTO THE ATMOSPHERE FROM THE IMOLA COGENERATION PLANT

mg/Nmc	National limit value	Authorized limit value	2020	2021	2022
Nitrogen oxides (NO _x)	60	14.5	8.8	8.6	8.4
Carbon monoxide (CO)	50	9.5	2.1	0.6	0.7
Ammonia slip (NH ₃)	not foreseen	2.0	0.25	0,0	0.1
Total suspended particulates (TSP)	not foreseen	4.0	0.01	0.01	0.01
PM10	not foreseen	1.0	<0.01	0.01	0.01

The authorized emissions limits of the Imola cogeneration plant refer to the Integrated Environmental Authorization and subsequent amendments and additions (with more stringent limits than set out in the Legislative Decree 152/06). The CO, NOx, NH₃ and PTS values correspond to the annual average values recorded continuously by the continuous monitoring system. The PM10 values are derived from the average of the values detected during the self-monitoring checks (quarterly). All authorized limit values correspond to the daily average.

The company vehicle fleet and sustainable mobility

Company vehicles

In 2022 as well, the strategy of rationalizing and optimizing the use of vehicles is confirmed, also through the purchase of technologically advanced vehicles powered by **fuels with a lower environmental impact** to replace obsolete vehicles.

NUMBER OF VEHICLES

Number	2020	2021	2022
Diesel	2,899	2,940	2,998
Gas	257	287	285
Methane	435	420	368
LPG	400	389	388
Electric	15	16	23
Total	4,006	4,052	4,062

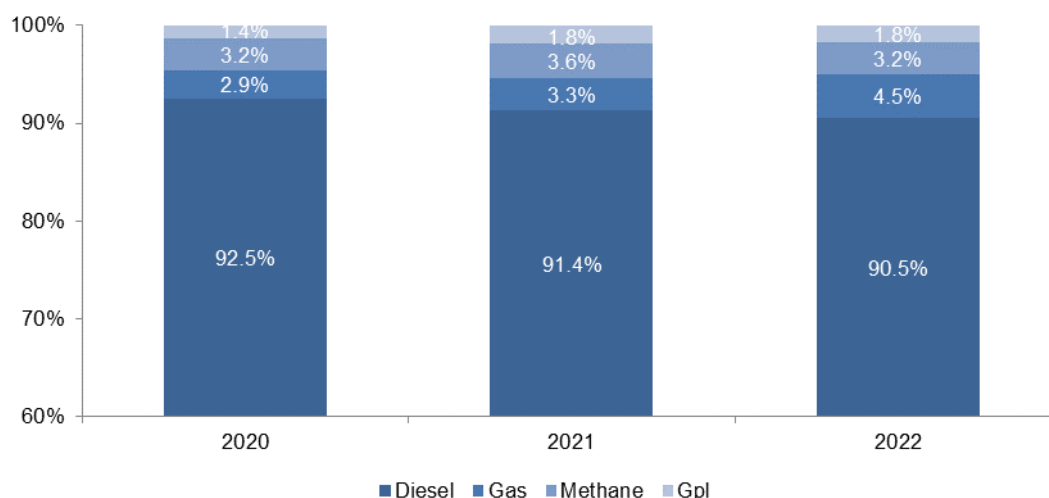
Non-circulating vehicles expected to be disposed of are excluded from the calculation.

In 2022 there are 4,062 vehicles in the Group (10 more than the previous year). A total of 284 vehicles were also sold and/or scrapped and registered 119 (94 diesel, 15 petrol, five methane, four LPG and one electric).

FUEL CONSUMED BY VEHICLES

toe	2020	2021	2022
Diesel	9,293	9,313	9,263
Gas	295	335	463
Methane	322	362	326
LPG	136	185	181
Total	10,046	10,194	10,234

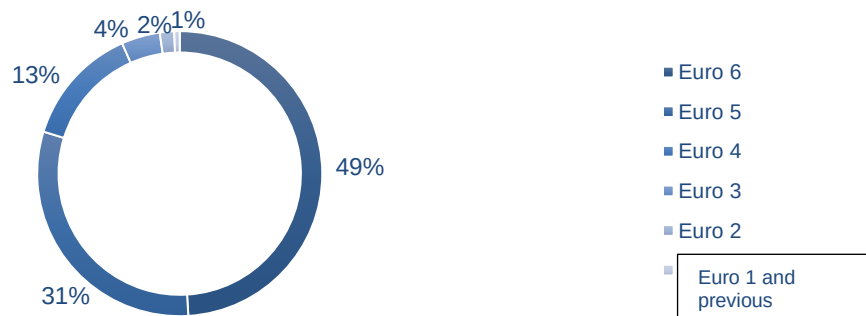
FUEL CONSUMED BY VEHICLES (%)



The comparison between the various types of fuels was carried out considering the primary energy present in the individual fuels.

At Group level, fuel consumption in 2021 amounted to 10,234 toe and remained substantially stable compared to 2020. Gasoline consumption increased (+38.3%), while methane (-9.9%) and LPG (-1.7%) consumption decreased. Diesel consumption remains stable.

COMPOSITION OF ASSETS FOR ANTI-POLLUTION DIRECTIVE (2022)



Vehicles complying with the most recent anti-pollution directive (Euro 5 and 6, including electric vehicles) account for **79.8% of the total**, up on the previous year (+5.2 p.p.); in particular, the number of Euro 6 vehicles increased by 15.4%.

The **average age of the Group's fleet** in 2022 is 7.9 years. For the Uniflotte fleet, therefore excluding the vehicles of Marche Multiservizi, the average age drops to 7.6 years, stable compared to 7.5 years in 2021 but still down compared to 2013 when the value stood at eight years. These results are the consequence of the investments made by the company aimed at renewing the company vehicle fleet.

The fleet of company vehicles is joined by **leased cars**, assigned to sales representatives and Hera executives. In 2022, this car fleet consisted of 223 cars, of which 159 assigned to executives and 64 used by salespeople.

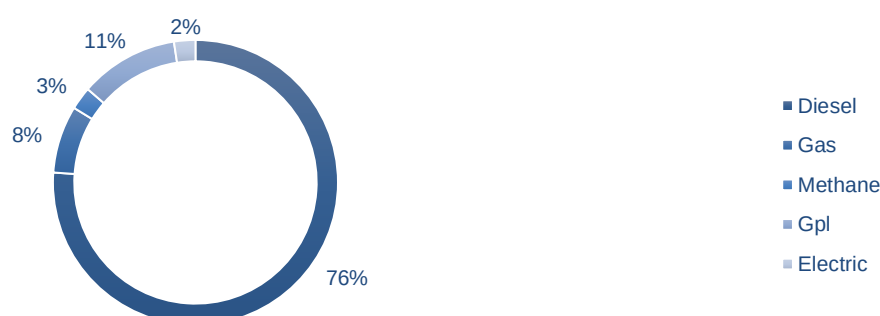
The cars assigned to executives are 103 diesel, 14 petrol and 42 hybrid powered (there were 32 in 2021), all registered after 2011 and of the **Euro 6** type. The other leased cars are instead **all hybrid powered**, registered after 2011 and of the **Euro 6** type. In total, hybrid-powered leased vehicles account for **66.7%**.

Supplier vehicles

Hera's commitment to sustainability and energy efficiency also has repercussions on the **supply chain** and in particular on the **criteria for choosing suppliers**. In view of the high environmental impact of urban hygiene services, especially in terms of atmospheric emissions, the Group has decided to **reward the most virtuous suppliers** in this respect by giving preference to those who use vehicles with a reduced environmental impact, and also giving a preference to such vehicles in the environmental services tenders it announces. For example, as part of the Atersir concessions in the provinces of Bologna and Modena, it is envisaged that the vehicles will be gradually replaced with vehicles of smaller capacity and lower environmental impact.

In 2022, the fleet of Hera Spa, AcegasApsAmga and Marche Multiservizi contractors consisted of 2,889 vehicles; **light vehicles** accounted for **58.9% of the total** (53.6% in 2021).

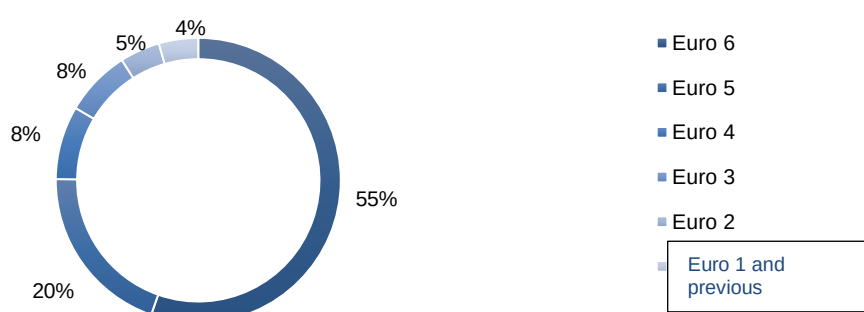
SUPPLIERS' VEHICLES BY FUEL TYPE (%)



The data include the vehicles of the temporary groupings of companies for managing environmental services in which Hera Spa is the agent.

From the point of view of fuel sources, in 2022 natural gas, LPG or electric vehicles accounted for **16.2% of the total** (13.6% in 2021).

SUPPLIERS' VEHICLES PER ANTI-POLLUTION DIRECTIVE (%)



The data include the vehicles of the temporary groupings of companies for managing environmental services in which Hera Spa is the agent.

From the point of view of the anti-pollution directives, on the other hand, the most recently registered vehicles (**Euro 5 and 6**) make up **75.1% of the total**, thus continuing also in 2022 the process of rejuvenating the vehicle fleet of subcontractors (this figure was the 71.3% in 2021).

Mobility management

Actions aimed at raising employee awareness in reducing the environmental impact of **home-to-work journeys** continued in 2022, also taking regulatory changes into account.

Among these, continuity was given to the **shuttle service** in the Bologna area, which connects the railway station with the Viale Berti Pichat and via del Frullo / via Cristina Campo offices, and in the Imola area, which connects the station with the via Molino Rosso and via Casalegno.

In addition to this, awareness campaigns have been activated for the replacement of individual means of transport for home-work trips towards more sustainable choices of **public transport**. For example, the **additional portion for sustainable mobility** included in the welfare plan to cover part of the cost of annual public transport passes which were made available to all employees was also used and appreciated in 2022: In fact, 189 employees took advantage of it.

Sustainable mobility week was organized again this year in September, aimed at involving all employees in the use of non-polluting means of transport. This year, in order to be more widely spread across all territories, some 80 ambassadors were involved, supporting colleagues in participating in the various challenges that were organised.

By virtue of the regulatory changes linked to Interministerial Decree No. 179 of 12 May 2021, Home-Work Travel Plans were sent to all the main municipalities where the Hera Group operates, containing information on locations, employee travel habits, main initiatives and future challenges.

Hera for electric mobility

The Hera Group, through the company Hera Comm, is active in the development of the **electric charging infrastructure network**.

In 2022, over 100 new public charging points were installed, 10 of which with a power of 50 kW for fast direct current charging. Therefore, **500 public charging points are currently installed** (about 250 columns), of which 14 have a power of 50 kW (seven columns); in total in 2022 they supplied around 1 GWh.

Through the awarding of new tenders and the signing of additional Protocols and Memoranda of Understanding, investments will be supported which will contribute to achieving the **goal of 750 public electric charging points installed by 2026**. In particular, in 2023 it is planned to install more than 20 high power points (50-100 kW).

Hera's activities in the field of electric mobility are not limited to public charging stations, but also involve **private charging stations**: these solutions are particularly appreciated by customers, as demonstrated by the more than 400 private charging points sold during the year, for total of 1,300 by 2022 (of which around 500 from business and top business customers).

During the year, in order to improve the user experience for **business customers**, a tool was launched through which those companies that purchase charging points can access, via the control platform managed by Hera Comm, a dashboard to **monitor the charging points they own** and view the reports. Hera Mobility Partner was also created, a new form of contract that allows business and top business customers that purchase private infrastructure to **make it available for public use**, in order to facilitate access to a greater number of users.

Considering the installations as a whole, **around 1,800 public and private charging points are active** as of 2022. The goal for 2026 is to **exceed 5,100**.

Lastly, among the solutions aimed at individuals we find that relating to **e-bikes and electric scooters**: launched in 2020, this initiative was also successful in 2022 with around 900 sales of electric bikes and scooters.

Hera for soil protection and biodiversity

Reuse of soil in the construction of infrastructures and reuse of excavated earth

Starting right from the preliminary analyses to the design of works, the Hera Group identifies technical solutions aimed at the **reutilisation of formerly urbanised areas and/or the preservation** of the natural context of the areas to be worked on, in line with the objectives set out in the UN Agenda 2030. Among the main design criteria, we can mention:

- in the area of networks: extensions realised by taking advantage of existing roadways and/or urban fabric, improvement of the network layout by upgrading or reclaiming existing pipelines, laying new pipelines adjacent to already existing services;
- in the area of plant systems: the re-use of already existing/occupied infrastructures and areas; decommissioning of the infrastructure and rehabilitation/restoration of the area at the end of its lifecycle; use of technological solutions to reduce the footprint of the infrastructure.

Continuing on the path of sustainability begun in previous years, the infrastructure (networks and plants) completed in 2022 involved the use of approximately 27,000 square metres of land, of which 72.9% was already occupied by existing infrastructure (approximately 19.5,000 square metres). Considering the period from **2018 to 2022, 77.9%** (equal to approximately 604,000 m²) of the total surface area involved in the construction of infrastructure, concerned land that was already occupied. This concerns the construction of infrastructures whose design was provided by HeraTech.

Among the projects completed in 2022, the **best results in terms of soil reuse** were obtained in the following interventions: revamping of the anaerobic digestion process of the Gramicia purification plant in Ferrara (100% of the soil reused, 6,500 m²), adaptation of the Lido di Classe purification plant in Ravenna (90%, 4,000 m²), upgrading of the Savignano purifier in Forlì-Cesena (91%, 3,000 m²) and reclamation of landfills in Rio Eremo in Forlì-Cesena (100%, 1,650 m²).

In the 2023-2026 period, it is foreseen that most of the infrastructure projects will be constructed on land that is already occupied, while continuing to limit the use of virgin soil: in fact, it is estimated that a further 246,000 square metres of land will be reused, bringing to 80.8% (or about 888,000 square metres) the amount of land reused in projects completed from 2018 to 2026 with plans drawn up by HeraTech.

In particular, work will be carried out in the Rimini area on the water and sewage network for an overall area of more than 8.7 thousand square metres. In the province of Bologna, the upgrading and expansion of the 'Ex Zuccherificio' purification plant will involve the reuse of about 10,000 square metres of land, and the interconnection of the Frullo / Berti district heating systems is also planned, which will see about 4,000 square metres of land reused. In the province of Ravenna, the upgrading of a number of purification plants (Ravenna and Cervia) and the revamping of the F3 waste-to-energy plant will be tackled by reusing the areas already occupied by existing infrastructures, thus allowing the reuse of more than 13,000 and 9,000 square metres of surface area, respectively. In the Forlì area, work will be carried out to upgrade sewers by connecting smaller agglomerations to existing purification plants, for a reuse of more than 30 thousand square metres. In Ferrara, work will be carried out to upgrade sewers by connecting them to existing purification plants, which will entail a reuse of land for about 12 thousand square metres. Finally, the province of Modena will be impacted by interventions aimed at upgrading the aqueduct system for a reuse of about 8,000 square metres.

Biodiversity

With respect to the protection and **conservation of wild habitats and species**, the European Union has enacted two pieces of legislation: Directive 2009/147/EC (known as the '**Birds Directive**'), which came into force in February 2010 and relates to the conservation of wild birds, and Council Directive 43/92 (known as the '**Habitats Directive**'), adopted in May 1992 and relating to the conservation of natural habitats and of wild fauna and flora. These directives have created a coherent ecological network of protected spaces located throughout the area of the European Union, called **Natura 2000**.

The two major water catchment plants in the province of Ferrara, Pontelagoscuro and Stellata, are located on the river Po within the special protection zone called "**River Po from Stellata to Mesola and Cavo Napoleonico**". The purification plant situated in the area of Ravenna (Marina di Ravenna) is located within the site of community interest called "**Piallassa Piombone**" and discharges the purified effluent within the "**Piallassa Baiona**" special protection area.

The Hera Group carries out **acute toxicity tests** on purification plants in order to safeguard biodiversity.

Herambiente has since 2020, embarked upon an **innovative biomonitoring** project aimed at further studying the environment around some of its plants and any impacts they may have on it. The project aims to **use bees as bioindicators** in order to assess the quality of the environment surrounding an industrial plant such as those managed by the Group. See the case study "Capiamo: biomonitoraggio ambientale con le api" (We understand: environmental biomonitoring with bees) for details.

Reclamation activities to protect the territory and biodiversity

Since 2009 the Hera Group has been involved in **environmental reclamation**. Starting from January 2022, the business unit related to 'environmental remediation' was transferred to Hasi, Herambiente's trading company specialising in industrial waste management and related environmental services, which thus extended its commercial offering also to **clean-up and reclamation services** aimed at securing and recovering contaminated urban areas and industrial sites.

The service is offered to a varied type of public and private clientele including oil companies, chemical and pharmaceutical industries, steel mills, real estate and insurance consultancy firms, reclamation consortia, and port authorities.

An **all-inclusive service** is offered that encompasses all environmental activities related to the technical-administrative management accompanying the reclamation of an abandoned urban and/or industrial area: from the design of the fact-finding survey to the economic feasibility study related to environmental liabilities, to environmental consultancy with regard to the purchase and sale, to the execution of environmental remediation and reclamation of degraded areas for regeneration.

The first and most important step in the reclamation process of an area is the **characterisation**, i.e., the in-depth study that allows the history of the contamination of the place to be reconstructed, provides all the elements to construct the planning phase of the intervention in a conscious and estimate the costs of the intervention. The technicians use state-of-the-art investigative technologies and equipment to carry out direct and indirect investigations and assist their customers in all phases of the authorization process required by current legislation. The reclamation and safety measures are the most delicate in terms of treatment of the processed materials and the impact that the activity can have on the productive life of a company or public organization. Over the years, particular attention has been paid to **increasingly more sustainable and low environmental impact approaches**, such as those that exploit the natural attenuation potential of the contaminated site to destroy polluting substances and/or reduce their relative hazardousness. Among the main sustainability requirements there is low energy consumption, minimization of the use of chemical amendments and finally the applicability directly in situ, i.e., without the prior removal of the contaminated environmental matrix (soil or groundwater). Such processes have already been effectively applied to the treatment of contaminated groundwater, soils and sediments. In parallel to the in-situ treatment, on-site and off-site technologies have also been developed which respectively provide for:

- the excavation of the contaminated soil and its subsequent treatment on site (soil washing, biopiles) for the recovery of the matrix and its reuse;
- the excavation of the contaminated soil and its subsequent treatment outside the construction site in order to send the contaminated matrix to authorized treatment plants or to landfills.

Previous or ongoing industrial activities are in fact often the cause of important alterations of the qualitative characteristics of the soil, subsoil and groundwater environmental matrices, such as to represent a potential risk for human health and natural ecosystems and therefore require remediation and/or depollution. In Italy, the remediation of contaminated sites is a problem of extraordinary importance not only on a health level but also on a social and economic level: just think that the sites of national interest alone cover an area that reaches 0.6% of the entire national area. In principle, the remediation of contaminated sites makes it possible to preserve the natural capital and reduce the impact on biodiversity, representing in fact an important resource for the country's economic development.

The remediation activity is carried out on a national level with certificates of qualification. Furthermore, the activities on the construction sites are carried out **in compliance with the international standards** ISO 9001, ISO14001 and ISO 45001, as also proven by the certifications held issued by the accredited bodies.

ENVIRONMENTAL REMEDIATION INTERVENTIONS COMPLETED AND IN PROGRESS

Thousands of square meters	2012-2019	2021	2022	Total 2012-2022
On-site treatment	120.0			120.0
Worksite treatment	60.0	20.0		80.0
Off-site treatment	142.4	15.0	16.5	173.9
Total	322.4	35.0	16.5	373.9

4 Local areas (and businesses) - Enabling resilience and innovating

4.01 Objectives, performance and targets

What we said we would do	What we did	SDGs	Progress*
Innovation and digitalisation			
Group data strategy: develop guidelines to support data analytics development projects and to maintain the transition towards a data-driven company.	Reference guidelines for the business units and technological partners were formalised, and internal training continued. (see p. 140)	8, 9, 11	●
IT security: Increase the Group's cyber security levels in 2022 through the evolution of processes, of instruments, and of company policies, and through the increase of monitoring activities, accident prevention, and increased awareness in user population through Ethical phishing campaigns.	Various initiatives were implemented in 2022: monitoring all mobile devices was activated; a solution for monitoring the interactions between users and cloud-based services and the blocking of malicious activity was activated and integrated; probes for monitoring the management networks and the industrial environments were installed; various tests and system scans to identify possible safety vulnerabilities were performed; two company policies were evolved; ethical phishing campaigns were run. (see p. 156)	-	●
41% of customers using online billing and 41% of customers using online services by 2025 (including EstEnergy and controlled) (30.9% and 27.1% in 2021, respectively).	34.5% of customers using online billing and 29.4% of customers using online services by 2022 on a Group level (30.9% and 27.1% respectively in 2021). (see p. 152)	11, 12, 17	●
Continue developing initiatives within the three main areas of innovation: energy transition, circular economy, and digital transformation. Define, develop, and report initiatives using the Corporate Digital Responsibility framework.	The Group's innovation model was revised, including the identification of new figures within the business units ("innovation promoters"). 20 main innovation initiatives within the areas of environmental transition and of digital transformation. A training course on the Corporate Digital Responsibility framework was activated. (see p. 138)	8, 9, 11, 12	●
Economic development and social inclusion			
Supplier selection: continue to promote the employment of disadvantaged people in waste management services.	Over 81 million euro (+13% over 2021) the value of contracts and partnerships between Hera and social cooperatives to perform environmental services: amounting to 30% of the Group's total awards for these services. (see p. 164)	8	●
Continue to provide instalment payment for bills and other voluntary facilities to support customers facing financial hardship. Propose to other municipalities to sign a protocol to prevent the suspension of supply.	272.462 instalment payments dispensed in 2022 (+36% over 2021), for a value of 353,8 million euro (almost tripling compared to 2021). 126 municipalities with active agreement protocols (these were 100 in 2021). (see p. 164)	17	●

What we said we would do	What we did	SDGs	Progress*
Job creation and development of new skills			
Continue to apply the social clause to protect employment in the contracts for emergency services on networks and services relating to customer management (except for insourcing situations).	23 tenders, among the most notable, included a social clause to protect employment. (see p. 170)	8	●
Direct training interventions towards the development of emerging roles and skills that concern digital transformation (with a focus on Data Analytics, Machine Learning, and Artificial Intelligence), energy transition (with a focus on decarbonisation and renewable energies), and environmental transition (with a focus on circular economy, climate change, and green finance). 65% of the corporate population will achieve digital proficiency (meaning full "digital soft skills") within 2025 (49% in 2021), 90% within 2030.	Training interventions directed towards the development of emerging roles and skills that concern digital transformation (with a focus on data analytics, machine learning, and artificial intelligence), the energy transition (with a focus on decarbonisation and renewable energies) and the environmental transition (with a focus on circular economy, climate change, and green finance). Employees with digital proficiency now at 54.1% of the total population. (see p. 180)	4, 8	●
Continue to raise awareness on the enhancement of diversity and inclusion through events and initiatives. (Inclusive language and STEM topics). Consolidate the Hera Group's ranking in leading diversity stock indexes.	The activity of promotion of diversity and inclusion has continued through the launch of a pilot project on inclusive language and through the planning and distribution, at branches provided with screens, of a video promoting the overcoming of gender stereotypes. Hera Group's position in the leading diversity stock indexes consolidated: Hera Group became part of the top ten of Refinitiv's Diversity & Inclusion Index2022 and Bloomberg's Gender Equality Index 2022. (see p. 176)	5	●
Resilience and adaptation			
Interventions in the area of resilience and adaptation to climate change, including: - Electricity service resilience: 36.8 km of network made compliant in 2022, 54.5% of the overall electricity resilience plan. - Resilience of the aqueduct service: development of predictive algorithms to intercept the risk of drought and adoption of new technologies to support the search for leaks.	Interventions in the area of resilience and adaptation to climate change, including: - Electricity service resilience: 38.3 km of network made compliant, equal to 56.7% of the overall electricity resilience plan. - Resilience of the aqueduct service: further consolidation and inclusion in corporate systems of the project for monitoring water sources. Leak detection was consolidated with predictive algorithms. (see p. 186)	9, 13	●
* ● Result achieved or in line with planning; ● Result with slight variance compared to planning; ● Result with significant variance compared to planning.			

What we will do	SDGs
Innovation and digitalisation	
IT security: increase the Group's cyber security in 2022 through the evolution of processes, of instruments, and of company policies, and through increased monitoring activities and improvements in technological instruments and procedures.	-
43% of customers using online billing and 41% of customers using online services by 2026, Group-wide (34.5% and 29.4% in 2022, respectively).	11, 12, 17

What we will do	SDGs
Continue developing initiatives within the two main areas of innovation: environmental transition and digital transformation, thanks to new internal figures (innovation promoters). Define, develop, and report initiatives using the Corporate Digital Responsibility framework, thanks to the continuation of dedicated formation.	8, 9, 11, 12
Economic development and social inclusion	
Supplier selection: continue to promote the employment of disadvantaged people in waste management services.	8
Continue to provide instalment payment for bills and other voluntary facilities to support customers facing financial hardship. Invite other municipalities to sign a protocol to prevent the suspension of supply.	17
Job creation and development of new skills	
Continue to apply the social clause to protect employment in contracts for emergency services on networks and services relating to customer management (except for insourcing situations).	8
Direct training interventions towards the development of emerging roles and skills that concern the digital transformation (Corporate Digital Responsibility, business intelligence, and increased use of Digital Workplace instruments) and the environmental and energy transition. 65% of the population that will achieve digital proficiency (meaning full control of "digital soft skills") by 2026, 90% by 2030. >50% of the population achieve circular economy and energy transition proficiency (environmental and energy transition skills).	4,8
Continue to raise awareness on the enhancement of diversity and inclusion through events and initiatives (focus on inclusive language and issues related to the integration of private life and working life). Consolidate the Hera Group's ranking in leading diversity stock indexes.	5
Resilience and adaptation	
Resilience and adaptation to climate change: - Electricity service resilience: 54.8 km of network made compliant in 2023, equal to 81% of the overall electricity resilience plan (57% by 2022). - Water service resilience: numerous interventions set out in the 2026 business plan in the Triveneto and Emilia-Romagna areas to mitigate the risk of drought (aqueduct interconnections, upgrading of catchments and supply lines, new wells and tanks). 70% of district-based network by 2026 and predictive algorithms to reduce dispersions.	9, 13

4.02 Innovation and digitalisation

Innovation for the Hera Group

The term **innovation** is traditionally used to identify a process that turns an idea into a good or service that has a value. In addition, innovation must be repeatable at an affordable cost and must meet specific needs. Innovating does not mean inventing, nor planning, but rather seeking, perceiving, discovering, making progress, improving and knowing how to gain value in the present and future contexts.

The two main **innovation areas** within the Hera Group, in line with its business plan and the renewed relationship between environmental transition and digital transformation, can be summarised as follows:

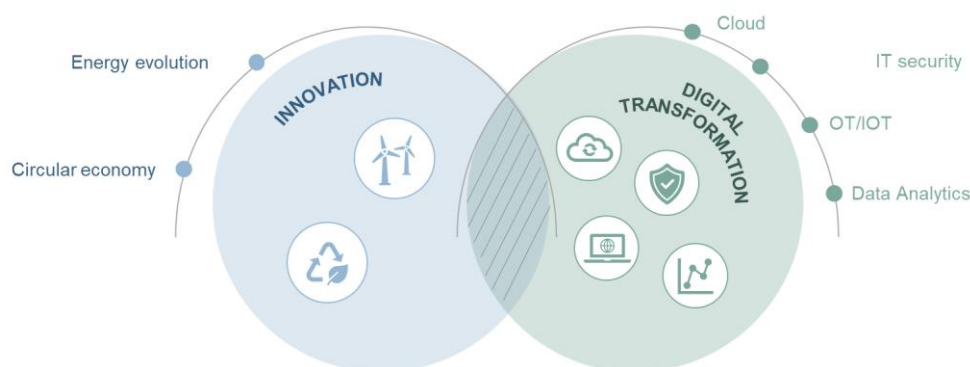


environmental transition aimed at shifting towards the use of more efficient and renewable energy sources and to the optimisation of materials, and maximising the recovery of waste and scrap;



digital transformation aimed at the implementation of new technologies for the digitalisation, automation, and flexibility of processes, and the enhancement and efficient use of data.

At Hera, **environmental transition** and **digital transformation** are two areas with elements that intersect without fully overlapping.



The last few years have seen strategic changes in the European landscape, linked to a multitude of factors: environmental, health, economic and geopolitical, with important **impact in the energy sector**. All of these events highlighted the need for the Group to forcefully **undertake new lines of growth in the environmental transition sector**, trying to implement projects that can intercept both new market trends and new financing opportunities deriving from the National Recovery and Resilience Plan.

For this reason, as early as 2022 it was decided to reorganize innovation by linking it more closely to **sustainability**, redefining the objectives of the Development function of the **Central Innovation Department**, which consequently acquired the name of **Environmental Transition**, determining an orientation towards projects more aimed at combining innovation and sustainability and a change in the approach to innovation.

The **culture of innovation is sufficiently widespread within the Group** to aim for a more evolved model of innovation, in which incremental innovation projects (those that see an evolution of the existing business) are **developed directly at the business unit level**, aligning them with the company's innovation strategy, while the revamped Environmental Transition function focuses on the development of radical projects, currently outside the current lines of business. This requires a different management of innovation, aligned with corporate strategies through the development of an innovation strategy which in turn will integrate with the innovation strategies of the individual business units.

New figures have been identified within the business units ("innovation promoters") with the task of establishing a point of reference for incremental innovation activities and projects, for the development

of the culture of innovation and for supporting the definition of the innovation strategies of the business units themselves. A special annual meeting is scheduled between the innovation promoters and the Environmental Transition function for the sharing and presentation of objectives and projects, so as to align with the Group's innovation strategy and to aim at achieving the macro-objectives of sustainability.

To encourage and boost innovation in its businesses, the Group has also launched **social innovation initiatives**, involving internal and external stakeholders through HeraLAB (see the paragraph Dialogue with our stakeholders in the chapter "Governance and creating value").

Investments in innovation [203-1]

In 2022, the Hera Group invested **over 102 million euro** in innovation and digitalisation (+24.8% compared to 2021), a figure that is part of the total investments **aimed at the creation of shared value** (see the section on Shared Value in the "Sustainability Strategy and Shared Value" chapter).

Corporate Digital Responsibility

In 2020, the Hera Group launched an internal reflection on the concept of **Corporate digital responsibility**, questioning what declination it could have with respect to the Group's activities and what approach to adopt accordingly.

As defined by Michael Wade in his 2020 article "Corporate responsibility in the digital era" on the MIT Sloan review, the term Corporate digital responsibility refers to a set of **practices and behaviours** that help an organization **use digital data and technologies** in an **ethical and responsible** manner in the **social, environmental, economic and technological** dimensions. These turn out to be important keys to understanding a unified analysis framework to address sustainability and digitalisation in a coherent and complementary way, with the possibility to anticipate and reduce future risks and **seize the multiple synergistic opportunities of the two trends**, laying the foundations for a new integrated reporting and responsible project development system.

The dimensions of Corporate digital responsibility find a declination consistent with the activities carried out by the Group in detail topics, each of which is able to identify risks to mitigate and opportunities to seize.

THE FOUR FACTORS IN CORPORATE DIGITAL RESPONSIBILITY FOR THE HERA GROUP

Factor	Social	Environmental	Economic	Technological
	 The company's relationship with people and society	 The connection between digital technologies and the physical environment	 Responsible management of the economic impacts of digital technologies	 Responsible creation of technologies

What it consists of

- Ensuring **data privacy** for customers, workers, and providers
- Promoting **digital inclusion** and moving past the **digital divide** for employees, residents, and customers
- Ensuring **health and safety** for workers, citizens, and customers thanks to digital technology
- Ensuring **recycling and responsible management** of products at the end of their working life
- Developing digital innovation solutions to **support the environmental transition** of the Company as well as of residents and customers
- Using **carbon neutral energy** (from renewable sources and/or high-efficiency gas systems with compensatory actions) for services and digital technologies
- Responsibly managing impacts on employment related to new digital technologies
- **Sharing** with stakeholders the **benefits** obtained thanks to the **efficiency** processes given by digital innovation
- Ensuring IT security and responsible use of technologies

In order to ensure a greater understanding of the framework and to thoroughly evaluate the detailed issues described above, Hera Group has developed **guiding questions** to support the analysis and grasp the different facets of the four dimensions.

So far, the introduction of the framework within the Group has had the main objective of **reporting**, that is, analysis and description in the sustainability report of how the digital innovation projects and activities already started and/or concluded respond to the four dimensions, and what their impacts on them are. As a result, also thanks to the **development of a specific new training course** on these topics, the new framework may also **respond to strategic objectives**, providing support for the definition of new projects in the digital transformation field, finding application in the ex-ante evaluation of projects, in order to analyse social, economic, environmental and technological risks that could arise from these activities if not properly managed, and transform them into opportunities and benefits. With the new Corporate Digital Responsibility, the Group acquires a cutting-edge tool that **responds in a proactive and integrated manner to the challenges arising from digitalisation and innovation**, consciously engaging in the development of a responsible digital transformation.

In 2022, a training course was designed and launched that involved the entire **company population** with a decision game to convey awareness of the impacts of digital transformation. Furthermore, a specific training course was launched to explore the possibilities of applying the principles of Corporate digital responsibility in the design and evaluation phases of digital transformation projects and activities. 86 individuals were chosen, for a total of 10 hours of training per capita (860 in total).

Hera Group innovation initiatives

The main initiatives and the innovation areas to which they belong are listed below. Each project can relate to several innovation areas: the table shows the symbols of the different innovation areas in which the project is classified. There is also an initial analysis of the initiatives with the Corporate Digital Responsibility framework.

Main initiatives	Innovation areas		CDR dimensions			
New generation electricity meters for business offers						
Dashboard for environmental monitoring and smart service delivery						
Consumption Log: advanced analytics to improve the customer experience (see the dedicated case study)						

Main initiatives	Innovation areas		CDR dimensions			
Green loyalty: incentives to sustainable behaviours						
4.0 public lighting with AI						
NexMeter: 4.0 meter with advanced security functions						
Connectivity and infrastructure enhancement (see the dedicated paragraph "The role of Acantho")						
Resilient dashboard: water distribution networks more resilient to climate change (see the dedicated paragraph "Resilient aqueduct and water source management")						
Steam explosion bioenergy						
Energy Park						
Development of agrivoltaics						
Development of the hydrogen supply chain (see dedicated paragraph on "The development of hydrogen" and the "Hydrogen in Modena's gas distribution network")						
Data community: development of engagement initiatives (see dedicated paragraph "Development of new skills within the Hera Group" 180)						
The Group's data strategy						
Digital café						
Digital identity for everyone (see the dedicated case study)						
Forlì remote control technology hub						
Robotic & Intelligent Process Automation and artificial intelligence platforms for text recognition						
Salesforce: new CRM and multichannel inbound						
IT security (see dedicated paragraph "Cyber security" 156)						

New generation electricity meters for business offers

In 2022 the **Hera 2G** app was launched, allowing customers equipped with **new generation meters** to monitor the trend of their gas and electricity consumption with greater granularity (monthly, weekly, daily and hourly). Continuous monitoring allows customers to understand their consumption habits and pick up on any savings opportunities, even receiving daily information on the cheapest hours of the following day.

The availability of metering data with **hourly or daily granularity** and the parallel development of new technologies, supported by cloud-based architectures capable of processing large quantities of data, favour a paradigm shift in metering management and allow us to provide customers with **offers and services based on their actual consumption data**, enabling a new frontier in the relationship between customers and supplier: the daily interaction between customers and consumption, and between customers and energy supply.

Corporate Digital Responsibility

Social



Through the services of the Hera 2G app, customers can effectively understand the environmental and economic effects of their consumption habits and act towards reducing waste.

Corporate Digital Responsibility

Environmental		Consumption monitoring with an hourly level of granularity supports customers in reducing their energy consumption.
Economic		The Hera 2G app's services allows customers modulate their consumption in the lower cost time slots with a consequent reduction in spending.
Technological		Cloud technologies support the processing of large amounts of data, including hourly consumption data that can be made available to customers for timely monitoring of their consumption habits

Dashboard for environmental monitoring and smart service delivery

PUNTONet is a **dashboard for analysing and monitoring indicators and services**, designed and created for municipal administrations, institutions, universities, and companies that aim to achieve the **sustainability objectives** of the 2030 UN Agenda.

The platform can be **modulated according to needs** through the activation of different services, including: the **Sustainability Passport**, dedicated to monitoring environmental, social and economic indicators; **Social sentiment analysis**, which allows a real-time report of public interactions that take place on the web (newspapers, social networks, blogs, forums, etc.); **Internet of Things sensors** for monitoring environmental pollution, vehicular traffic or other smart services; **reports** deriving from apps available to the citizen or from the Municipal Police.

Six dashboards have been released in 2022, each one for different organisations:

- **Metropolitan City of Bologna:** four PUNTONet Board dashboards were supplied through the Acantho company, three dedicated to the Municipalities of Bologna, Imola, and Granarolo, and one intended for the main body for monitoring the three municipal areas. The Sustainability Passport has been activated within the dashboards, with KPIs selected in collaboration with ASviS (Italian Alliance for Sustainable Development) and Urban@it (National Centre for Urban Policies Studies), Social sentiment analysis, and environmental monitoring performed by ten Internet of Things control units.
- **University of Bologna:** two dashboards have been provided, one created for the Cesena Campus and one for the Bologna Campus, both dedicated to monitoring sustainability indicators through the Sustainability Passport service. Furthermore, the dashboards include the social sentiment analysis service and the **monitoring of internal and external air quality** through Internet of Things control units developed by the University itself.
- **Municipality of Ferrara:** as part of the **Air Break** project, activated thanks to the European call for Urban Innovative Actions, among the various projects in the environmental field and led by Hera, the dashboard named **Airbreakboard** was released. This allows the Municipal Administration of Ferrara to monitor the environment in real time through different services, such as:
 - Forecasting models: a tool that allows forecasts of the major atmospheric pollutants every day for the next three days, both on a regional (1 km) and an urban (200 m) scale;
 - Social sentiment analysis: in this case with a focus on the public issues of air pollution and the Urban Innovative Actions tender;
 - PM10 from satellite: an experimental service which, thanks to the processing of Open-Source satellite images and with an algorithm specifically calibrated on the data deriving from Internet of Things control units located in the area, allows the concentration of PM10 to be plotted on the map with a resolution of 10 meters. The processed images are obtained every time the satellite passes over the reference area provided that the cloud cover occupies less than 10% of the image;
 - Smart hubs: section dedicated to the new shelters that will be installed in the municipality of Ferrara during 2023, to encourage sustainable mobility and represent the use of electric recharges for bicycles and electric scooters and the related energy consumed.

In addition to these six releases, Hera maintained the PUNTONet Board dashboard for the **Municipality of Cesena**, integrating it with the following initiatives:

- **Next Generation Valle del Savio:** a dashboard has been created monitoring resources (one's own or deriving from the National Recovery and Resilience Plan and public tenders) for new projects throughout the Valle del Savio area. The report is available online to all residents.

- **PUNTONet H₂O**: visualization of water consumption and environmental quality data deriving from five totems conceived and designed by Hera. Their installation has begun in December 2022 and will be completed in the early months of 2023. These allow the supply of public and ultra-filtered water (both natural and sparkling), the recharging of electronic devices and also electric wheelchairs, environmental monitoring through Internet of Things control units, and an LED screen set up for the sharing of information content by the Administration.

Thanks to these developments, Hera has been able to consolidate its skills in the smart city and sustainability fields, which can certainly be exploited for future initiatives and specific projects and to implement tools for data collection, display, and analysis of information.

Corporate Digital Responsibility

Environmental		Real-time monitoring of environmental indicators and implementation of strategies to achieve reference targets.
Economic		Identification of strategic projects for sustainable development through the collection and analysis of social, environmental and economic data and the assessment of the qualitative state of the local area.
Technological		Use of cloud solutions for data collection and processing, and Internet of Things sensors.

Green loyalty: incentives to sustainable behaviours

The **Green Loyalty** initiative uses digital technology to reconcile its diffusion with the sustainability goals set out in the UN 2030 Agenda. The project aims to be a self-consistent and open system in which to enhance the use of the service through **actions of involvement**, encouraging customers to **actively participate** with common objectives.

The initiative has various objectives which translate into specific actions:

- encouraging users' digital and sustainable behaviours and actions;
- helping to lower the environmental impact of consumers, for example by stimulating savings and consumption control;
- creating involvement through a digital platform that provides incentives for the achievement of individual and collective results with games and entertainment mechanisms;
- creating new partnerships and enhancing existing ones to spread the benefits on the territories.

Fruition is free for customers and residents and, depending on the active contracts and territorial affiliation, dedicated activities, actions, and missions will be developed.

In this context, a technological platform has been created that **rewards one's sustainable behaviour** through the disbursement of small economic incentives on a digital wallet. The incentives received can be used as discount vouchers for affiliated products and services, **stimulating sustainable purchasing behaviour** and feeding an increasingly rich offer circuit. The platform has been developed using **blockchain** technology to ensure the best security, traceability, and immutability requirements of the managed operations.

In particular, in 2022 the "**Smart Sustainable Community**" initiative developed within the Bologna BI-REX Competence Centre was completed, with the issuing of the first call for tenders for the selection of technological innovation projects. The project allowed to conduct a two-month experiment that was not just demonstrative, but aimed to achieve the definition of a **complete and qualified technological system**. The project has made it possible to create an actual smart community with a cluster of real users, combining in particular two distinct sustainable loyalty circuits, those of Hera Comm and those of Camst. The **sustainable behaviours encouraged** by the project partners were: sending the gas self-reading, switching to the digital bill, saving on gas and electricity compared to the previous year, consulting one's own consumption through the Consumption Log, and finally the purchase of dishes suitably prepared using raw materials with low greenhouse gas emissions.

A second use of the blockchain platform completed in 2022 was applied in the Municipality of Cesena with the "**IoSonoCesena – Cashback**" initiative which allowed the creation of a circuit for the promotion of local commerce. Each purchase from merchants affiliated to the circuit assigned an incentive in the form of a **digital token**, the sum of which was convertible into a discount coupon to be used for subsequent purchases.

Ultimately, with the experiences gained from these implementations, evaluating the state of the art of technological solutions and the main market trends relating to sustainability, a new model called "**Green**

Wallet” will be developed in 2023: a platform that the municipal administrations will be able to adopt within the framework of carbon neutrality.

The first sustainable behaviour that will be examined will be related to the purchase of renewable energy or alternatively to the purchase of shares of photovoltaic panels of the Energy Park, a renewable energy production park in one's city. In doing so, a citizen will be able to guarantee shares of renewable energy at a defined price and reduce the costs of the electricity bill. It will also be possible to monitor the avoided greenhouse gas emissions and offset any residual ones through the purchase of carbon credits in a dedicated market provided by leading companies in the sector.

Corporate Digital Responsibility

Social		Guarantee of privacy requirements, digital inclusion and transparency of processes towards customers.
Environmental		Creation of a community for the aggregation of products and services in line with the sustainable development objectives, helping reduce the environmental footprint of customers and the local area.
Economic		Creation of an economic incentive for the purchase of products and services in line with the sustainable development objectives.
Technological		Use of innovative solutions such as blockchain for a secure tracking of the supply chain of sustainable behaviour.

4.0 public lighting with AI

Hera Luce carries out various projects for the digital transformation of the public lighting service.

In 2022 it consolidated the **predictive maintenance** project of the state of degradation and corrosion of public lighting pylons, and launched the pilot project for assessing the state of low voltage switchboards.

Intelligent devices have thus been installed that are capable of providing increasing amounts of information about the position, condition, and availability of assets, such as appliances and ignition and control panels. The use of this data (**big data analytics**) will be a lever in the migration process towards a **circular business model** as it allows to **anticipate** failures and put the company in a position to plan maintenance operations in advance while containing unexpected costs. The increase in direct costs deriving from a greater number of minor interventions is in this way compensated by the **minimization of the risks of high danger** and by a higher qualitative state of the plants, returning **more valuable infrastructures** to the area served. Furthermore, in this way it will be possible to **maximise the use** of components and networks, **guaranteeing their correct functioning** even in the event of external stresses that cannot be foreseen in the design phase.

At the beginning of 2023, 141 municipalities were included in the system for the predictive maintenance of the state of degradation and corrosion of supports.

Another activity concerns so-called **adaptive lighting**: this is a pilot project for the implementation of intelligent sensors distributed locally, capable of constantly monitoring the flow of traffic and therefore **modulating the intensity of the lighting** on the basis of real conditions, with obvious **benefits on energy consumption** and at the same time keeping the degree of safety unchanged.

A first test was carried out in the Cesena area, with the installation of 178 remote controlled point-to-point light points on four sample systems. The light points are regulated using **algorithms and traffic and luminance sensors** (with radar technologies or cameras with integrated AI). Passage sensors have also been installed on cycle/pedestrian paths: the lighting level rises as pedestrians or bicycles pass, remaining at lower levels during periods in which no movements are detected.

The installed technology has proven to be mature, guaranteeing a **good level of reliability despite the greater complexity** compared to traditional systems. The energy analysis has found that, with standard reduction profiles, savings between 15 and 30% can be achieved, while **with adaptive lighting savings are between 40 and 50%**, at the same time guaranteeing a safe and sustainable environment for the community.

Corporate Digital Responsibility

Environmental		Ensuring recycling and responsible management of products at the end of their working life.

Corporate Digital Responsibility

		Optimization of energy consumption, which can be modulated on the basis of the actual surrounding conditions, with benefits also in terms of light pollution.
Economic		Sharing with stakeholders the benefits obtained thanks to the efficiency processes given by digital innovation.

NexMeter: the 4.0 gas meter with advanced safety features

NexMeter is the **4.0 gas meter** created by Hera Group. It guarantees users maximum safety and allows **real-time detection of consumption**, improving the environmental and economic performance of traditional meters.

It was presented in Paris in the prestigious showcase of the European Utility Week, the most important trade fair in the sector, and is being installed for users served by Inrete Distribuzione Energia (in Emilia-Romagna) and AcegasApsAmga (in the Triveneto area). The first to adopt the new device were the residents of Ferrara, followed by those of Modena and Udine.

NexMeter is much more than a gas meter: it is an **intelligent device** with characteristics of absolute precision thanks to algorithms, sensors, and ultrasounds. It is therefore able to offer advanced safety functions: the special monitoring and warning tools with which it is equipped allow in fact to prevent accidents in many conditions, providing greater protection to buildings and residents, in a similar way to the functioning of electrical "lifesaving" devices.

It can monitor the pressure and flow conditions of the supply system and the network in real time, immediately signalling **any possible anomalies and irregularities** (small latent leaks, large and immediate leaks), and interrupting the supply, immediately securing the system. Once corrective action has been taken it can perform a test to check that the user system works properly, to promptly resume the service. Moreover, it is able to detect earthquakes in real time, and stop the gas supply, taking action to ensure greater safety. It is already set up for **biomethane** and the so-called **blended gases**, i.e. mixtures of methane and hydrogen and, again with a view to **circularity**, it will soon be produced in **recycled plastic**.

The benefits of using this innovative device are in the following respects:

- enhanced **security and reduction of incidents**, including those caused by faults in the network downstream of the meter and the users' equipment;
- resident protection against earthquake risks, mitigating the risks of fire and explosion through immediate, targeted and timely cut-off of damaged gas user systems;
- higher **service quality**, thanks to network and supply pressure measurement with possible correction of measured volumes also based on pressure values;
- greater **protection of the environment**, by promoting the smart and rational use of energy and resources and reducing greenhouse gas emissions thanks to the possibility of detecting even micro-leaks.

In 2022, **180 thousand meters** were installed in the areas of Ferrara, Modena, and Udine; with the expectation to continue towards 270 thousand installations in 2023 and to reach a **final objective of 300 thousand** installations by 2026, thanks to which an estimated **3500 tons** of greenhouse gases will be saved **annually**.

Corporate Digital Responsibility

Social		Greater level of safety for residents in the gas system, thanks to advanced meter functions capable of detecting anomalies immediately and securing the system.
Environmental		Reduction of greenhouse gas emissions thanks to real-time monitoring technology that enables the detection of leaks and micro-leaks and rapid intervention. The use of recycled plastic to manufacture the meter incorporates circularity into the creation of the product.
Technological		The 4.0 meter's advanced technology supports the proper and enhanced safety performance of the gas service, contributing to the resilience of the Group's service area.

Steam explosion bioenergy

The **Life Steam** project aims to develop an innovative prototype for the **pre-treatment of grass clippings and pruning** in order to transform them into a product suitable for the production of biomethane.

This innovative technology uses the **steam explosion process**: it consists of the heat treatment of pruning, using steam to break the links between lignin, cellulose, and hemicellulose, making the material suitable for anaerobic digestion. This way, biogas can also be produced from pruning, a waste material that is collected and managed by the Group.

In 2022, the final design and the authorization processes for carrying out the trials at the Herambiente composting plant in Ozzano dell'Emilia (Bo) were completed. Its construction will be completed within the first half of 2023, and it will then be tested in the second half of the year for a duration of approximately six months. Once fully operational, it will be able to process up to 1.7 tons of lignocellulosic material every hour. The treated material will then be transported to the Herambiente anaerobic digestion plant in Voltana (Ra) to evaluate its capacity to **produce biogas**.

The innovative process of valorisation of waste lignocellulose for the production of biomethane proposed by the project will contribute to the achievement of the objectives of the most important national and European strategies in the field of energy transition and circular economy, helping to reduce the dependence on natural gas of fossil origin coming from abroad.

Energy park

The **Energy Park** is an environmentally conscious infrastructure made up of various functional units with the primary objective of reducing the impacts of cities. The energy parks are based on five pillars: production of local renewable energy; protection of biodiversity; optimization of agricultural production; green communities; urban park for residents. **This model, patented by the Hera Group**, includes cutting-edge technologies such as **agrivoltaics** (photovoltaic panels raised off the ground so as not to subtract land for cultivation) and **precision agriculture** (use of digital techniques and tools to monitor and optimize agricultural production processes). Citizens can take an active role in the initiative by joining the Green Community, a platform that allows them to invest directly in the construction of the plant.

Hera has identified a large area near the urban centre of **Faenza** for the creation of this type of integrated solution. Here the technological systems of the Energy Park will be **integrated into the local area** thanks to green spaces made up of woods and urban parks open to residents. Within the area there is a centre where different types of activities aimed at the public already take place today, and which will be further enhanced as part of the initiative. The Energy Park will also be able to provide for the construction of a system for **collecting rainwater** for the irrigation of the land and possibly the recharge of the aquifers, helping the city to defend itself against drought phenomena.

In parallel with the initiative in Faenza, Hera is building an **agrivoltaic plant** in **Cesena** together with Orogel: the aim of the project will be to supply renewable energy to the industrial plant to support the decarbonisation of the company's consumption, while simultaneously testing the integration of agrivoltaic technology with different types of crops.

The authorization phases are expected to start in 2023 and construction will start by 2024.

Development of agrivoltaics

As part of the decarbonisation strategy, Hera has identified **agrivoltaic technology** as an effective solution for the production of renewable electricity which at the same time guarantees the **maintenance of agricultural use** of the land. In fact, agrivoltaics consist in the creation of a structure equipped with photovoltaic panels placed at a height of at least four meters from the ground, thus allowing agricultural vehicles to be able to carry out their activities. The space occupied on the ground by the metal supports and tie rods remains less than 10% of the entire area covered by the intervention.

This area represents a current of national development, and the related initiatives may eventually fall within the scope of the interventions that can be financed by the National Recovery and Resilience Plan (Pnrr), which provides financial resources of 1.1 billion euro to install 1.04 GW of agrivoltaic plants.

The described model can be adopted in various contexts. These include:

- municipal administrations, for the construction of large renewable energy parks, environmentally friendly infrastructures to support environmental protection and personal services;
- companies, also in partnership with owners of land adjacent to the production site, to self-produce shares of renewable energy to replace traditional fossil sources;

- private individuals, such as farmers, who want to protect their business, cope with climate change (with particular reference to water scarcity and high solar radiation) and experiment with crop yields underneath the agrivoltaic plant itself.

The first agrivoltaic application to be implemented by the Hera Group will take place in collaboration with Orogel, the leading company in Italy in the frozen food market. This partnership will allow the company to self-consume the renewable energy produced by the plant and to preserve the main agricultural activity, and Hera to develop new know-how in the energy sector.

The Group's data strategy

The continuous digitization work and the relative growth of information push the Hera Group to adopt a strategy for enhancing them. The goal of the **data strategy** is to create value from all this information, supporting the group's transition towards a true data-driven company.

The strategy undertaken is based on data mesh principles, a paradigm that takes into consideration both the organisational part and the more technological part (platform and tools): an innovative vision of data, assimilated to products in an enlarged marketplace. In this context, the reference **guidelines have been formalised** for each business unit and for the technological partners who support the development of "data and analytics" projects. These guidelines are where the initiatives will be based, and allow information to be circulated so that they become quality products that can be reused by the entire Group. It is therefore a project that enables the development of data analytics projects and that produces practical benefits, always from a data-driven perspective.

Corporate Digital Responsibility

Technological



Definition of guidelines regarding secure access to data and to their methods of consumption, avoiding costly and dangerous redundancies.

Digital café

As part of the Digital workplace and in order to **guide users in the pervasive use of new digital solutions** based on Microsoft Power platform technology, the **Digital café** was established in May 2021. The objective of the Digital café is declined through the following activities:

- "on demand" support for users who need guidance during the autonomous creation of digital solutions;
- implementation of projects through agile methodologies aimed at digitising business processes through the solutions available within the Power platform;
- guidance through the standard processes of the Information Systems Department of digitization opportunities that cannot be achieved exclusively through the engagement of the Digital café.

The Digital café therefore aims to be an **engine of innovation** in the digital transformation process undertaken by the Group, adopting a model that satisfies the need for agility.

Following the promotion activities of the Digital Bar, carried out in collaboration with the Personnel and Organization Head Office Department, also thanks to the proven ability of the new Competence Centre Process Automation structure to create digital solutions quickly and with certain costs, the path of adoption within the Hera Group has undergone a significant increase. During 2022, 59 potential initiatives were in fact implemented, evaluated and addressed, which gave rise to the launch or completion of **42 projects**.

The goal for 2023 is to **further increase the number of projects** that will be managed through the Digital café, continuing to evolve the Group's digital skills and introducing additional tools capable of making company processes more efficient. During the year, the operating model of the Digital café itself is expected to be completed by introducing application monitoring and management tools through the Microsoft Toolkit.

Corporate Digital Responsibility

Social



Promotion of digital inclusion and overcoming the digital divide for employees through awareness-raising and training initiatives on tools capable of guiding the digitisation of company processes through the support of a dedicated centre of expertise.

Environmental



Reduction of the use of paper supports through the digitization of processes.

Corporate Digital Responsibility

Economic		More efficient and effective use of personnel thanks to the introduction of digital tools: saving resources in terms of process efficiency translates into benefits of economic savings.
Technological		Increase in the quality and security of the data managed thanks to the solutions implemented within the Power platform (going from unstructured and unsecured sources and databases to more solid, robust and secure architectures). Guarantee of responsible use of the new technologies introduced thanks to a competence centre dedicated to overseeing the solutions created.

Forlì remote control technology hub

The **Forlì remote control centre** is a multi-specialised centre, unique in Italy and at the forefront in Europe: **a remote control, remote management and 24 hour technical emergency call centre** room of almost 400 square metres, with a giant screen of 60 m², a 3D system to represent the main systems, 160 monitors, 60 stations, a team of 80 operators, double fibre-optic communication lines, an independent fire-fighting system, and a set of controls that make the whole context extremely resilient and reliable, guaranteeing its management in business continuity in any condition.

The Centre is divided into two functional areas that cooperate synergistically:

- **Telecontrol:** remote controls, monitoring, automation and continuous control, in real time, of the Hera Group's **aqueduct, sewerage, gas distribution and remote heating** networks, which extend across **all the managed territories** of Emilia-Romagna, three Tuscan municipalities, Marche, and Triveneto.
- **Technical call centre:** management of all emergency calls in the area (over 530,000 per year) with very high performance ensured by a total of **330 incoming lines** (between primary and backup) segmented by service so as to avoid congestion on essential services. An average of 147,000 work orders are generated per year, geo-referenced and monitored in their progress. In addition to services in the water, gas, and district heating sectors, the centre handles calls for the public lighting and traffic light service, environmental services, and the electric mobility service.

FACILITIES CONNECTED TO THE FORLÌ REMOTE CONTROL HUB

Amount	2020	2021	2022
Total connected facilities	7.146	7.932	8.949

The hub is constantly growing both in terms of quality and in terms of size: by 2022 a total of **8,949 connected plants** had been reached (+1,017 compared to 2021), with **28 million pieces of information acquired per day** so as to feed a set of **decision support** tools for the activities of the operating structures. The goal for 2026 is to reach 12.3 thousand plants connected to remote control. In this continuous growth, the Centre assists the various Group structures by providing them with tools to help them make decisions. For example: for Hera Trading, for example, the hub carries out the energy balancing management service, integrated with the Terna site for the energy dispatching service market; for Hera Comm it manages the electric mobility service for customer recharging; for Uniflotte, it manages the development of the remote control of waste collection containers

Among the main innovative development and evolution projects implemented in 2022, in the field of remote control, the following stand out:

- **Integration of the Marche Multiservizi remote control:** in 2022 all the activities were developed to integrate all the Marche Multiservizi plants into the SCADA of Forlì, creating a specifically dedicated technological and connectivity architecture. The dedicated infrastructure activities, the installation of PVSS emergency servers and Middleware at the Pesaro site, and the cabling, connections, integrations, tests and inspections necessary to ensure go-live according to the new configuration have therefore been carried out. In 2022, all the gas systems have been completed, which have also been taken over for management in the room, and the first integrated water service systems have been built. The project will continue in 2023.
- **Cybersecurity operation technology:** in 2022 the overall project was developed internally, including all the control, monitoring, and structural actions where the centre will represent a

reference for the business units and companies in the operation technology context. The project consists in the development of a **centralized corporate solution** architecture for the remoting, programming, management of field devices, centralized SW PLC repository (field device intelligence) and accesses in cyber security in the O.T. field. The project, in addition to having satisfied the primary objective of cybersecurity with an approach based on intrinsic security, has created the basis for enabling new “man-machine” networks by redesigning work processes and organizations. Also in 2022, an anti-ransomware system was implemented for emergency fluid remote control with functions essential to the process, permanently disconnected from the corporate network and activated in the event of a cyber-attack.

- **Container control room:** the project dedicated to Uniflotte also continued in 2022 with the evolution and rewriting of the firmware with the complete set of internal skills capable of incorporating the improvement and growth of electronics. 2022 also saw the creation of new platforms for monitoring maintenance (alarms and signals) as well as the remote control of new waste collection devices.
- **Monitoring of sewage lifts and pump maintenance:** a specific tool was created which is a decision support system for the operating technicians and users of the Hera Group PVSS remote control system who manage wastewater treatment plants. Specifically, the objective is to identify anomalies relating to the sewage lifting stations through the use of statistical algorithms which automatically compare, for each plant, the operating status (level and pumps) of a reference day on the basis to the average functioning that the plant has had in the previous weeks. The choice of the algorithms used was the result of analyses carried out in collaboration with the operational management and which led to the interception of anomalous behaviours which have, in past, created real problems for the plants and the surrounding environment. The tool is effective in verifying anomalous situations in standard operating conditions.
- **Smart remote heating:** this is a data-driven project which makes structured and functional platforms available to the remote heating structure which allow for optimization of the processes of the remote heating network/plant system. To support the decisions, synoptics have been created with process algorithms and KPIs with the display of the operating parameters of the substations and network with predictive elements for exchanger maintenance. The tool is completed by the addition of a reporting tool of historical, commercial and operational data to increase the levels of analysis.

While in the technical call centre field:

- **Electricity outage signalling project:** carried out in collaboration with the Energy Management structure, this allows to monitor all the electricity outages relating to all the plants managed within the perimeter of the Pole, both remote controlled and not (for example, even equipped ecological stations). The technical solution aims to replace operational actions with a fully automated process.
- **Management of the public lighting switchboard service of Marche Multiservizi:** at the conclusion of a process that had seen the insourcing of the Hera Luce switchboard service, evolved with the new Consip contract, the management of the entire public lighting service and traffic lights has also been integrated in the Marche Multiservizi basin.
- **«Technical Wiki System» project:** the goal has been to create, during 2022, an innovative IT tool capable of “engineering” skills. This tool ensures the processes of continuous learning and knowledge sedimentation through the transfer of skills and professionalism in the continuity of the maintenance of quality standards, with maximization of rules, available documents and online support procedures for personnel. Management software was developed for daily operations, used as a repository of switchboard knowledge aimed at prompt and correct response to customers, remote control knowledge aimed at plant management, and operational knowledge related to network management and communication with operational colleagues. As an operational instrument, the Wiki is presented as the combination of several tools:
 - a CCT News portal which collects all the information, documentation, and procedures (“virtual library”), divided by area with search fields to facilitate usability, suitable for carrying out room activities, whether they are telephone operator or remote control of the systems. The important news is always on the front line and the use of information will be quick and intuitive.
 - a module section that will provide newcomers with a defined and uniform training path, for new entries in the technical call centre and remote control and also for training resumptions with greater focus and insights for support and consolidation of knowledge.
 - A test section where users can put their knowledge to the test and understand which topics they need to learn more about

- a section where suggestions can be made, as well as requests to insert documents that have a connection with the work of the remote-control pole and technical call centre and which, according to each operator according to their sensitivity, can be useful for everyone.

Corporate Digital Responsibility

Social		Increase in the level of safety for customers and workers thanks to the constant monitoring of the Group's network systems, achieved through the integrated remote-control structure and emergency response support. The "Technical Wiki System" tool allows to help employees in continuously guaranteeing an easy and reliable response to the customer or citizen as a guarantee of the quality supplied, providing them with an increasingly less subjective and more structured service of the highest quality.
Environmental		Monitoring, identification and intervention in the event of leaks (gas and water networks), to guarantee lower emissions into the atmosphere and responsible management of resources. The "Monitoring of sewage lifting and pump maintenance" tool makes it possible to minimize disservices and intervention times with clear reverberations on the environmental quality of the discharges. The "Smart remote heating" tool allows to maximise energy savings and optimise the management of the remote heating network. The push towards the complete automation of processes (particularly in the integrated water service) leads to an ever-greater emphasis on the efficiency of the processes themselves. The further evolution of automation with AI algorithms brings forth further benefits in terms of energy efficiency but also of asset working life.
Technological		Development of cybersecurity systems with the introduction of dedicated figures and specific systems for monitoring the matter and coordination with the corporate structures involved. The technological remote-control solutions are used responsibly, to ensure the safety of the area in which the Group operates. The continuous increase in remote-controlled systems makes it possible to exploit all the enabling conditions of technology: use of data, development of new forms of man-machine interaction, availability of analytics and business intelligence solutions, and solutions capable of reducing the distance between the physical and digital worlds at the production process level.

Robotic & Intelligent Process Automation and artificial intelligence platforms for text recognition

At the end of 2019, the foundation of the **Robotic & Intelligent Process Automation platform** was completed, with the aim of **automating processes** that involve interaction activities with IT systems characterized by **high volumes, high effort or high levels of expected quality**.

The industrialisation of the platform for the digitalisation and robotisation of business processes, has given extremely satisfactory results in the **seven identified processes** (management of the DURC of suppliers, management of communications between vendors and energy distributors, management of the vendor's Order Entry process, management of "expense reports", management of service notices related to waste management services, management of work orders for the replacement of measurement equipment in the networks, virtual assistant for planning meetings and booking meeting rooms), both in terms of speeding up the process, and resulting efficiency, and reliability of the operations carried out.

The **positive results of the pilot initiatives** mentioned have allowed, over the last two years, the use of **digital automation** on the initially mapped processes in a progressively more extensive way. Furthermore, it was possible to extend these technologies to **six more new processes** (automation of the acquisition process of receivable invoices from the Ministry of Economy and Finance, automation of the accounting process of work packages for Inrete, integration with Anac and automation of the verification process of criminal records of suppliers, automatic management of waste during the contracting phase of new Hera Comm customers, automation of the invoice issuing process for Hera Comm value-added services, integration with the Revenue Agency for the automated acquisition of invoice liabilities present in the tax box).

By adding special **dashboards to monitor automated activities**, we can analyse the main causes of waste and act effectively on business processes, continuously optimising productivity and efficiency. These tools also effectively facilitate man-machine operation and extend the scope of application of processes that can be automated, thanks to their continuous technological development (semantic text interpretation engines, OCR management, etc.).

The results in terms of potential efficiency on a Group scale are certainly significant, also considering the technological development that is rapidly **expanding the scope of application of the platform** which has been created and is managed with agile methods from a competence centre perspective to support

all the Group's Business Units. The findings collected in 2020 and 2021 confirm the opportunities **for using the company's resources in more qualifying tasks**, enhancing the intellectual skills applied to the processes that generate the greatest value for the company.

After completing the analysis of the business processes that can potentially be re-engineered with a view to automation and digitization, a **multi-year plan** was defined for the **implementation of opportunities** that guarantee the achievement of the highest levels of efficiency among all the identified initiatives. This plan, which was launched in 2021, will also continue in 2022 and 2023.

As part of the adoption of artificial intelligence and natural language processes solutions, the first **text recognition** project was completed to activate device actions on the back-end systems (Inbound multi-channel in support of Hera Comm). This project has made it possible to create a corporate asset called LEO (Read-Elaborate-Organise). Various opportunities for extending LEO to other processes are envisaged over the course of the Plan. During 2022, **the operation of the Inbound platform saw the amounts of practices managed and addressed through the Intelligent Automation solution triple**, generating ever increasing efficiency margins. 2023 is the year in which it is hoped that these services will be extended to other group businesses that could obtain significant benefits from these services.

Corporate Digital Responsibility

Social		Digitalisation and automation of repetitive activities with a high impact in terms of time, with an improvement in the working conditions of workers, through the use of digital technologies.
Economic		Digitalisation of business processes through advanced IT solutions and greater efficiency of massive and highly manual processes with a beneficial impact on overall efficiency in regulated services as well. Involvement of employees in activities with greater added value.
Technological		Use of digital automation tools capable of guaranteeing data consistency and security.

Salesforce: new CRM and multichannel inbound

The objective of this initiative is to adopt a **new customer relationship management (Crm) platform** that pursues the centrality of the customer, ensuring a single view and end-to-end management.

The omnichannel nature at the basis of this new system allows for coherent management of moments of contact with the customer, through an **integrated path** on traditional and digital channels and a personalised customer experience. The new platform activates **personalized communications** and advanced tracking that accompany customers throughout the phases of their "life cycle" at Hera. It also drives front-end enhancement through a contextual knowledge management system to support the resolution of customer inquiries in a single point of contact.

The initiative is also supported by an **artificial intelligence model** to support the **automatic classification** of customer requests received by email from Hera Comm with the aim of progressively arriving at a **fully automated management** of the simplest procedures. The operators' use of the innovative tools integrated in the Crm system with an aim towards resolution on first contact allows to **reduce customer response times**.

The new system simplifies and automates some operational processes through flexible, rapid and integrated management of practices, making it possible to pursue the objective of operational excellence capable of creating an ever-improving relationship between the company, its customers, and the local area.

The new Crm platform has a multi-year rollout plan: the functions that are currently released support the management of marketing and communication campaigns towards customers, including those through social channels, retail sales on the free market, and the management end-to-end for a subset of customers.

Corporate Digital Responsibility

Economic		The new omnichannel platform makes it possible to reduce response times and manage cases in a rapid, flexible, and integrated manner.
Technological		Applied artificial intelligence providing customers with quick and customized support for answering their questions.

Digitalisation for our customers and for the local area

The role of Acantho

The **Acantho** telecommunications operator is Hera Group's **digital company**. For over 20 years it has been developing an ultra-broadband fibre optic network and, partially thanks to the integration with the main operators in the sector, it ensures complete nationwide coverage.

Focusing on its main assets (two data centres and over **238,000 km of proprietary fibre optics**) and on innovation, Acantho offers cutting-edge services and tools for the **competitiveness of small and large companies**.

Alongside the constant technological upgrade, Acantho combines five historical and essential values, central to medium-long term strategies and daily operations: **territoriality, flexibility, transparency, sustainability and innovation**.

Acantho provides information and communication services (ICT) for **individuals** and **companies**, developing its offer in four main areas:

- Data & voice communication: advanced voice services and solutions for data traffic, with high standards of security and performance;
- Hybrid multi-cloud: reliable, secure, easy to manage, and flexible cloud services thanks to the two data centres in Imola and Milan;
- Cyber & physical security: protection services against cyber-attacks and physical security aimed at preserving business continuity;
- Smart city: services for healthier and more sustainable cities, with innovative solutions integrated into the urban context.

Acantho coordinates the needs of Hera Group's companies and business units. For example, the **technological renewal and strengthening of the Hera Group network** continued in 2022, currently counting over 250 offices. In order to guarantee uniform and high-performance access to the Group's information systems, the connectivity services in four offices of the Hera Servizi Energia company and in about thirty customer branches in the EstEnergy area have been completely **harmonised** with company standards. With reference to the provisions of the Authority (ARERA resolution 540/2021), in 2022 Acantho has agreed upon and implemented FTTH (fibre to the home) connectivity for around twenty electrical substations of Inrete Distribuzione Energia and 4G connectivity for around thirty electrical substations of Inrete Distribuzione Energia and AcegasApsAmga.

To support the **migration to the Group's cloud services**, a dedicated and redundant 10 Gbps interconnection was created between the Microsoft Azure cloud and the on-premise environments available to the Information Systems Department of Hera Spa at the Acantho data centres. This interconnection complements a similar service already available for the Amazon Web Services cloud.

2022 also saw the creation of a new service called **OT** (operational technology) **probes**, dedicated to the logical security of remote-control networks (fluids, energy, environment) and deployed in seven significant points of the networks that oversee the operation of essential services for the local area (water, gas, electricity, urban hygiene, and waste disposal). The OT probes complement the similar IT probes already deployed in 2021.

During 2022, a plan for the reorganization and technological updating of the **telepresence systems** was launched and completed, consisting in the transition from the service based on Lifesize technology (89 meeting rooms) to the service based on Microsoft Teams Room technology (deployed in 65 meeting rooms in 37 Group offices). This step has undoubted advantages in terms of complete integration between the equipped rooms and the Teams application already widely used by corporate devices. During 2022, four Teams rooms already present in four offices in the EstEnergy area were also harmonised.

Other internal projects supported by Acantho are:

- Market: continuation of the **technological evolution of customer branches**, in particular in the territories in the Estegy field (Treviso, Vicenza, Rovigo, Venice, Varese, and Savona);
- Corporate services: strengthening of **physical safety of locations and production plants**;

- Digital newsstand: a service that allows to enjoy **newspapers and magazines in digital format**, with additional content research and sharing features; In 2022 this service was used by 48 users from 13 distinct units, belonging to four of the Group's companies.

In the market context and for business customers in particular, the connectivity services offered are based on fibre-optic technologies, radio links, and copper. In 2022 special attention was given to the extension of the offer for fibre optical connectivity over new areas and particularly on **"white areas"** (i.e. territories where there is no ultra-wide band connection from private operators); this is both as a "bundle" offer (on shelf for retail and business customers) and as a design solution specially made for the specific needs of business customers. The goal for the future is to increase customers nationwide by integrating the broadband infrastructure opportunities offered by other operators to allow also offering this service portfolio to customers where Acantho connectivity is not present.

Cost optimization has allowed a **review of the current monthly fees** for internet and voice calls, with a view towards increasing competitiveness on the market.

With its own fibre-optics, Acantho provides **ultra-wideband connectivity** (with connection speeds of up to ten gigabits per second) to **over 20,400 companies** in the business and institutional segment, out of the approximately 39 thousand counted in the areas where Acantho is present with its optical fibre, thus ensuring **coverage of 52%** of the companies surveyed (59% in 2021).

The evolution of services in 2022 has allowed to enhance the Acantho portfolio with a development of Amazon Web Services solutions, one of the cloud providers that is among other things most characterised for its high energy efficiency (3-4 times better than the average of US data centres).

The electricity requirement of the Imola data centre is satisfied with self -production for about 66%; the remaining fee is purchased from certified renewable sources (Go); The Siziano (PV) data centre works with 100% renewable energy with certified origin.

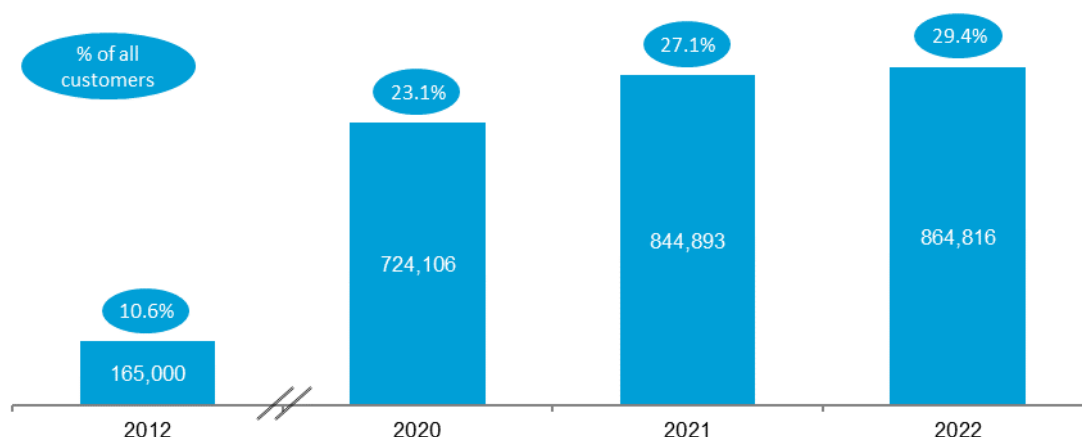
How does this initiative contribute to responsible digital transformation? The benefits we obtained in the Corporate digital responsibility dimensions

Social		Guaranteed quality of cloud services for customers and responsible and secure data management. Support to initiatives for the physical safety of offices and plants, as well as for the logical safety of networks relating to essential services for the area served. Improvement of connectivity, in order to reduce the digital divide for workers and companies.
Environmental		Energy savings thanks to the implementation of efficiency solutions and the purchase of green energy for the part that exceeds self -production. Lack of paper consumption thanks to the digital newsstands and electronic billing services.
Economic		Offer of latest technology services and tools for greater competitiveness of client companies. Optimization of costs thanks to the efficiency of activities and services sharing fee savings with customers.
Technological		Creation of works and services in favour of greater connectivity of the area served (companies and residents), capable of promoting smart city services within an inclusive digitalisation process. Business activities to guarantee and enhance the safety of IT networks.

Digital channels for our customers

The Hera Group continues to help its customers become more digital, both by developing and updating its **online services** and by providing **applications for tablets and smartphones** (Rifiutologo, Acquologo, and MyHera).

CUSTOMERS USING THE ONLINE SERVICES

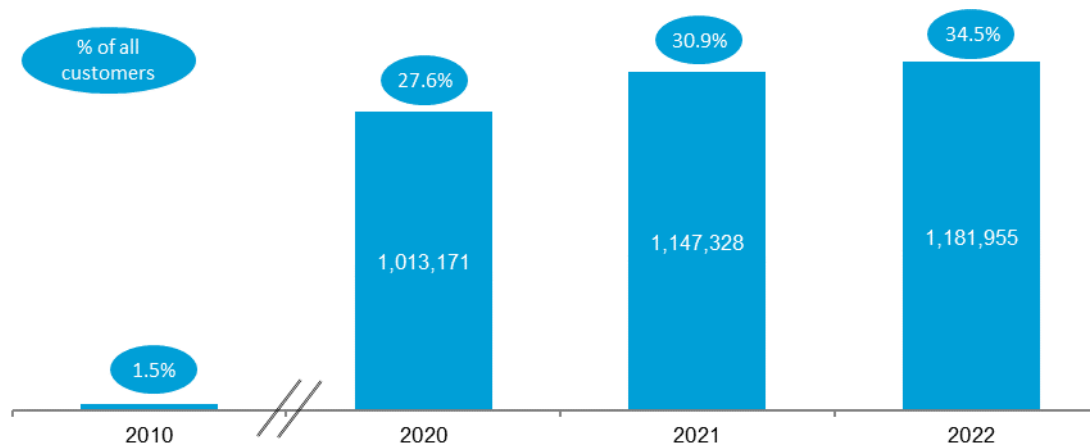


This data does not include the companies Eco Gas, Con Energia, and AresGas.

In 2022, **customers registered for online services on a Group level are 29.4%**, recording a 2% increase compared to the previous year (27.1%).

In detail, users registered for the online services of Hera Comm Spa remained substantially stable at 34.5% of the total; those of EstEnergy remained at 28.7%; while those of Hera Comm Marche rose to 29.3%. Etra Energia registers a percentage of 21.3%. The growth trend towards digitization also continues for AcegasApsAmga with 11.8% of customers registered for online services (+31.5% of subscribers compared to the previous year), thanks to the introduction of this contact channel in bills, and for Marche Multiservizi with 10.8% (+20.7%), thanks to having carried out targeted actions aimed at encouraging the use of these digital tools.

CUSTOMERS WITH ELECTRONIC BILLING



This data does not include the companies Eco Gas, Con Energia, and AresGas.

As of 2022, **34.5% of Group customers had chosen to receive their bill in electronic format** via email, with an increase of 3.6 p.p. compared to 2021 (30.9%).

In detail, by 2022 the customers who had chosen the electronic billing format were 40.4% of Hera Comm customers, 27.5% of EstEnergy customers, 26.6% of Hera Comm Marche customers, 28.7% of Etra Energia customers, 25.3% of AcegasApsAmga customers, and finally 12.6% of Marche Multiservizi customers.

For customers of Hera Comm, Hera Comm Marche, EstEnergy, and AcegasApsAmga who have not chosen the electronic format but delivery via ordinary mail, the bill is **printed on 100% recycled paper**.

Actions to **promote the digital behaviour of the Group's customers** also continued in 2022.

Starting in the 2021/2022 school year, the **Digi e Lode project** was also extended to the schools of Lombardy, Veneto, Friuli-Venezia Giulia, and Puglia (for further details, see the case study "Digi e Lode, for more digital services and schools" in the attachments). The project aims to **promote digital services**, such as electronic billing, online services, applications for mobile devices, and the use of digital self-care areas.

In 2022 the participation of Acantho's customers in the digital billing service allowed to avoid printing approximately 146 thousand sheets of paper. Acantho does not print paper reports on its customers' electronic traffic, but customers can view them on the customer portal. Furthermore, the management of administrative communications is gradually shifting to the use of certified e-mail (29.8% compared to paper). Overall, the digitalisation of these three processes has saved over 495 kg of greenhouse gas emissions per year.

Hera has signed several cooperation agreements with major banking players (Unicredit, CBILL, MyBank, Bancomat Pay, Amazon Pay, Paga con Postepay, and Satispay) to develop services that will significantly **simplify payments** and the related accounting management.

Under the agreement with **Unicredit**, **fifteen million dedicated virtual IBANs** have been generated that Hera, the **first company in Italy to do so on a large scale**, has made available to all customers through a notification on the bill, or on the invoice. Customers can thus pay conveniently from their own internet banking service, without queues, and with automatic and unique identification of the payment.

In addition to the virtual IBAN system, Hera is developing **additional smart and mobile payment methods** for its customers, such as digital wallets, to make transactions increasingly simple, quick and user-friendly. Specifically, **MyBank** supports making irrevocable online transfers simply and securely using the Internet banking service of the customers' bank. The service provides real-time confirmation of payment and 100% automatically speeds up reconciliation processes, and further reduces the risk of fraud. The **CBILL service**, on the other hand, using an innovative and advanced, multi-bank and multi-channel approach, enables customers to pay using their own **internet banking** service, and also using mobile devices, at ATMs and branch offices, providing security for the payer, real-time reporting, and complete and integrated coverage of the entire bill collection process, from the issue of the notice to reconciliation.

Using the **MyHera app** or the Group's **online services**, customers are also able to pay bills by simply entering their mobile phone number in **Bancomat Pay**, without having to enter their credit card or bank account details.

In 2022, using the Group's online services and the MyHera app, bill payments using the **pagoPA** method were introduced for electricity, gas, water, district heating, and waste services provided by the Group. This change allows the Hera Group to comply with current Italian legislation.

Lastly, the **digital wallets** Amazon Pay (bill payment through an Amazon account), Masterpass, Paga con Postepay, Apple Pay and Satispay simplify payments via mobile devices or desktop computers, providing a simple and fast user experience.

The initiative is part of the **broader infrastructure and services digitalisation process** that the Hera Group started some time ago, with the aim, among other things, of addressing the needs of an increasingly "connected" and demanding public. This roadmap is fully consistent with the European Union's strategy for creating a digital single market based on three pillars: improving online access to goods and services for consumers and businesses, creating an environment conducive to the development of digital networks and services, and maximising the growth potential of the digital economy.

How does this initiative contribute to responsible digital transformation? The benefits we obtained in the Corporate digital responsibility dimensions

Social		The multi-channel approach offered for digital payments allows the customer to manage payment transactions in a flexible and autonomous way, involving a wider user audience and thus reducing the potential risk of digital divide.
Environmental		Less use of paper for printing bills and less need for transport thanks to the digitisation of the payment process.

How does this initiative contribute to responsible digital transformation? The benefits we obtained in the Corporate digital responsibility dimensions

Economic		Development of collaborations with the main banking players and consequent simplification of payment transactions. Efficiency of operating processes with reduction of costs related to the dematerialisation of bills and less travel required.

Cyber security

The growth forecasts of cyber-attacks in 2022 have been exceeded by the facts connected to the conflict between Russia and Ukraine, also due to the related cyberwar implications. The geopolitical instability generated by the war has created a polarization of malevolent figures active in the field of cyber security who have lined up for or against the conflict, supporting the states that in various ways were involved in the event with cyber-attack actions. Specifically, in Italy in 2022 the National Cybersecurity Agency declared the state of cyber alert in relation to the conflict, with particular attention to the **energy sector** and the **national critical infrastructures**. In such a dynamic context, it is therefore increasingly important to continue to use all available resources to increase the **level of protection** on the one hand and **attention to cyber security risks** on the other, in order to balance system protection and the guarantee of the provision of the company's services.

In the face of these events, and in consideration of the businesses that the Hera Group manages, in 2022 **the alert levels** of the SOC (Security Operation Centre) monitoring of anomalous events **were intensified**, and the **checks** following the bulletins that the Agency for National Cyber security shares constantly **were increased**.

[418-1]

CYBER-ATTACKS

	2020	2021	2022
Cyber-attacks and breaches to information systems	3	1	0
<i>of which: breaches involving customer data and information</i>	0	0	0
Customers affected by data breaches	0	0	0
Fines and penalties paid for the attacks and breaches (euro)	0	0	0

The trend linked to the number of IT security incidents in the last three years shows a decrease, up to their disappearance in 2022, with **no recorded incidents** and therefore **no violations** or compromises of personal data.

The Hera Group's cyber security initiatives can be grouped into **three main macro-groups**, which concern **technologies**, **processes**, and **people**. This subdivision responds to the choice to keep the **balance of interventions** between the various areas of IT security under control.

LARGE-SCALE AREAS OF CYBER SECURITY INTERVENTIONS, 2022

Cyber security infrastructures and systems (technologies)	Security by design and cyber security monitoring (processes)	Cyber security culture (people)
Technological interventions that introduce or improve the tools dedicated to the protection of computer systems and networks, in management and industry. This includes interventions such as the introduction of security controls to cloud services through a centrally managed and monitored dedicated CASB platform, and the introduction of a system for the protection of smartphones and tablets, which is also centrally monitored.	The context of the processes saw the review and formalization of the security by design process, as well as the extension of the monitoring services of the Security Operation Center (SOC). The extension of integrated monitoring involved both the on-premise environment, through the subjection of new management areas, and the cloud environment, through integration with additional consoles for system monitoring. In addition, the convergence of monitoring of IT and OT environments continues through the subjection of new OT probes.	Interventions that act on the so-called human factor. The monthly online courses offered to all employees have continued, and further periodic ethical phishing exercises with increasing difficulty were carried out. At the same time as the publication of the new security by design procedure, dedicated training courses and specific sessions for the technical area were published and made mandatory. Furthermore, four workshops and seven dedicated meetings were held with the creation of a technical document on cyber security controls in the OT area.

In the context of the **protection of systems and identities**, during 2022 the protection of mobile devices (smartphones and tablets) was extended through the subjection to a centralized control and monitoring system for anomalies: with this system, the SOC is capable of monitoring devices, for which 80% coverage has been achieved.

During the year, the process of convergence of cyber security monitoring in the IT and OT areas continued through the installation and subjection of **new probes** both in the management context (seven probes) and in industrial plants (five probes), starting the coverage of the environment, water, and electricity areas. This path is essential both to **increase the visibility** of systems and events and to **centralise the monitoring** of anomalies in a single point (the Group SOC), which can be the first phase of even large-scale cyber-attacks. In terms of procedures, the **security by design management procedure in IT projects** was formalised in 2022, and is essential for ensuring sufficient security measures in projects and supporting the digitisation process by promoting ever greater protection of the data and systems that the group manages.

Furthermore, activities to increase **awareness and culture of cyber security** continued in 2022, through monthly content published on a dedicated online training platform accessible to the entire corporate population. Furthermore, ten **Ethical Phishing campaigns** were carried out with the involvement of approximately seven thousand employees for each campaign (over 70 thousand emails throughout the year). A further training activity dedicated to the field of industrial systems (OT field) was the creation of a course consisting of four workshops and seven dedicated meetings which saw the involvement of 13 companies or corporate departments of the Group and the drafting of the **technical document on cyber security controls in the operation technologies field**.

Main initiatives in 2022

Continue the implementation and extension of the monitoring service of the security operation centre (SOC) subjecting new sources and integrating IT and OT probes with a view towards the convergence of the two areas.

Activate new probes dedicated to the safety monitoring of industrial operation technology areas.

Improve the Cyber Security of corporate mobile devices through specific initiatives.

Main initiatives in 2023

Continue the implementation and extension of the monitoring service of the security operation centre (SOC) subjecting new sources and extending the service coverage.

Identify and activate new systems for centralised and specific monitoring of corporate cloud platforms.

Review system and network security procedures with the aim of extending coverage to the cloud environment.

Main initiatives in 2022

Main initiatives in 2023

Identify a threat intelligence service for monitoring the main open and closed sources (dark web) in relation to the presence of relevant information for the Group.	Analyse the Shadow-IT systems identified in previous years and identification of the related measures to protect the Group's central systems.
Activate a specific training course for the context of cyber security in the OT area dedicated to personnel impacted by the issue.	Continue the specific training course for the context of cyber security in the OT area dedicated to personnel impacted by the issue.
Continue raising awareness among the user population through security awareness and ethical phishing campaigns.	Continue activities for raising awareness among the user population through security awareness and ethical phishing campaigns.
Formalize the security by design procedure in projects with the aim of guaranteeing sufficient security measures in projects.	
Perform vulnerability assessment and penetration testing activities, in order to identify in advance any vulnerabilities present on systems exposed to the internet or present on the company intranet.	

How does this initiative contribute to responsible digital transformation? The benefits we obtained in the Corporate digital responsibility dimensions

Social		The training platform dedicated to Cyber Security themes aims to increase user awareness and reduce the risks associated with cyber-attacks, both on a work-related and a personal context.
Technological		All the IT security initiatives are developed to strengthen the processes and skills necessary for the correct use of technologies. Furthermore, the security by design process, applied to all IT-type projects, aims to guarantee the identification and implementation of sufficient security measures which are the basis for the protection of employees' information and personal data.

4.03 Economic development and social inclusion

Hera's contribution to the economic development of the area

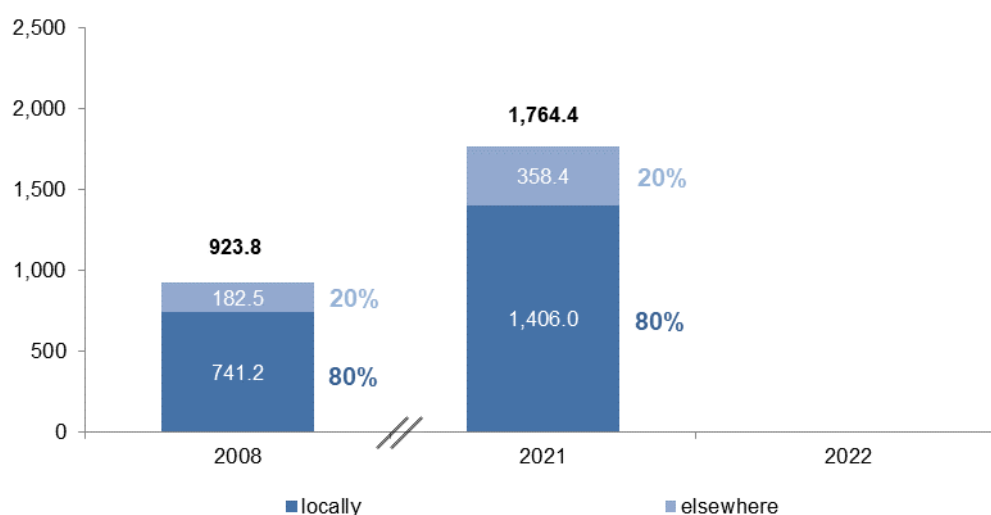
Economic value distributed to stakeholders

In 2022, the **added value distributed to local stakeholders** amounted to 1,443.6 million euro (+2.7% from 2021).

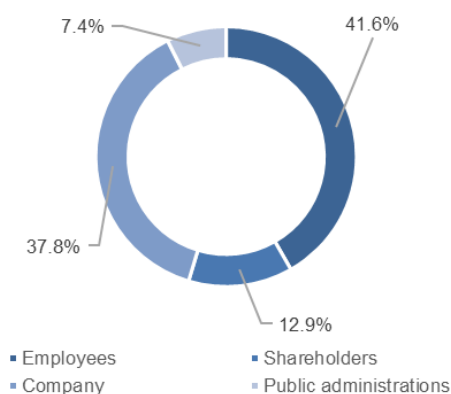
This can be broken down as follows:

- resources reinvested in the company (37.8% of total added value);
- salaries to workers (41.6% of total added value);
- taxes, fees and royalties to local bodies (7.4% of total added value);
- dividends to local Hera Spa shareholders (12.9% of total added value);
- donations and sponsorships (0.3% of total added value).

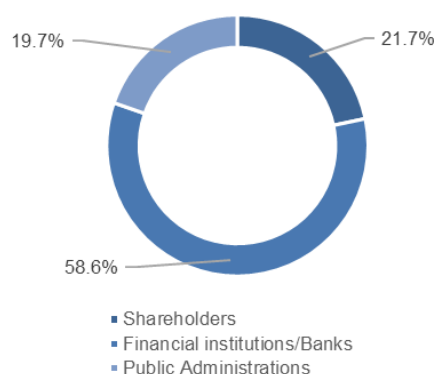
ADDED VALUE DISTRIBUTED (MILLION EURO)



ADDED VALUE DISTRIBUTED TO LOCAL STAKEHOLDERS (2022)



ADDED VALUE DISTRIBUTED TO NON-LOCAL STAKEHOLDERS (2022)

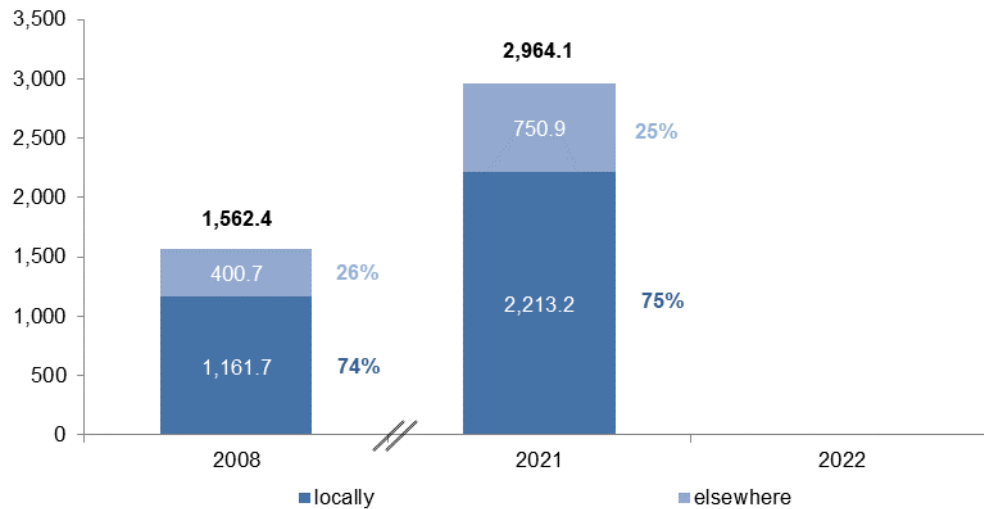


Including the added value distributed to local areas the amount of supplies from local suppliers (which constitute 64.5% of the Group's total supplies at the consolidated level and can be estimated at 881 million euro), the **economic value** that was **distributed to the local area** in total in 2022 can be

estimated at 2,324.4 million euro (+5% compared to 2021), accounting for 76% of the total wealth produced, which amounted to 3,039.7 million euro.

[201-1]

ECONOMIC VALUE DISTRIBUTED (MNE)



The economic value distributed to local stakeholders can be broken down as follows:

- Suppliers 37.8% (36.5% in 2021)
- Employees 25.9% (26.8% in 2021)
- Company 23.5% (28.0% in 2021)
- Shareholders 8.0% (4.1% in 2021)
- Public administrations 4.6% (4.5% in 2021)
- Local communities 0.2% (0.1% in 2021)

If we consider the share of economic value going to stakeholders outside the local area: 67.7 percent was distributed to suppliers; 18.9% to lenders; 7.0% to shareholders; and 6.4 to public administrations.

Note that in the calculation of the added value going to local areas, minority shareholders of subsidiaries were not considered and that, with regard to the dividend distribution of Hera Spa, we refer to the shareholding composition as of the date of the 2021 ex-dividend date.

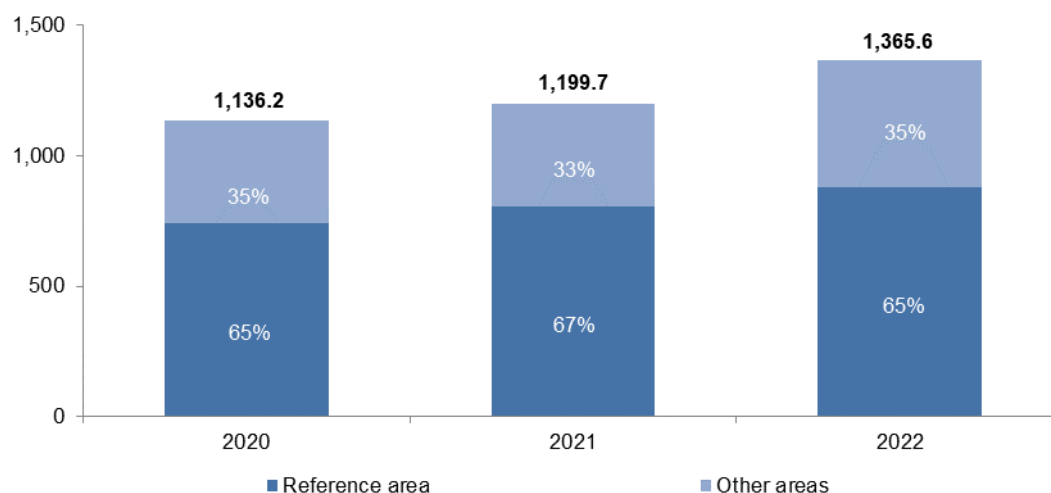
Economic value distributed to suppliers [203-2]

More than 60% of the companies listed in the supplier registry have **sales offices in the reference area** (Bologna, Ferrara, Forlì-Cesena, Modena, Ravenna, Rimini, Triveneto, Marche, Molise and Tuscany).

In terms of **economic value**, on the other hand, Hera commissioned purchases of **881 million euro** (+9.1% compared to 2021) from companies that have their business headquarters in the **local area** (accounting for **65% of the total**, a slightly lower percentage than in 2021).

[204-1]

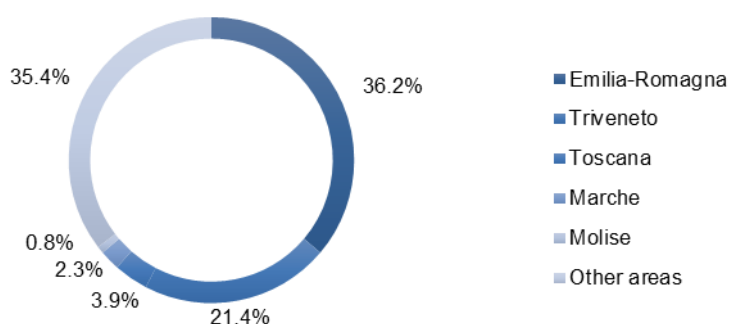
VALUE OF SUPPLIES BY GEOGRAPHIC AREA (MN€)



This data excludes Acantho, Hera Trading, Aresgas, Aliplast, ASA, Biorg, Feronia, Recycla, Vallortigara, Amgas Blu, Eco Gas, Con Energia, Macero Maceratese, Hera Comm Marche, Wolmann, Marche Multiservizi Falconara, Green Factory; intercompany purchases are excluded.

In terms of economic value, in 2022, the Hera Group commissioned purchases of more than 1.3 billion euro (60% from suppliers based in Emilia-Romagna, Veneto, Friuli-Venezia Giulia, Marche), including more than 28 million for purchases from other European states and 2.9 from non-European states (Switzerland, Great Britain, San Marino, the United States, Canada).

VALUE OF SUPPLIES BY GEOGRAPHIC AREA (2022)



The data exclude Acantho, Hera Trading, Aresgas, Aliplast, ASA, Biorg, Feronia, Recycla, Vallortigara, Amgas Blu, Eco Gas, Con Energia, Macero Maceratese, Hera Comm Marche, Wolmann, Marche Multiservizi Falconara, Green Factory; intercompany purchases are excluded.

In the year of the definitive reopening after months of pandemic-related restrictions, the activity of events in partnership with Hera intensified. In 2022, the Hera Group **flanked and supported initiatives** worth a total of 2.6 million euro (1.3 million, Hera spa) in favour of sectors such as exhibitions, theatres, music, cinema and sport.

SPONSORSHIPS

thousand €	2020	2021	2022
Recreational activities	342	378	179

thousand €	2020	2021	2022
Culture	1,031	816	1,087
Sport	489	420	654
Social	114	73	104
Environmental	74	155	309
Other	158	191	277
Total	2,208	2,033	2,610
<i>of which local</i>	<i>2,167</i>	<i>1,965</i>	<i>2,463</i>
<i>of which non-local</i>	<i>41</i>	<i>68</i>	<i>147</i>

Exhibitions. The Hera Group brand has been combined with some of the most important exhibitions organized in the area. Among the main sponsorships: **Musei San Domenico** in Forlì with the exhibition **"Maddalena il mistero e l'immagine"** (Magdalene the Mystery and the Image), focused on the figure of a woman who has fascinated artists of all ages and narrated for the occasion with 210 works. In Bologna in two exhibitions that attracted a great deal of public interest: **"Anche se il tempo passa"** (Even if time passes), a tribute to singer-songwriter Lucio Dalla, told through a wealth of iconographic material, and **"Fattori, l'umanità tradotta in pittura"** (Factors, humanity translated into painting) hosted at **Palazzo Fava**. Inside the halls of Ferrara's **Castello Estense** the multi-utility was the main sponsor of the exhibition dedicated to the Treviso artist **"Carlo Guarienti: la realtà del sogno"** (Carlo Guarienti: the reality of the dream). Also confirmed is the partnership with Savignano's **"Si Fest"** "in the year of the change in artistic direction with Alex Maioli; the famous photographer has set himself the goal of educating new generations about images, intercepting the gaze of children and students.

Music, theatres and festivals. Among the main sponsorships: support for the **"Crinali" cooperative**, which brought theatrical and musical performances to the arena of the archaeological area of the Kuna Park in Marzabotto; partnership with the **Musica Insieme Foundation**, which organizes classical music festivals in Bologna with a strong innovative character; **A Cielo Aperto** festival in the Cesena area, which features artists of Italian and international independent music; **Ravenna Festival**, with which Hera promoted an operation of environmental enhancement and allowed the most virtuous residents of the territories served by the multi-utility to win tickets for the concert of maestro Ludovico Einaudi; support for the **Ferrara Busker Festival**, the international street musician festival that has returned to the historic centre; The partnership with the latter has made it possible to organize an increasingly green festival where various activities on the environmental sustainability front have been promoted: widespread recycling collection and workshops for adults and children. In the Triveneto region, major sponsorships include **"I Giardini d' Estate: di sera con Hera"**, (The Gardens of Summer: in the evening with Hera) a program of music, shows and reading staged in Modena; **"Pordenonelegge - Festa del libro con gli autori"** ("Pordenone Reads - Book Festival with authors") in Pordenone, one of the most important literary festivals in the Northeast; and **"éStoria-Festival internazionale della storia"** in Gorizia, an international history festival and meeting place for scholars, experts and enthusiasts.

Cinema. Among the main collaborations: support to the Cineteca di Bologna for the festivals **"Il cinema ritrovato"** and **"Sotto le stelle del Cinema"**; also renewed the successful partnership with **Biografilm Festival**. Interest in movie theatres and films is also confirmed through support for initiatives present in other areas, including **"Rassegne itineranti"**, which involves ten municipalities in the Imola area; the Cinema Estivo in Sassuolo, the Rassegna "La settimana arte" in Rimini, the Porretta Film Festival and the Ferrara Film Festival.

Environment, sports and electric mobility. Also confirmed was Hera Comm's partnership with **"Flowershow"** (two editions, Florence and Perugia), the floricultural event during which compost produced in HerAmbiente's plant systems was distributed as a gadget; support for the **Padua Marathon** event, which promoted sustainable and resource-conscious behaviours and lifestyle choices; and participation in the historic **Barcolana** international sailing regatta held in Trieste, thanks to which the Group participated by promoting the claim **Navighiamo insieme verso la transizione energetica** (Let's sail together towards the energy transition) for visible communication of solar energy and electric mobility. Environment and sustainability are topics also addressed in the partnership

with **GoSmartGoGreen**, an event held at the **Imola Autodrome** on sustainable mobility and the world of electric automotive characterized activities ranging from road education to instruction on driving electric vehicles, to safe driving internships.

CHARITABLE GIFTS AND DONATIONS

thousand euro	2020	2021	2022
Recreational activities	1	4	4
Culture	140	56	247
Sports	5	9	9
Social	765	201	600
Environmental	26	40	47
Other	169	124	288
Total	1,106	434	1,195
<i>of which local</i>	<i>655</i>	<i>303</i>	<i>882</i>
<i>of which non-local</i>	<i>451</i>	<i>121</i>	<i>313</i>

In 2022, the Group disbursed more than **1.2 million euro in donations**, 74% of which went to the local area.

These donations are another opportunity to show that **it is close to and supports the local area**. Focus was placed on proposals from entities that can promote the principles of solidarity and social inclusion, spread the culture of participation and promote social cohesion, including through projects aimed at enhancing the value of the environmental heritage.

The years of the pandemic and most recently the war in Ukraine have only amplified the calls for help from so many residents in need. This is why the company decided to support two important organizations in the area such as the **Banco Alimentare** (Food Bank) and **Empori Solidali Emilia-Romagna**, which ensure some sensitive segments of the population not only material for their food needs but also support to improve their sociocultural conditions (language courses, digital literacy). Solidarity was also expressed in favour of the people affected by the conflict in Ukraine, thanks to the donation to support the fundraiser activated by the Emilia-Romagna Region and Civil Defence for the welcoming of refugees fleeing the war.

This sensitivity was also shown by Group employees, thanks to the HeraSolidale initiative, which foresees support for a number of associations offered by Hera employees through monthly donations withheld from their payslips or the devolution of part of their welfare. The Group also contributed to the initiative through its sales company Hera Comm, which recognises and donates 1 euro for every new customer who signs up for free market offers for electricity and gas. In 2022 an extraordinary edition of the project was promoted to collect donations for the Ukrainian people affected by the conflict. For more details on this initiative see the case study "Thanks to the fourth edition of HeraSolidale, 535,000 euro collected" (in the chapter "People").

Solidarity, inclusion and closeness are also broadly centred themes in the **"Psicologo di base"** (Basic Psychologist) project, sponsored by the Association Centre for Study and Research in Therapy and Psychosomatics and supported by the Hera Group. It concerns a project to promote people's health, well-being and quality of life that offers a real service desk for residents who wish to schedule free interviews with psychologists within the outpatient clinics of general practitioners in the Bologna area. An experimental service whose growing demand, especially among young people, has enabled it to provide support to more than 129 users in recent months alone; an important innovative project and a concrete response to the needs of many residents, which have emerged especially after long months of pandemic and restrictions.

In 2022, the multi-utility confirmed its support for entities engaged in inclusion and socialization activities, including the **AiAsport non-profit** association, which offers an equestrian activity service for people with disabilities, and the **Mus-e project** for art programmes aimed at schools located in difficult contexts,

aimed at accompanying the child in the discovery of self and of the other, experimenting with different artistic disciplines together with classmates and teachers.

PHILANTHROPIC GRANTS

Type of contribution (thousand euro)	2021	2022
Monetary contributions	2,823	
Time	805	
Donations in nature	756	
Total	4,384	

"Monetary contributions" refer to sponsorships and donations, HeraSolidale and Digi e Lode. The "Time" category refers to the hours spent by employees to train their colleagues. The category "Donations in nature" refers to tree planting and the CiboAmico and PharmacoAmico projects.

Taking into account not only sponsorships and donations, but also disbursements related to the HeraSolidale project from Hera Group employees and customers, the in-kind donations from the CiboAmico and FarmacoAmico projects, and valuing in economic terms the hours that employees have devoted to internal training as trainers, it can be said that the total philanthropic activities of the Hera Group in 2022 will amount to approximately 5.9 million euro.

Hera's contribution towards social inclusion

Social bonuses for families in economic and physical hardship

The **social bonus** is a benefit that **reduces the expenditures** borne by household customers on electricity and gas supply. Household customers with an **Isee indicator of no more than 8,265 euro** or, in the case of families with more than three dependent children, no more than 20,000 euro, as defined by the government in a Ministerial Decree of Dec. 28, 2007, or holders of a guaranteed minimum income or pension, are eligible for the subsidy. From 2023, the Isee threshold within which the bonus can be accessed will be **9,530 euro**. As of 2021 (through ARERA Resolution 63/2021), **bonus disbursement** is no longer linked to a request by the eligible customer but is done **automatically** through the Integrated Information System managed by the company Acquirente Unico. In fact, it is sufficient for the client to submit a DSU (Dichiarazione Sostitutiva Unica or Single Substitute Declaration) to INPS for the purpose of obtaining the ISEE. The DSU can be submitted to the entity providing the subsidized benefit, to the municipality, to a Tax Assistance Centre or online to INPS through the dedicated service. This innovation has affected the increase in the number and value of bonuses awarded.

The **electrical energy bonus** is designed to ensure savings on annual electricity expenses for two types of households: those in economic hardship and those in which a person with a serious health condition lives who is being kept alive by household electromedical equipment. In the case of families in economic hardship, the electrical energy bonus allows annual savings from a minimum of 128 euro to a maximum of 177 euro; in the case of families in physical hardship, it allows savings from a minimum of 189 euro to a maximum of 676 euro. With ARERA Resolution 396/2021, from October to December 2021, the supplementary bonus came into effect, which for economic hardship ranges from a minimum of 46 euro to a maximum of 64.4 euro and for physical hardship ranges from a minimum of 18.4 euro to a maximum of 36.8 euro.

The **gas bonus**, on the other hand, is determined differently according to climate zones and allows for annual savings from a minimum of 30 euro to a maximum of 245 euro; with ARERA Resolution 396/2021, a supplementary bonus ranging from a minimum of 18.4 euro to a maximum of 147.2 euro came into effect from October 2021 to December 2021.

GAS AND ELECTRICAL ENERGY BONUSES DISBURSED

	2020	2021	2022
Number of bonuses disbursed	113,164	109,506	228,674
Value of bonuses disbursed (thousand euro)	12,692	10,781	31,845

This data refers to the bonuses communicated to ARERA during the year in question.

In 2022, the **gas and electrical energy bonuses** disbursed to Hera Group customers amounted to 228,674 totalling 31.8 million euro (an amount that is nearly tripled compared to 2021. The automatic mechanism introduced for social bonuses has greatly affected the value and number of bonuses disbursed. The supplemental bonus introduced from October 2021 produced an increase in the average value of the bonus.

The percentage of electricity and gas contracts that have received at least one bonus stands at 7.4% (vs 3.9% in 2021). The percentage is somewhat higher for gas contracts (7.5%) than for electricity contracts (7.4%).

Regarding the **water service**, ARERA Resolution 897/2017 established the water **social bonus** for the **supply of water** to resident household users experiencing economic hardship as of January 1, 2018. A subsequent ARERA Resolution 3/2020 updated the Integrated Text of the application modalities of the social water bonus in order to further strengthen the previous support mechanisms for vulnerable consumers. In this regard, as of Jan. 1, 2020, the right to claim the bonus was also extended to those granted a guaranteed minimum income. The calculation of the bonus recognized in the bill, which for 2018 and 2019 covered only the aqueduct component, has since 2020, also been applied to the cubic meters of sewerage and purification, where that service is provided.

The automatic mechanism introduced by Resolution 63/2021 with a view to simplifying the bonus disbursement mechanisms has produced a significant increase in the number of beneficiaries. This modality, which was scheduled to take effect as of the year 2021, was not finalized until the year 2022. In fact, since June 2022, the flow of communications from Acquirente Unico to the operator of those eligible for the bonus for 2021 and 2022 began. Therefore, bonuses referring to the year 2021 (one-time payment) were disbursed in 2022, and disbursement of the 2022 bonus instalments to eligible persons reported monthly by Acquirente Unico began with a fully operational flow. The maintenance in the territories under Hera Spa management of a supplementary bonus established by Atersir as an additional protection measure (Resolution Camb 45/2018) is also confirmed for the year 2022.

In 2022, the **water bonuses granted** to Hera Group customers amounted to 161,748 totalling **19.4 million euro**. These values are up considerably from 2021 for the reasons that were highlighted above.

For **waste collection services**, a total or partial exemption from payment of the Tari or the Pay as You Throw Tariff may be granted to individuals experiencing severe social welfare hardship. It is the municipalities that allocate funds for these facilities, based on the income of applicants. In some areas of Emilia-Romagna there are also reductions for families consisting of a single member with a disability or permanent disability greater than 66%.

Starting in 2010, Hera introduced a bonus to offset the expense of the **district heating service on a voluntary basis**, to be granted to customers who also meet the income requirements for gas and electricity bonuses. The ordinary bonus for 2022 has a value of 106 euro per year for households with up to 4 members and 146 euro per year for households with a higher number of members. During the year 2022, Hera introduced, as a measure aimed at coping with the high energy prices for its customers experiencing economic hardship, an extraordinary supplement to the ordinary bonus that redefined the total annual contribution as 511 euro for households with up to 4 household members, and 712 euro for households with more members, respectively. As of the date of approval of this budget, there are an estimated 1,530 applications for the year 2022 (there had been 927 in the previous year) with a total economic value of about 840.70 thousand euro, more than four times the value paid in 2021 (180.20 thousand euro). The additional compensation granted by Hera as well as the increase in applications registered as a result of the energy crisis (65% more), led to a significant increase in the value of the 2022 bonus initially planned, resulting in the total amounts shown above.

Per capita tariff bonuses for water saving and benefits for large households

With the ARERA 665/2017 resolution the **per capita tariff for all resident household users** was introduced, which was to be applied in all municipalities.

Starting from 2022, **Hera Spa** has applied a per capita rate structure to resident households based on the actual number of household members per 100 municipalities, accounting for 78% of the households served. For the other 63 pro capita tariff municipalities, Hera applies the tariff breakdown based on the standard number of household members (equal to three).

As of 2022, all 16 municipalities in the **Triveneto** region and 47 managed municipalities in the **Marche** region have switched to the pro capita type tariff.

Hera's initiatives to support users experiencing economic hardship: payments of utility bills in instalments

ARERA Resolution 636 of 2021, which remained in effect until June 30, 2022, placed an obligation on companies to grant instalments of up to 10 months without interest, upon payment of an advance instalment (equal to 50% of the amount). Once the regulatory obligation lapsed, Hera continued to allow the **payment of bills in instalments** in the presence of a customer undergoing economic hardship. **Households experiencing economic hardship** have as a matter of fact been granted a payment plan of instalments **without interest on arrears** and, provided that the agreed instalment dates are met, up to two simultaneous instalment plans are granted. Hera considers instalment requests of **up to three months**, with the amount of the first instalment being as little as one-third of the bill. For certain types of customers experiencing hardships (e.g., customers who have been laid off, in a redundancy scheme, beneficiaries of the income support fund of the Bilateral Agency of Emilia-Romagna, unemployed as a result of reduction or closure of work activities or workers who are part of a defensive job-security agreement, with an hourly reduction of more than 30%) the instalments are extended to six without interest. In addition, for extraordinary situations, Hera evaluates repayment plans of up to ten instalments and also makes available the rescheduling of those repayment plans already granted.

For the **corporate** segment, payments in instalments may also be requested from Hera, which will grant it, subject to the verification of solvency conditions.

AcegasApsAmga grants the payments of bills in instalments should these be requested. Payment in instalments may be requested through the contact channels indicated on the bill. In case the request is made for bills that have already been the subject of arrears, the instalment plan shall have a minimum duration of 12 months with non-cumulative instalments and a periodicity corresponding to that of billing. Any customized plans of payments in instalments must be requested in writing or otherwise documented, as stipulated in Article 5.1 of ARERA Resolution 311/2019 (Remsi).

In those territories managed by **Marche Multiservizi**, Resolution 655/2015 stipulates that the operator is obliged to grant, upon the customer's request, which must be made by the fifth calendar day prior to the deadline for payment of the same reminder, the payment in instalments of the bill if the latter exceeds by 80% the value of the average charge referred to the bills issued during the last 12 months. Such a request can be submitted to the call centre, customer office, or credit office.

At the discretion of the company, in cases of particular hardship, the request for payments in instalments may be granted under the following conditions:

- the request must be received by the tenth calendar day after the due date of the bill;
- there must be no existing payment in instalment plans for other bills;
- the customer must have settled all previous bills.

It is not possible to proceed with payments in instalments for amounts that are overdue and less than 50 euro if they concern household supplies, for amounts overdue and less than 500 euro if they concern VAT accounts and condominiums.

For household customers, the number of instalments granted varies, depending on the amount to be paid in instalments, from two to six, and from two to three for those holding VAT accounts and condominiums.

During the year 2022, **272,462 payments in instalments were carried out** (up 36% from 2021), including 263,173 to mass market customers and 9,289 to business customers. The total value of payments in instalments amounted to 353.8 million euro (almost tripled in comparison with 2021). **At the territorial level**, 163,767 bills were paid in instalments in the territories served in Emilia-Romagna, 22,865 in Triveneto, 16,794 in Marche, and 69,036 in other unserved territories, for a value amounting to approximately 220.2 million euro in the territories served in Emilia-Romagna, 22.3 million euro in Triveneto, 17.5 million euro in Marche, and 93.8 in other unserved territories.

The customers who requested that **payments be made in instalments of at least one bill** during the year were 6.5% of total customers up from 4.7% in 2021. More specifically, 6.6% of residential customers asked for at least one payment in instalments, up from 4.7% in 2021, and 4.6% of business customers asked for at least one payment in instalments, up from 5.6% in 2021.

The **considerable increase in both the number and value of payments in instalments** confirms the Group's commitment in terms of granting payments in instalments, which has always been at significant levels over the years. The increased demand for repayment plans from customers is certainly related to the **sharp increase in the cost of energy services** and, secondly, to the **ARERA Resolution 636/2021**, which facilitated the **granting of payments in instalments to delinquent end customers** before proceeding with any credit protection actions.

NUMBER AND VALUE OF BILLS PAID IN INSTALMENTS

	2020	2021	2022
Bills paid in instalments (no.)	214,604	200,014	272,462
<i>of which mass market (no.)</i>	<i>208,729</i>	<i>190,246</i>	<i>263,173</i>
<i>of which business (no.)</i>	<i>5,875</i>	<i>9,768</i>	<i>9,289</i>
Bills paid in instalments (thousand euro)	129,266	133,983	353,839
<i>of which mass market (thousand euro)</i>	<i>85,686</i>	<i>76,154</i>	<i>186,956</i>
<i>of which business (thousand euro)</i>	<i>43,580</i>	<i>57,829</i>	<i>166,883</i>

The data do not include the companies Aresgas and Eco Gas.

Hera's initiatives to support users in economic distress: preventing the suspension of supplies

The Group's focus on weak social groups continued in 2022 through the implementation of the **Protocols of Intent**, which aim to prevent the suspension of services for assisted persons reported by the social services of municipalities and who provide assistance to people. The collaboration activated through these protocols with the social services of municipalities and with entities that deal with services to the people, represents a distinctive element of Hera in the panorama of multi-utilities and sales companies. Hera, has as a matter of fact, for over 6 years, established a dedicated channel with operators who offer **support and advice to social workers** through structured forms of facilitation for the segment of the population subject to economic fragility. Collaboration with these entities makes it possible to **avoid the suspension of service or restoration** when interrupted, optimizing the management of financial contributions by the entities themselves. There are a total of 135 municipalities with which a Protocol of Intent has been signed. All of the provincial capitals in Emilia-Romagna are involved with the exception of Rimini, where energy contracts have a lower impact. 5 new protocols involving 26 municipalities were activated in 2022.

Thanks to these protocols, Hera gives advance notice to the Entity before activating the suspension of the customers' services by adding an additional moratorium of at least 21 days, which allows the services or the customer himself to be able to manage the debt situation in time to avoid the shutdown of the supplies. The requests handled in 2022, as a result of referrals from social workers, amounted to more than 19 thousand (22% less than in 2021); the extension of the range of customers eligible for energy bonuses, the increase in the number of protocols, and preventive actions dedicated to managing the debt of customers in economic difficulty led to a lower demand for economic interventions. **The percentage of suspensions avoided amounted to 58%**. Protocols have also been updated in the municipalities of Trieste and Padua.

By 2023, it is envisioned that new municipalities (Upper and Lower Ferrara area, Po Delta and Bologna metropolitan area) will be proposed to sign protocols of intent.

As far as **Hera** and **AcegasApsAmga** are concerned, the contracts stipulate that in cases of **failure to pay the bill**, it is possible to proceed with the **suspension of the supply**.

In the case of **gas, electricity and district heating** customers, the procedure involves sending an initial reminder by regular mail after about 20 days from the due date of the bill only in the case of good-paying customers and with debts of less than 150 euro, and the subsequent sending, after an additional 20 days, of a registered letter with return receipt or PEC (certified e-mail) if available, in which the risk of suspension of service is communicated. In the case of non-payment, following 40 days after delivery of the registered letter with return receipt (or 25 days for customers with low-voltage electricity supply), the supply is suspended. On average, in those cases of debts amounting to less than 150 euro, therefore, suspension takes place about three months after the bill is due. If the invoice subject to the reminder is more than 150 euro, a single reminder shall be sent, by registered mail with return receipt or PEC (Certified e-mail) if available, in which the risk of suspension of supply is communicated. Again, suspension of supply can also occur 40 days after delivery of the registered letter with return receipt (or 25 days for customers with low-voltage electricity supply) and approximately two months after the bill is due.

Should the suspension of supply not be possible (e.g., inaccessible meter), further notice shall be sent to the customer to inform him/her of the interruption of supply (disconnection of power supply) in case of non-payment within the specified time. In the event that the interruption is also technically infeasible, it is the vendor's option to proceed with contract termination by activating the services of last resort.

Based on the provisions of the Regulation of Arrears in the Integrated Water Service (Remsi), in all the served territories of Emilia-Romagna and Triveneto, as far as **water** supply is concerned, the procedure involves sending an initial reminder by registered letter with return receipt or PEC (Certified e-mail) if available, after about 12 days from the due date of the bill in which the risk of service suspension is communicated and the subsequent sending after a further 15 days of a registered letter with return receipt or PEC if available, in which the risk of service suspension is communicated. Hera on the basis of what is governed by the Remsi and the regulations, after 40 days from the receipt of the amicable reminder, for household users, shall proceed to the operations of supply restriction, and in case restriction is not possible for technical reasons, which must be reported to the user in a special letter, it shall proceed to suspension; in case of non-household users, it shall proceed directly to suspension or closure of the street valve if suspension is not possible.

In the period prior to the suspension of supply, the customer can always request that the bill be paid in instalments.

All initiatives to support families experiencing economic hardship are summarized in the **SOSTegno Hera guide** which is available on the Group's website and periodically updated. The guide contains all the information needed to learn about opportunities to curb spending on energy and water services, reserved for Hera Spa and Hera Comm customers experiencing economic hardship or physical difficulties. It is an easy-to-follow reference tool, which also provides information on how to obtain payment in instalments of bills and what to do if you are late in making payments. SOSTegno Hera shows how to benefit from social bonuses for electricity, gas, water and district heating, and what to do in case of water leaks on the network downstream of the meter. Finally, advice is provided on good practices to curb consumption.

In 2022, the system of services and opportunities that has already been available to customers for years was strengthened in order to offer concrete support to those who find themselves in a state, even temporary, of economic difficulty through the constantly updated **SOSTegno Hera** guide, which can be [consulted online](#). The website features all the financial support options provided for household supplies, from social bonuses to instalments ending with best practices and water-saving tips.

Finally, in order to provide further help to the most hard-pressed customers in coping with the energy crisis due to price instability in international markets, additional guidance was implemented in autumn 2022, focusing mainly on electricity and gas supplies. **SOSTegno Energia**, which can also be [consulted online](#), in addition to numerous energy-saving tips, describes the means and opportunities available to Hera customers to monitor their consumption and adopt the right behaviours in order to reduce waste and curb consumption and spending. Also discussed within the guide is the new "Energy Tutor" project, which provides for the training of representatives from associations who are in contact with the most vulnerable people regarding energy consumption and energy needs analysis.

Job placement through social cooperatives [203-2]

In 2022, the **value of supplies** for types of works or services requested by Hera Group from social cooperatives amounted to more than **82 million euro** (+14% compared to 2021). The increase is related to the start of Atersir concessions for environmental services in the provinces of Bologna and Modena under which the consortium of social cooperatives operating in partnership with Hera performs a greater volume of services than before the concession.

More than 81 million euro are related to the provision of **environmental services, and these are both contracts to social cooperatives and partnerships between Hera and social cooperatives. This amount** corresponds to 30% of the total of the contracts awarded by the Group for these services. Supplies and partnerships involved 44 cooperatives and consortia of social cooperatives in total (-28% compared to 2021), with the employment of 899 disadvantaged people (pursuant to Art.4, Law 381/91. At the territorial level, there were 745 people placed in the Emilia-Romagna area, 104 in the Triveneto area and 50 in the Marche region.

SUPPLIES FROM SOCIAL COOPERATIVES

	2020	2021	2022
Social cooperatives or consortia (no.)	50	61	44
Supply value (thousand euro)	67,143	72,253	82,302
Disadvantaged individuals placed (no.)	864	882	899

The disadvantaged persons placed included workers employed for periods of less than a year. The data include job placements related to partnerships between Hera and social cooperatives, i.e., temporary business groupings for the management of environmental services in which Hera Spa is the agent.

The "Valoris" economic valuation model developed by the University of Brescia in 2013 makes it possible to measure the value created by job placement social enterprises, based on the results of empirical research. In particular, the model makes it possible to quantify the **economic impact for public administrations** resulting from the social placements made by B-type social cooperatives. The study shows that the benefits are mainly derived from lower welfare costs and higher tax revenues, determined by the payment of taxes on the employment income of disadvantaged individuals. The reduced revenue to the state from the tax and contribution exemptions enjoyed by B-type social cooperative were deducted from the benefits. All this translates into a benefit to the public administrations of an average of 4,209 euro per year per disadvantaged person. The economic benefit to public administrations from the Hera Group's contracting of social cooperatives for the year 2022 can thus be estimated at more than 3.8 million euro.

Hera helped insert a specific clause in the national collective agreement for environmental services (renewed in July 2016) in order to safeguard outsourcing in favour of social cooperatives. This clause stipulates that a portion of outsourcing for sweeping, collection, waste transportation, and cesspool and dumpster cleaning activities will be excluded from the obligation to apply the national contract for environmental services, through the definition of social inclusion projects. This quota is 5% and may be raised at the company level to 15%. Hera applies the 15% quota in accordance with the agreement signed in March 2012 with the trade union organizations and with the Group's trade union coordination.

Protected categories among Hera's workers

Hera complies in all provincial areas in which it operates with the obligations arising from Law 68/1999, which establishes to a defined extent the **mandatory hiring of personnel belonging to protected categories**.

The regulations on the right to employment of people with disabilities, stipulate that companies that due to the special conditions of their business cannot employ the full percentage of eligible workers (disabled persons) may apply for **partial exemption** from the obligation to hire on condition that they pay to the Regional Fund for the Employment of the Disabled a sum equal to 39.21 euro for each worker not employed and for each working day not worked; the maximum percentage that can be authorized is 60 percent. Hera also takes advantage of this option, which specifically provides for payments by individual Group companies to the provinces in which there is a smaller proportion of disabled people with respect to legal obligations.

According to the legislation, which is aimed at promoting the inclusion and integration of certain categories of people (the disabled, orphans, etc.) into the world of work, the worker's placement path takes place with solutions that are mutually agreed upon among the company, territorial employment centre and the worker himself.

At the end of 2022, **324 people belonging to the categories protected by Law 68/1999** were working in Group companies, of whom 275 (193 in Hera, 54 in AcegasApsAmga, 28 in Marche Multiservizi) were present pursuant to Art. 3 of the law (disabled).

PERSONS BELONGING TO THE CATEGORIES PROVIDED FOR IN LAW 68/1999

Number	2020	2021	2022
Persons belonging to the categories provided for in Law 68/1999	369	357	324

The data do not include Vallortigara, Recycla, Eco Gas, Etra Energia, Wolmann, Con Energia, Macero Maceratese, and Biorg. 3% of the Group's employees work in these companies

4.04 Creating jobs and developing new skills

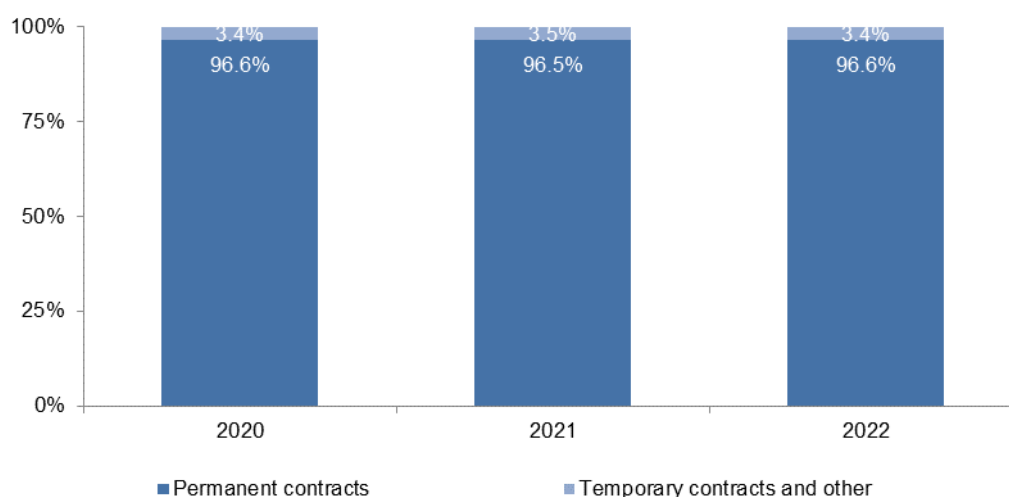
Hera's contribution to increased employment

The importance attributed by the Hera Group to employment growth, as discussed in this paragraph, is not only reflected in the number of employees hired by the Company, but also in the creation of indirect employment and in the development of social responsibility initiatives in procurement procedures. By adding the workforce employed in supplier companies to the number of the Group's employees, the **overall number of personnel exceeds 18,000**.

Stable
employment and
turnover
[401-1]

96.6% of the Group's workers are employed on the basis of permanent contracts. Compared to 2021 the number of permanent workers has **remained stable**, thanks to the consolidation of employees who previously had a fixed-term contract within the Group.

AVERAGE NUMBER OF EMPLOYEES



9,413 employees work at the Hera Group, of which 9,091 are **permanent employees**, 252 **temporary employees** (2.7%) and 70 **non-subordinate employees** (approximately 1%), hired in accordance with other flexible employment solutions (contract-based employment agreements).

These numbers confirm the Group's firm intention **to limit the flexible solution formula** to ad hoc urgent circumstances only (season-based needs, special and temporary work peaks and temporary replacement of workers on leave). In any case, employees hired on the basis of flexible solutions constitute a priority recruitment pool for permanent contracts.

PERSONNEL HIRED DURING THE YEAR BY QUALIFICATION

Number	2020	2021	2022
Executives	0	1	1
Managers	7	15	6
Clerical Staff	286	321	334
Manual Labourers	291	324	306
Employees Hired on a Permanent Basis	584	661	648
Temporary Employees	393	301	342
Contract-based Employment Agreements (temporary)	89	109	93

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Number	2020	2021	2022
Seasonal Employees and Apprentices	1	0	0
Employees Hired on a Fixed-Term Basis	483	410	435

External recruitment mainly focused on highly skilled personnel (specialised and assigned to operations) who are otherwise difficult to find internally. Most of clerical and operational needs are generally managed by internal staff.

In 2022, there were 648 **permanent workers**, of which 15 hired following changes in the scope of consolidation (inclusion of companies Biorg and Con Energia in the scope of consolidation). Furthermore, 230 employees were switched to fixed-term employment.

In the last three years, a total of **1,893 people were hired on the basis of permanent contracts**, of which 716 after working within the Group under a fixed-term contract.

WOMEN HIRED ON PERMANENT CONTRACTS DURING THE YEAR BY QUALIFICATION

Number	2020	2021	2022
Executives	0	0	0
Managers	0	3	2
Clerical Staff	121	144	153
Manual Labourers	3	2	5
Total	124	149	160

In 2022, 160 **female workers were hired on permanent contracts** (11 more than in 2021). As far as Executive, Manager and Clerical Staff categories, the percentage of new permanent employees was 45%, of a total of 341 permanent hires.

PERSONNEL HIRED DURING THE YEAR BY AGE GROUP AND GENDER

Number	2020			2021			2022		
	F	M	Total	F	M	Total	F	M	Total
Younger than 30 years of age	128	310	438	117	257	374	138	291	429
Between 30 and 50 years of age	118	449	567	129	488	617	135	457	592
Older than 50 years of age	7	42	49	10	70	80	5	56	61
Total	253	801	1,054	256	815	1,071	278	804	1,082

Data refer to total permanent and non-permanent employees.

Furthermore, there were 209 new permanent hires involving staff **under the age of 30** (30 more than in 2021), 393 between the age of 30 and 50 (29 less than in 2021) and 46 older than 50 (14 less than in 2021).

OUTGOING PERMANENT EMPLOYEES BY REASON

Number	2020	2021	2022
Voluntary resignation	96	182	223

Number	2020	2021	2022
Retirement	415	326	335
Death	11	12	15
Termination	22	17	26
Job Description Mismatch	7	10	9
Transfer to other Companies/Demergers	4	1	5
Total	555	548	613

In 2022, 613 employees left the Company, a 12% increase compared to last year, 55% of which resulting from **retirement**. The figure is up slightly compared to 2021, while the increasing trend of **voluntary resignation** remained stable.

OUTGOING EMPLOYEES DURING THE YEAR BY AGE GROUP AND GENDER

Number	2020	2021	2022
Younger than 30 years of age	15	22	45
Between 30 and 50 years of age	85	123	154
Older than 50 years of age	463	403	414
Total	563	548	613

In 2022, the number of employees under the age of 50 who left the Company increased by 6% on the total compared to the 2021 figure. In 2022, most of the employees who left the Company belonged to the 50+ year category.

EMPLOYEE TURNOVER RATE BY QUALIFICATION

%	2020	2021	2022
Executives	5.2%	5.9%	5.3%
Managers	5.4%	4.3%	3.4%
Clerical Staff	4.8%	5.4%	5.8%
Manual Labourers	8.5%	7.3%	8.7%
Average	6.2%	6.0%	6.7%

EMPLOYEE TURNOVER RATE BY GENDER

%	2020	2021	2022
Men	7.2%	6.8%	7.7%
Women	3.4%	3.8%	4.0%
Average	6.2%	6.0%	6.7%

EMPLOYEE TURNOVER RATE BY AGE

%	2020	2021	2022
Younger than 30 years of age	3.2%	3.7%	7.1%
Between 31 and 50 years of age	1.6%	2.7%	3.3%
Older than 50 years of age	11.3%	9.5%	10.1%
Average	6.2%	6.0%	6.7%

The **turnover rate** is calculated by dividing the number of employees who left during the year by the number of employees at the end of the year: in 2022, the rate amounts to **6.7%**, an **increase** compared to the previous two years.

The cluster most subject to turnover is the male population over the age of 50, a phenomenon in line with the trend of recent years due to retirement. The percentage of the **turnover rate** of employees **under the age of 30** has substantially increased, almost **doubling**.

The **hiring rate** is calculated by dividing the number of hires during the year by the number of employees at the end of the year divided by age group, gender and geographical area. For 2022, this index is **7.1%** (7.3% for men, 6.3% for women, 33.1% for employees under 30, 65.8% for those between 31 and 50 and 1.1% for those over 50).

Employment generated indirectly by suppliers

[2-8]

To comprehensively assess the social impact of the Hera Group on the country, it is also useful to consider the **employment generated Indirectly by suppliers** procuring goods, services, professional services and work, which can be estimated within the workforce of suppliers who carry out activities on behalf of the Hera Group.

In 2022, the estimated employment generated indirectly by suppliers amounts to over **9,000 jobs**, of which 4,800 in Emilia-Romagna, 1,410 in the Triveneto region, 175 in the Marche region and 2,975 in other non-managed areas. Approximately 70% of such indirectly-generated employment concerned the Group's areas of operation.

This figure was obtained by analysing the Financial Statements of the main suppliers of the Group and of the temporary business groupings in which Hera Spa is a partner, which cover approximately 80% of the volume purchased in 2022. To estimate the employment generated by suppliers, we considered the **ratio between the value commissioned by Hera and the suppliers' total turnover**: this percentage was multiplied by the total number of employees declared in the suppliers' Financial Statements.

Social responsibility in procurement

The employment impact of the Hera Group also derives from concrete actions of **social responsibility as it pertains to procurement contracts**, which the Group has continued also in 2022, in line with the principles of the Group's **Code of Ethics** and with attention to working conditions in the supply chain.

2022 was also characterised by the application of the **Memorandum of Understanding on tenders (Procurement Protocol)**, entered into on 26 October 2016 between the Hera Group and the National Trade Union Organisations representing the relevant employment categories. The Protocol has a binding/contractual value between the Hera Group and Trade Union Organisations, entailing an obligation for the Group to implement the provisions set forth in the Protocol as it pertains to procurement activities.

The Procurement Protocol, in addition to providing for specific National Collective Labour Agreements to be applied to the main company activities, also deals with regulating issues related to **employment continuity** by providing for the "voluntary" application of the **social clause** (i.e., "voluntary" in that it is not required by National Collective Labour Agreements), in particular in regulated and labour-intensive sectors, in work and service contracts relating to post-first intervention activities, networks and services related to the management of the relationship with end customers (consumption readings and metre-support activities), and in the case of new contracts for services already outsourced. The social clause requires a new contract awardee to **make a job offer consistent with the overall conditions in place at the time of contract change** (such as salary and professional requirements, as well as duration of the contract) to permanent staff who are directly and mainly assigned to contract duties and who are employees of the outgoing contractor, in the 90-day period prior to the takeover of new management. In

all other cases of contract transfer from the outgoing contractor to the new awardee, if the contract is due to replace an expiring contract and objectively similar in scope to the existing one, and whose labour costs is greater than 50% of its total financial value, it is necessary to schedule a preventive meeting between the outgoing contractor, the incoming contractor and the competent trade union organisations for the purpose of evaluating every possible solution intended to **protect employees (so-called “absorption project”)**.

We also point out that in 2022 the provisions on the protection of contractor personnel were consolidated following the publication of **ANAC Guidelines no. 13 on 13/02/2019** on “**The Social Clauses Regulations**”. The document drawn up jointly by the Central Personnel and Organisation Directorate and the Purchasing and Contracts Directorate in 2019 intended to **steer** more assertively and directly the work of contract points of contact and **uniform** their activities as much as possible, including through the use of special standard tender specifications, whose article on the **financial and regulatory guidelines applied to contractor’s personnel** provides for five types of social employment clauses in the event of an incoming contract that replaces an expiring one. It is necessary to select the type that best fits the contract at hand. Likewise, it is necessary to take into consideration the provisions of Art. 30, paragraph 4 of the Procurement Code, which requires applying the so-called sector “leader” of the National Collective Labor Agreement to be signed by the comparatively most representative trade unions, and whose scope of application is closely connected with the contract activities, as well as of Art. 50 of the Code, which establishes the obligation, with particular regard to labour-intensive contracts, to include specific social clauses in the tender documents for the purpose of fostering the employment stability of contract personnel.

There are 23 major tenders in which the aforementioned regulations defined in the Procurement Code have been applied. Below are listed those tenders whose financial value exceeds 10 million euro:

Type	Description	Legal entity	Amount (mn€)	Duration (years)	National labour contract (CCNL)	Clause
Open procedure	Integrated and coordinated service for the maintenance and management of real estate, plant engineering and all related activities and space management within the areas covered by Hera Spa and AcegasApsAmga (global service)	Hera Spa	101	5	CCNL for monitoring, CCNL for cleaning and multi-services, specific CCNL for the supply chain	Transfer of all personnel on the basis of the clause provided for in the CCNL (where applicable), request for an absorption project for the other CCNLs
Open procedure	Network maintenance and emergency response support activities in the electricity sector, in the area managed by Inrete Distribuzione Energia	Inrete Distribuzione Energia	35	3	Metalworkers + Construction sector and similar sector(s)	Voluntary application*
Competitive subcontracting procedure	Municipal and similar waste collection and transport services and sweeping services in the Ravenna and Cesena area	Hera Spa	33	4	Servizi Ambientali FISE	Transfer of all personnel on the basis of the social clause provided for in the CCNL
Competitive subcontracting procedure	Municipal waste transport services performed with roll-off vehicles and loader vehicles in the Bologna area and province, and in the municipalities of Firenzuola,	Hera Spa	24	4	Logistics, Freight Transport and Shipping	Absorption project

Type	Description	Legal entity	Amount (mn€)	Duration (years)	National labour contract (CCNL)	Clause
	Marradi and Palazzuolo sul Senio served by Hera Spa					
Open procedure	Manual and mechanised sweeping services included support and other environmental services	AcegasApsAmga	20	4	Servizi Ambientali Utilitalia/FISE	Social (all staff)
Open procedure	"Customer Service - Back Office" services, for the management of complaints, specialist activities, requests for information and instructions from Hera Group end customers	Hera Spa	17	2	Tertiary, distribution and services	Voluntary application*
Competitive subcontracting procedure	Municipal waste collection services in the Bologna area and province, and in the municipalities of Firenzuola, Marradi and Palazzuolo sul Senio served by Hera Spa	Hera Spa	17	4	Servizi Ambientali FISE	Transfer of all personnel on the basis of the social clause provided for in the CCNL
Competitive subcontracting procedure	Municipal waste transport services performed with roll-off vehicles and loader vehicles, in the municipalities of the Modena area and province served by Hera Spa	Hera Spa	16	4	Logistics, Freight Transport and Shipping	Absorption project
Open procedure	Replacement service of mechanical metres with electronic ones and of electronic metres with next generation ones, on gas metering units, distributed in the areas managed by the Hera Group companies	Hera Spa	14	2	Gas-Acqua Utilitalia	Voluntary application*
Open procedure	Works necessary for the "made-to-measure" emergency interventions, and routine and special maintenance on water and sewage networks	AcegasApsAmga	14	2	Construction sector and similar sector	Voluntary application*

* The application concerns at least 51% of personnel employed in the Hera contract.

Note furthermore that the **discount percentage limitation clause was added to the following tenders**, formulated as follows: "taking into account the technical peculiarities inherent in the contract and the economic analysis, which is the basis of the price items that make up the single price list offered in the tender, the Contracting Authority believes that reductions of the tender basis exceeding 25% may be untenable and reductions exceeding 30% may be impossible to accept":

- tender for specialised building maintenance work to be performed on water cycle, gas and district heating plants managed by Hera Spa and Inrete Distribuzione Energia, divided into seven distinct lots (the entire Emilia-Romagna area)
- tender for specialised mechanical maintenance work to be performed on water cycle, gas and district heating plants managed by Hera Spa and Inrete Distribuzione Energia, divided into seven distinct lots (the entire Emilia-Romagna area);
- tender for specialised electrical maintenance work to be performed on water cycle, gas and district heating plants managed by Hera Spa and Inrete Distribuzione Energia, divided into seven lots (the entire Emilia-Romagna area);

- tender for scheduled routine and special corrective maintenance on an as-needed basis, on the Guascor brand cogeneration generators managed by Hera Spa;
- tender for network maintenance and emergency response support activities in the electricity product sector, in the area managed by Inrete Distribuzione Energia, divided into three lots (Area of the provinces of Modena, Bologna and Ravenna);
- tender for the replacement of mechanical metres with electronic ones and electronic metres with next generation ones, on gas metering units, distributed in the territories managed by Hera Group companies, divided into three lots (Inrete, AcegasApsAmga, Marche Multiservizi).

In 2022, the clause requesting authorisation for the use of temporary workers and the **clause which prohibits the use of support work** (so-called “voucher”) were kept in the **standard specifications for the categories of works and services** used in the tender procedures, as it pertains to contract-based works and services.

Lastly, note the constant attention of the Hera Group, as part of its corporate social responsibility, to performing **due diligence on social security contribution payments**, by means of the automated and centralised tool that became operational in 2018, which involves the entire company chain that deals with the management of supplies, so as to make such due diligence even more systematic and widespread.

Diversity and inclusion

The Hera Group’s commitment to **inclusion and diversity protection policies** is long dated and was consolidated in 2009 with the **signing of the Charter for equal opportunities and equality in the workplace**, by which the Company is committed on the front lines to the fight against discrimination in the workplace, together with other public and private entities. Furthermore, the creation of the role of the **Diversity Manager** in 2011 was fundamental in further promoting the processes of development of inclusion policies and of diversity enhancement. That same year, the Company put together a **working group** comprising employees of the Group companies, heterogeneous in terms of age, position held, profession and training, which, coordinated by the Diversity Manager, has been focusing on projects, activities and initiatives hinging on diversity and inclusion.

In 2018 Hera also signed the “**Utilitalia Agreement - Diversity makes the Difference**”, a programme of concrete principles and commitments to promote inclusion in corporate activities. The agreement, promoted by Utilitalia (the Federation of water, environmental and energy companies) among its associates, supports inclusive policies at all levels of the organisations, work-life balance measures, transparent and neutral management of merit with respect to diversity of gender, age and, culture, adoption of progress monitoring systems and internal and external awareness-raising policies.

Hera has received **important recognitions** from the main national and global financial indices, dedicated to investors who pay particular attention to policies of inclusion and enhancement of diversity: in 2023, Hera was confirmed for the fourth time within the **Bloomberg Gender-Equality Index**, a global index which evaluates more than 11,700 companies worldwide committed to the promotion and creation of fair and inclusive workplaces, and stands as a core point of reference for the responsible financial community. Overall, it achieved a score of 80/100, up sharply compared to last year and better than the average both in its sector and among the Italian companies evaluated.

Further evidence of the Group’s attention to diversity issues is the score obtained in the “**Diversity & Inclusion Index 2022**” by Refinitiv (formerly Thomson Reuters), in which Hera, out of more than 12,000 companies evaluated, ranked among the TOP10 internationally, first overall among multi-utility companies and first among the Italian companies.

The **partnership with Auticon** continued in 2022, through which an individual with Asperger’s syndrome performed work activities for the Group, which, in turn, contributed to raising awareness and creating an inclusive culture with respect to different cognitive abilities.

In order to make the tools inclusive and accessible to all, the Company **mapped the accessibility of its platforms**, which will lead to a process of adaptation and cultural change.

With the aim of contributing to the dissemination of an inclusive culture also in society and among the residents served by Hera, the Company continued with the production of **videos intended for customers**. The videos are disseminated at customer contact points to **raise people’s awareness of the inclusion of diversity and of the need to overcome stereotypes**. The first video production had focused on raising awareness of deaf people and the second celebrated STEM female colleagues who perform activities at Hera that stereotypes still consider to be traditionally the professional realm of men.

Two seminars entitled “Inclusive Cities” were organised in Bologna and Padua. On both occasions, Hera was able to involve its local stakeholders, extending the dialogue beyond a reflection on the value of residents’ inclusiveness.

Outside of the corporate realm, the Company reaffirmed its support of 4weeks4inclusion, an initiative that since 2020 has been focusing on inclusion issues. Participating alongside the main Italian companies, the Hera Group contributed by producing “**Generational Footprints**”, a webinar to raise awareness of generational differences and similarities.

The Group’s commitment will continue in 2023, focusing on inclusive language issues.

The Group’s commitment to disseminating an inclusive culture beyond the corporate setting will continue in 2023, with its contribution to the 4weeks4inclusion initiative aimed at companies, the completion of inclusion projects aimed at local schools, and the production and dissemination of new inclusive videos for customers.

[405-1]

FEMALE PERSONNEL BY QUALIFICATION

%	2020	2021	2022
Executives	21.7%	22.1%	21.6%
Managers	32.2%	32.8%	33.6%
Total Executives and Managers	29.9%	30.5%	31.1%
Managerial Employees	34.0%	35.7%	36.2%
Total Executives and Managers and Managerial Employees	32.6%	34.0%	34.5%
Non-managerial Employees	45.4%	45.9%	46.4%
Total Employees	42.2%	43.0%	43.6%
Manual Labourers	2.6%	2.5%	2.4%
Total Female Employees	26.7%	27.3%	27.6%

Data referring to 31 December and to the total number of permanent and temporary employees.

Among Managers and Executives, the incidence on the total stands at **31.1%**, an increase compared to 2021. The increase also affects all contractual qualifications that provide for a **managerial role** (executives, managers and management employees): the female percentage was **34.5%** in 2022. To complete the picture on roles of responsibility, in 2022, 43.9% of women advanced in their career as Managers and Executives, and 42.9% as Executives, Managers and Managerial Employees. Lastly, with regard to the composition of the Board of Directors, we note full compliance with the legislation on gender balance based on the provisions of Law 160/2019 and the European Directive of 17 October 2022: the quota reserved for women is **2/5 of the current Board of Directors**.

Of the 854 career advancements that took place in 2022, 235 involved female employees, with the exclusion of blue collar workers where the female population amounts to approximately 2.4% of the total, career advancements involving female workers accounted for 42.9% of the total. 43.9% of new Managers and Executives are women.

The 2022 Sustainability Report prepared by the Utilitalis Foundation on behalf of **Utilitalia**, the Federation of water, environment and energy companies, discusses the sustainability performance of 87 utility companies. Considering the percentage of female Executives in 2021, Hera’s value (22.1%) is more than 5 p.p. higher than the average of the companies evaluated (17%). Considering the percentage of female Managers in 2021, Hera’s value (32.8%) is more than 4 p.p. higher than the average of the companies evaluated (28%). Considering the total percentage of women in 2021, Hera’s value (27.3%) is more than 4 p.p. higher than the average of the companies evaluated (23%).

PERSONNEL BY QUALIFICATION AND GENDER

%	2020	2021	2022
Executives - Women	21.7%	22.1%	21.6%
Managers - Women	32.2%	32.8%	33.6%
Clerical Staff - Women	42.2%	43.0%	43.6%
Manual Labourers - Women	2.6%	2.5%	2.4%
Total - Women	26.7%	27.3%	27.6%
Executives - Men	78.3%	77.9%	78.4%
Managers - Men	67.8%	67.2%	66.4%
Clerical Staff - Men	57.8%	57.0%	56.4%
Manual Labourers – Men	97.4%	97.5%	97.6%
Total - Men	73.3%	72.7%	72.4%

Data referring to 31 December and to the total number of permanent and temporary employees.

PERSONNEL BY AGE CATEGORIES

%	2020	2021	2022
Younger than 30 years of age	5.8%	6.4%	6.7%
Between 30 and 50 years of age	49.0%	48.2%	49.4%
Older than 50 years of age	45.2%	45.4%	43.9%
Total	100.0%	100.0%	100.0%

Data referring to 31 December and to the total number of permanent and temporary employees.

There are 4,131 workers over 50 years of age, representing 44% of total employees. The share of under-30 personnel increased to 7%.

PART-TIME CONTRACTS

Number	2020	2021	2022
Men	45	52	43
Women	349	349	347
Total	394	401	390

Data referring to 31 December and to the total number of permanent and temporary employees.

WORKERS BY GENDER AND TYPE OF CONTRACT (2022)

Number	Men	Women	Total
Full-time	6,769	2,256	9,025
Part-time	43	347	390
Total	6,812	2,603	9,415

Data referring to 31 December and to the total number of permanent and temporary employees.

The **part-time** formula, as governed by current employment contracts, is recognised as a useful tool for responding to the **flexibility** of work organisation and the needs of workers. It is characterised by willingness, reversibility, compatibility with the technical, organisational and production requirements of the Company and the needs of the workers. Requests motivated by family needs for the health protection of or assistance to disabled individuals and duly certified serious medical conditions are taken into consideration as a priority. The request to consider granting part-time employment is submitted by Managers based on the needs of a given service: if the Manager gives a positive opinion, the contract is modified.

In 2022 there were 105 requests for conversion to part-time work, all of which were accepted. Part-time work continues to be the employment formula of choice of female staff.

[405-2]

WOMEN-TO-MEN BASE SALARY RATIO

	%	2021	2022
Executives		86.6%	85.2%
Managers		97.1%	96.5%
Clerical Staff		92.5%	92.5%
Manual Labourers		101.1%	100.4%

This data does not include the following companies: Vallortigara, Recycla, Eco Gas, Etra Energia, Wolmann, Con Energia, Macero Maceratese and Biorg. 3% of Group employees work in these companies.

The **salary differential between women and men** in the Executives category is significant (85.2%): however, this figure is affected by the number of female Directors (5 of 43). The differential is much smaller for Managers, Clerical Staff and Manual Labourers. The differential between male and female employees is motivated by the fact that 64% of managerial employees are men. With regard to Managers, Clerical Staff and Manual Labourers, the ratio between the remuneration of women compared to that of men is equal to 96.5%, 92.5% and 100.4%, respectively. The differential is obviously influenced by the level of company seniority as well as, for Clerical Staff and Manual Labourers, by the level of employment.

The total wage differential between women and men is equal to 102.2% by virtue of the greater presence of men in the Manual Labourers category; the figure is better than the European average (85.6%) and the Italian average (94.5%) (Source: Eurostat 2021). The Energy, Utilities and Environmental Services sector average is 110% (Source: Job pricing 2022).

The Group's remuneration policy system is based on the ability to offer the most appropriate remuneration package based on individual performance achieved, skills deployed, organisational position occupied and specific market-level comparisons. Any pay differential between individuals can be exclusively attributable to these factors and is in no way conditioned by other elements (age, gender, culture, etc.), except as provided for by the applicable National Collective Labour Agreements.

[401-3]

MATERNITY, PATERNITY AND PARENTAL LEAVE

Number	2020	2021	2022
Women who have taken maternity leave	148	185	83
Men who have taken parental leave	-	-	126
Women who have taken parental leave	-	-	239
Total parental leave taken	556	355	365

The data do not include the following companies: Vallortigara, Recycla, Eco Gas, Etra Energia, Wolmann, Con Energia, Macero Maceratese and Biorg. 3% of Group employees work in these companies.

The number of mandatory maternity leave requests used in the Group in 2022 was 83 (average duration 121 days), versus 149 compulsory paternity leave requests (average duration 8 days). Since 2021, the

Company grants 10 days of mandatory paternity leave, but fathers, despite having the right to it, can decide whether to use their leave or not. 365 employees took parental leave (126 men and 239 women), and the average duration per capita was 23 days a year (11 days a year for men and 29 for women).

The percentage of female workers returning from maternity leave is 100%, as is the percentage of female workers who are still employees 12 months after their return.

Development of new skills in the Hera Group

As in previous years, in 2022 too the Hera Group developed a variety of projects and training initiatives for its employees, in order to keep pace with **new skills and the digital transformation**.

Every year we update our skill “map” by evaluating skill evolution (new, changing and declining skills); among the **main initiatives** already launched or in progress on new skills and skills undergoing “transformation” we cite:

- provision of targeted training content to support the enhancement of **smart working practices** with specific focuses dedicated to planning activities, managing online meetings and sharing effective habits and tools to better integrate private and professional life within a hybrid organisational context;
- continuation of **training initiatives within HER@futura**, the Group’s digital transformation project, in line with the “Digital DNA Hera” updated in 2020 and based on three areas of relevant skills (“soft, hard and job-related skills”, subsequently integrated upon organisational agility and data analytics). In 2022, the corporate population with digital proficiency was 54% of the total; the goal is to reach 65% by 2026 and 90% by 2030;
- launch of the “**Corporate Digital Responsibility**” training program aimed at the entire company population to create awareness of the integration of innovation and sustainability;
- continued application of the **change management plan** in the **Digital Workplace** area, with a continuum in the provision of training content focused on the use of Microsoft 365 digital tools and application workshops aimed at digitising operating micro-processes;
- continued application of the **Cyber Guru programme** aimed at raising awareness and large-scale training for the entire company population in the area of IT security;
- specific training initiatives on skills in **industry trends, data analytics, data visualisation and data governance**;
- registration and participation in specific initiatives of the **Digital Innovation** Observatories of the **Milan Polytechnic University** for resources involved in innovation projects in the different Business Units of the Group;
- **Action Learning** initiatives with a Design Thinking and Lean Start Up approach (Digital Lab) aimed at the development of prototypes by transversal groups, for resources with a strong propensity for digital innovation (2 projects with 12 resources involved);
- initiatives for sharing the first Group experiences with a focus on the environment and energy connected to the **National Recovery and Resilience Plan** (PNRR);
- design and launch of the **ecoHERA assessment** aimed at the entire company population to map the knowledge and skills of the business chains and of energy and environmental transitions. The evaluation was sent to 8,763 people with a completion rate of 50% (4,352 profiles), and made it possible to reach a level of green transition proficiency of 21% and energy transition proficiency of 28%; the goal is to exceed the 50% level for both indicators by 2026;
- extension of the boundaries of the “**Circular Economy Manager**” Community, implementation of two initiatives aimed at disseminating the principles and tools of the circular economy (“Circular Data: Data at the Service of the Circular Economy” and “Application of SDG 17: the Management of Partnerships”) and launch of the circular economy round table;
- cross-cutting training initiatives to strengthen **influence and negotiation skills**, in particular for managers (leadership model, interventions on advanced managerial negotiation techniques and institutional training);
- training interventions on **new core business software** applications (for example: Geocall, Salesforce, HR systems and inHERA).

20 **Virtual factory** experiences were created between 2018 and 2022, which involved a total of 115 employees. The projects mainly focused on optimising/improving internal processes, on issues related to the circular economy, or improving the customer experience of our customers.

Further initiatives are planned for **2023**, such as:

- training initiatives on the **development of skills** related to knowledge of business chains, and energy and environmental transitions (ecoHERA Change Management Plan);
- consolidation of the **digital transformation initiatives** of the HER@futura programme, with the launch of a new assessment to map the evolution of digital skills in the Group;
- continuation of the **change management** programme linked to the Digital Workplace - Office 365 programme;
- programmes dedicated to the development of **new ways of working**, with particular reference to the consolidation of one's ability to plan activities and manage meetings, as well as to the dissemination of effective habits and tools to better integrate private and professional life within a hybrid organisational context;
- change management programmes focusing on the development of skills related to the role of **"operator 4.0"** in the Networks sector;
- programme for further of **information security awareness**;
- Initiatives for further dissemination of the **culture of innovation**.

Development of digital skills

The **HER@futura programme continues**, with the aim of developing the dimensions of culture, processes, skills and digital tools through the identification, study and enhancement of the needs and peculiarities of the various areas of the corporate population, taking into consideration the current reference context and its relative complexity. The planned initiatives include: training sessions, webinars, participation in projects with workshops and application sessions, Action learning projects (digital lab and virtual factory), participation in specialisation courses and external activities also in Massive Online Open Courses (MOOC) mode, envisioning and celebrating the results. In particular, in the context of change management relating to the Digital Workplace, a support network has been set up for the digitisation of ways of working and processes, made up of Tutor colleagues from the entire Group, who are assigned to the different Business Units and whose experience and knowledge are collected in a sharing environment called Knowledge Platform. The **Digital Workplace Tutor Support Network** evolves through multiple channels, digital environments and tools and, above all, thanks to the enhancement guaranteed by the Digital Bar, a group of experts in the field of information systems that provides advanced support and automation development.

Since 2018 **over 8,000 employees** have been involved in **at least one training initiative**.

We also launched the **Corporate Digital Responsibility** training programme, whose purpose is to engender awareness of the integration of innovation and sustainability, strengthening the specific skills of employees involved in digital innovation projects, and the reporting, analysis and description of skills required in digital innovation.

Change management process continue alongside events (eight in 2022) held with internal and external guests for the members of the data analytics community on topics such as the digital mindset and the ethics of artificial intelligence. In addition, the Company held internal meetings coordinated by the Chief Executive Officer with the aim of updating Top Management on the progress of the initiatives underway in the various Business Units in the field of digitisation and data strategy. he meetings involved a few dozen people within the Hera Group. During the year, the work team met three times and, also by virtue of the knowledge honed, it was possible to monitor not only individual project initiatives but also the progress of several integrated initiatives launched by the Business Units, both in terms of operation and in the market. The main initiatives presented are:

- Data Strategy course in AcegasApsAmga - overview of data management, governance, data science and business intelligence projects, with a focus on chatbots for electricity and gas distribution customer interaction and data analytics on Company vehicles;
- Application of artificial intelligence to image recognition based on waste quality, bin centring and volume recognition in the field of waste management - "Quality", "Neglect" and "One click for the environment"
- Water data strategy - evolution of operation technology with development of dashboards, alarms and functional logics;
- Launch of data strategy process Herambiente - Dashboard to support sales in HASI;
- Data strategy Heratech - Quality monitoring, quality assurance and optimisation of the communication process for abnormal water consumption and integral solution for the creation of reports in the laboratories;
- Hera Comm data strategy training - Predictive analyses, big data, advanced analytics and optimisation of the imbalance burden associated with consumption;

- Credit management Data Journey - characterisation of each individual customer and customisation of credit recovery processes;
- Application of data strategy to the development of domain data products in the emergency field;
- Reporting 4.0 - development of business intelligence reports of technical/economic nature in the context of management control of environmental services;
- Inrete Data strategy - data governance projects and data product development.

The monitoring of the priority initiatives in the field of digitisation and data analytics is accompanied by the activities and events of the **data community**, which currently sees 392 participants from all the Group's Business Units, and whose purpose is to disseminate data culture and skills; in 2022 the topics covered were:

- **Digital mindset:** what is meant by digitisation and what is needed to advance in the corporate process of digital transformation of the Hera population;
- **Ethics of artificial intelligence:** artificial intelligence is an automated system, programmed to respond to interpretative needs that are too complex for human intelligence alone. Faced with the risk of AI, it is necessary to develop increasingly understandable and transparent systems, to clearly identify dangers and advantages;
- **Graph thinking:** method for rethinking one's business in terms of a network by redefining and understanding the problem in terms of interconnections to represent the complexity of data;
- **Data strategy:** revolving training and definition of technical guidelines. User profiling has been launched to direct a training path suitable for the exercise of the roles envisaged by the model;
- **Sustainability:** sharing of contents and knowledge among different communities to broaden the base of interested parties and foster new exchanges of ideas in order to intercept design needs or, in general, to extend the culture of analytics.

How does the initiative contribute to a responsible digital transformation? Benefits obtained in the Corporate digital responsibility realm (see the dedicated paragraph entitled "Corporate Digital Responsibility")

Social		The strengthening of the data community is aimed at disseminating and learning digital skills; therefore, it promotes the digital inclusion of employees and allows them to develop individual analytical skills.
Technological		Corporate awareness of the importance of disseminating the "data culture" among employees is a sign of a responsible digitisation strategy aimed at transparency of processes and strengthening the Group's identity.

Hera educational for school-work activities

In 2022, the Hera Group continued its activities with the "Hera Educational" system through the creation, for the 2021/2022 school year, of 73 **Pathways for Cross-Cutting Skills and Orientation (Pcto)**, pertaining to the Emilia-Romagna area, comprising 68 individual courses held at the Company and 5 job orientation meetings delivered in group settings; in the second half of 2022, for the 2022/2023 school year, the Company began planning the annual delivery of 90 courses for cross-cutting skills and guidance, and comprising a total of 82 individual courses held at the Company and 8 job orientation meetings. The interventions and guided tours conducted by expert staff of the Group also continued as part of the project "**Hera teaches you a trade... at school**", which, for the 2021/2022 school year, involved the Guglielmo Marconi Technical Institute of Forlì and the Nullo Baldini Technical Institute of Ravenna.

In 2022, the Company created the **three-year curricular integration courses with a view to strategic workforce planning**, which envisage a teaching phase conducted by Hera staff at the Institute - with the resumption of in-class activities since 2022 - and, from the second project year, the creation of paths for enhancing cross-cutting skills and for guidance designed in line with the topics dealt with in the teaching phase. In particular, the Company moved forward with:

- the co-planning and implementation of the training contents for 12th and 13th grade classes in the 2021/2022 school year, for the curricular integration that began in 2019 with the Copernico-Carpeggiani Institute of Ferrara, in relation to the "Energy" training module, which was followed by the delivery of 4 Pcto courses to 12th and 13th grade students on Company premises;
- the co-planning and implementation of the training contents for 10th and 11th grade classes in the 2021/2022 school year, for the curricular integration that began with the Belluzzi-Fioravanti Institute of Bologna, in relation to the "Mechatronics" and "Automation" training modules.

In June 2022, the “**Full Immersion Experience**” was also successfully completed, the second and last experimentation of the **Erasmus+ international project “GrEnFin- Greening Energy Market and Finance”**, funded by the European Commission and implemented by a large international partnership of universities and companies coordinated by the University of Bologna. The project, completed in October 2022, aims to develop the knowledge and skills to support the transition to renewable energy sources and the de-carbonisation of the European economy, creating the role of a new “**Sustainable Energy Expert**”, according to an innovative and interdisciplinary approach.

In 2022, the Hera Group also participated in the experimentation of the new **TRED High School** which, with the coordination of ELIS, offers a four-year training course focused on the issues of ecological and digital transitions.

The Hera Group, through its **Corporate University HerAcademy**, has had for several years **framework agreements with the main universities** in areas in which it operates, such as the University of Bologna, the University of Modena and Reggio Emilia, the University of Ferrara, the University of Padua, the University of Florence, the University of Milan Bicocca, the University of Pisa, the University of Trieste, the University of Udine and the Marche Polytechnic University (in 2022, the total investment amounted to 287,000 euro for projects with universities). With particular reference to the University of Bologna, the initiatives connected with the Framework Agreement renewed in 2019 continued during 2022, which further addresses the need to give continuity to a broad partnership aimed at promoting multidisciplinary activities and projects in the following areas: research, development and innovation; teaching, advanced and permanent training; orientation and job placement; internationalisation; technology transfer; development cooperation, sustainability and social innovation. Scientific collaboration also continued with the University of Milan Bicocca and the Inter-university research centre for public utility services (Crisp) whose general objective is to support the development and implementation of activities envisaged within the HerAcademy. The Group also actively collaborates with some **business schools and innovation centres**, such as: Bologna Business School, LUISS Business School, the Mib School of Management Consortium of Trieste, the Mip Polytechnic of Milan, the SAFE Study and Research Centre, SDA Bocconi, The European House Ambrosetti; the Group also participates in the **scientific committee of Assoknowledge-Confindustria** Innovative and Technological Services.

Sustainability among the “new skills” of young people: the Hera Group’s contribution

Environmental education

For over 15 years, the Hera Group has been promoting many **free environmental education projects** aimed at schools in the areas in which it operates, in order to raise awareness among the youngest participants on respect for the planet’s resources and sustainability. This commitment also continued in 2022. There are numerous educational courses offered under **The Great Machine of the World** and **A Well of Science** programmes, for kindergarten and secondary school, which are renewed and updated every year in terms of contents and methodology. The courses are always engaging and interactive, and include workshop meetings, graphic-creative workshops, role-playing games, debates, challenges and guided tours of the Group’s facilities. Students were able to participate in person or remotely, according to their needs. In 2022, a total of **97,898 students aged 4 to 19 years** joined the project and took part in **3,156 activities**, including scientific laboratories, meetings, graphic-creative laboratories, role-playing games, debates, challenges and guided tours of the Group’s facilities.

The Great Machine of the World programme, which reached its twelfth edition in 2022, involved schools from kindergarten to lower secondary school, with 31 brand new high-level educational courses, designed to support teachers in guiding, enriching and completing the school programme for the youngest, and has become over time an important point of reference for increasing knowledge and awareness in children on **environmental issues** (water, energy and waste), the **circular economy** and more current **social issues**, offering stimuli to engender habits and lifestyles that are more sustainable for the planet.

2,424 classroom activities were carried out between January and June, in which 79,598 pupils aged 4 to 13 years participated, all focusing on topics included in the 2030 Global Agenda and linked to the 17 objectives. The laboratories were designed for face-to-face, remote or hybrid instruction, according to the discrete needs of each school.

In 2022 it was possible to deliver most activities in person, just as it was before the health emergency, and this allowed for greater involvement and active participation in the laboratories.

There were **many innovations introduced in 2022**: a play laboratory to shed light on the most common errors in separate waste collection, with the help of the Waste Inspector and a special transparent Hera bin; a Citizen Science course on the topic of surface water quality; three live green events, coinciding with World Water, Earth and Energy Saving Day, with engaging testimonials presented by guests known to girls and boys (such as cartoonist Massimo Bonfatti, actor and YouTuber Roberto Mercadini and author Giovanni Caviezel); new contents for the app (GMM AR+) designed to let pupils play with augmented reality and bring useful anti-waste advice on environmental issues to the classroom and family, through tools and languages closer to young people. We proposed two experimental workshops on inclusive culture and language using the new interactive game Diversity@School.

A second theme, that of the environment and waste, has been added to the Kids for future course, whose purpose is to develop the sensitivity of kindergarten children towards respect for the environment by sharing with them the very first rules on correct separate waste collection.

In addition, the Company offered three new training webinars on the 2030 Agenda to all kindergarten, primary and lower secondary teachers of local schools.

The Hera site for schools has been enhanced with a **new section to support teachers**, with teaching kits and in-depth multimedia resources, to consult or download to complete courses in the classroom, even in self-study mode. We also refreshed the section dedicated to challenges and games to have fun with the family while learning about the environment, as well as three podcasts and a video with waste-prevention tips.

The science dissemination programme entitled **A Well of science**, which Hera dedicates to upper secondary schools, involved **18,300 girls and boys in 732 interdisciplinary activities** between February and May. The workshops and meetings have been designed to spark young people's curiosity about current topics such as science, innovation, technology and sustainability, stimulate the desire for knowledge and critical thinking, and develop the ability to understand the challenges of the future and face them as protagonists.

Among the objectives of the activities there is also the emphasis on the central role of correct scientific information and communication.

"What if...? –Causes and effects of an interconnected world" is the theme of the 16th edition which envisaged face-to-face and remote activities on topics related to the objectives of the 2030 Agenda.

The programme includes 39 new proposals: scientific laboratories on water, waste and CO₂; interviews of young people with scientists such as Vincenzo Balzani on the energy theme, or with voices of innovative thinking, technological development and sustainable corporate visions; streaming events with Telmo Pievani, Stefano Mancuso and Roberto Mercalli, and 2 connections with researchers from the Concordia base in Antarctica. The participants engage in debates and Discussion Games on environmental and current topics.

Many topics were covered, for example: renewable energy, recycling and innovation in plastics, green professions of the future, research at the ends of the Earth, food of the future, sustainable consumption, climate change, mobility but also how to communicate science between scientific opinions and truths, the risks of the Web and fake news presented by experts from the Postal Police.

Among new proposals there is the special Citizen Science laboratory, with several meetings that allowed students to experience firsthand that science can also belong to residents; girls and boys collected and processed data in the field, thus actively participating and contributing in a concrete way to scientific research projects already started by bodies operating in the environmental field, such as that of Fresh Water Watch on the quality of surface waters.

The Hera Group educational project is also being adopted in some cities in the Triveneto area.

AcegasApsAmga too has always played the role of public utility, not only as a provider of efficient and effective public services, but also as an all-round active player in promoting a culture of sustainability and inclusiveness to the benefit of quality of life and protection of resources. The Company is concretely committed to environmental education dedicated to kindergarten and compulsory school children, making available an extensive programme that includes visits to corporate facilities, and specific educational and informational projects such as The Great Machine of the World and the Well of Science. The proposed activities, constantly refreshed to keep pace with changing economic and social scenarios, build on the awareness gained during the pandemic, which required immediate and effective reaction capacity and innovation. Indeed, new teaching methods and connection have been tested, both with institutes and with young people, for the purpose of promoting in students an environmental awareness

aimed at sustainability and inclusiveness, which, in turn, is essential for contributing to the achievement of 2030 Agenda goals.

ENVIRONMENTAL EDUCATION PROJECTS

Number	2020	2021	2022
Participating students	93,053	82,178	111,091
School involved	1,281	818	1,160
Teachers involved	8,039	6,350	9,432

Compared to 2021, in 2022 there was an increase in the number of students, schools and teachers involved in environmental education projects as a result of the resumption of activities after the end of the health emergency, which had essentially disrupted the organisation of academic training.

A total of 97,898 students and 8,278 teachers from 934 kindergarten, primary and secondary schools were involved in the area managed by **Hera in Emilia-Romagna** 11,325 students and 1,036 teachers were involved in the area managed by **AcegasApsAmga**, while 1,868 students and 118 teachers were involved in the **Marche** region.

4.05 Resilience and adaptation

Resilient management of aqueducts and water sources

Relations with institutions

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The quality of **relations with institutions**, which play a role both in territorial planning and in the management of emergency events, is essential for the mitigation of the risk and impacts deriving from climate change.

Concerning territorial planning issues, at the national level the expectation is to have soon an organic reference framework with the National Plan for adaptation to climate change, the main planning tool for dealing with climate emergencies. The Plan identifies four objectives: contain the vulnerability of natural, social and economic systems to the impacts of climate change; increase their ability to adapt; improve the exploitation of any opportunities; and promote the coordination of actions at the various levels of governance. As of December 2022, an updated version of the Plan is currently available and awaiting final approval. The Government is also preparing to make a “Control room for the fight against the water emergency” operational before the summer of 2023 with the aim of:

- defining an extraordinary national water plan in agreement with the Regions and local authorities in order to identify the priorities for intervention and their adequate programming, also using new technologies;
- adopting an urgent regulatory provision that contains the necessary simplifications and derogations, and accelerating the essential work to deal with the drought;
- launching an awareness campaign on the responsible use of water resources;
- identifying a Special Commissioner with executive powers with respect to what was programmed by the Control room.

At the river basin level, the information frameworks and sector plans developed by the district Basin Authorities are essential. For the Po Valley district, the significant impacts of climate change (drought on one side, floods on the other) are considered in the Water Balance Plan and in the Flood Risk Management Plan. The District Plans are completed by the Po District Water Management Plan.

An important role is played by the Regions and their Agencies both in the planning phase and in the management phase of emergency events. The Emilia-Romagna Region defines the information frameworks of availability and needs and the lines of action in its Water Protection Plan (soon to be updated).

The Emilia-Romagna Territorial Agency for Water and Waste Services (Atersir) approves the investment plans for the integrated water service which define, for each territorial area, not only the more “standard” interventions for the maintenance and development of services, but also those aimed at increasing the resilience of supply, adduction and distribution systems and urban drainage systems. **In these plans, however, there is no space for large strategic works (for example reservoirs) which, as recalled further on, need extraordinary planning, financing and construction procedures.**

For water supply, specific roundtables coordinated by the Region and/or the Civil Protection Agency are set up to define short/medium-term management and sampling programmes at significant points should conditions of scarcity and competitive uses of the water resource emerge in certain periods of the year or emergency situations (for example, releases from the artificial basins of the upper Reno valley and derivations from the Casalecchio dam, management of sources in Romagna during dry summer periods).

Hera participated in some initiatives of the national Civil Protection Department carried out as part of the European project “MUHA” (MUltiHAzard framework for water related risks management). The main objectives of this project are to improve the forecasting, prevention and mitigation capabilities of natural and man-made risks in water supply systems, and to strengthen cooperation between management bodies and civil protection systems at national, European and international level.

In particular, Hera participated in the 2022 RIWAX (RIdracoli WAter crisis eXercise) drill in March 2022, which simulated a water shortage event with progressively increasing severity on the Radracoli reservoir and on the distribution systems connected to it (Acquedotto della Romagna), with related communications among the entities involved (Emilia-Romagna Region, AUSL Romagna Health Authority, Regional Agency for territorial security and civil protection, Atersir, Arpa, Observatory on water use at the Basin Authority of the Po District, Romagna acque, and Hera) and possible mitigation actions.

Hera has also endorsed the project's “action plan”, undertaking to adopt the best practices highlighted therein.

Limits of management leverage of water service operators and need for institutional commitment

Beyond the interventions “intended to promote greater resilience” currently envisaged in the investment plans of the integrated water service approved by the competent local bodies, and the mitigation management actions that can be implemented under the coordination of the aforementioned national and regional bodies, it is clear that a **significant reduction in the risk of potential unavailability of water resources for drinking water needs can only be achieved by planning and building important water banking and system interconnection infrastructures** which:

- must be effective in terms of technical response (e.g., compensation capacity such as to respond to increasingly frequent and severe multi-year lows);
- must be environmentally compatible and socially accepted;
- must be organically included in the territorial planning instruments;
- require exceptional financial resources, certainly far exceeding those that can be made available by the fees of the integrated water service.

The operator of the integrated water service can provide data and information within its purview, that are necessary to define the current and prospective scenario for infrastructural development, as well as make its design and construction know-how available in the various stages of development of the works, and of management.

However, these are works which, due to their technical and economic scope and their environmental and social impact, need a **firm institutional commitment**, especially in a country like Italy where planning and approval processes can be particularly complex and lengthy, with a high number of subjects called to carry out technical-administrative and consultative roles often lacking coordination.

The severity of the context and prospects undoubtedly requires the rapid implementation of **extraordinary actions substantially outside the management leverage of the water service operators, and which are necessary** in order to:

- secure the financial resources for the construction of large works, such as reservoirs (whether they are dedicated to drinking water regulation or for multiple uses), and large transfer/interconnection schemes
- speed up all phases of the administrative and technical processes, from the approval of local plans, to the authorizations of individual works, to the procedures for assigning the works, up to testing and commissioning.

Drought risk monitoring, identification and classification

At present, the setting up of a **consolidated methodology for the classification of drought risk** differentiated on the basis of the territorial context is being defined. In fact, initiatives are underway aimed at quantifying the impact of climate change on the water distribution networks, and at identifying solutions to improve the resilience of the network itself.

To define the likelihood of intensive or prolonged droughts in Emilia-Romagna and interpret how these events affect Hera's supply sources, it was necessary to **analyse the statistical characteristics** of the precipitation events as well as of the surface runoff and of groundwater levels. The analysis was aimed at defining both the ways in which droughts occur and the delay with which they affect Hera's different supply sources. The results consist of information regarding, for example, the optimal balance between surface and underground supplies, network connections, need for additional reserves or alternative supply sources.

Thanks to the data collected and the analyses carried out in partnership with the University of Bologna and Arpa, in 2021 the Company completed an initial development step of the system called “**Resilient dashboard**”, which is able to collect, display and analyse data from heterogeneous sources (surface water, groundwater and precipitation). The monitoring project was consolidated and expanded in 2022 by integrating the Resilient dashboard into the Hera systems, a **platform updated in near real time** with data relating to weather and climate trends, and surface and underground sources in the aqueduct macrosystems of the area managed. The variables of interest, temperature and rainfall, flow rates of springs and levels of rivers or reservoirs, as well as well levels, are compared with the historical records at a variable depth, allowing the trend of the variable to be measured in statistical terms for each aqueduct macro-area. Through a dynamic weighing system, the Resilient dashboard will make it possible to appreciate the state of water criticality of macro-areas, also in relation to the trend in water demand, becoming a support tool for management actions and investment decisions to deal with climate change.

How does the initiative contribute to responsible digital transformation? The benefits achieved in the Corporate digital responsibility dimensions (see the dedicated section "Corporate digital responsibility")

Environmental		Creation of a predictive model and a digital platform for monitoring the consistency of groundwater and surface water resources, aimed at developing resilient water networks, reserves and sources of supply.

In 2022, in collaboration with the University of Bologna, the Company also **analysed the potential of the aquifers** of the Arpolli (Gaggio Montano) and Tolè (Vergato) spring systems in order to evaluate scenarios for optimising and/or enhancing the underground detection of the Apennine area. This activity will continue over the years, with an in-depth assessment of possible project scenarios.

With the use of the **FVG aqueducts Masterplan**, a tool for analysing drinking water requirements for assessing the degree of reliability of the availability of sources from a geological, climatic, morphological and land use point of view, in scenarios of severe environmental stress linked to climate change and consequent extreme events (fires, floods and prolonged droughts) AcegasApsAmga identified the main structural interventions to be implemented to interconnect the various aqueduct systems of the Friuli Venezia Giulia region and some municipalities in eastern Veneto. The Masterplan also defines the prioritisation of interventions based on various drivers, including housing intensity, the risk of default of supply sources, the service standards set by national and EU regulations.

An agreement was signed with the Marche Polytechnic University within the **Marche Multiservizi** scope, for the critical and experimental analysis of the phenomena of ageing and wear of materials and infrastructures, with the ultimate aim of supporting the design, construction and management of new distribution systems and purification. Furthermore, a feasibility study was launched in partnership with the Universities of Ancona and Bologna, to identify new supply sources for the province of Pesaro and Urbino through the "Action plan for the adaptive management of the resource against drought and water scarcity".

With regard to the classification of the areas served by Hera based on the drought risk available from external sources, see the paragraph "Quality of Drinking Water" in chapter "Sustainable Management of Water Resources".

Drought risk management and mitigation

From the point of view of risk mitigation and management initiatives, the water stress situation that occurred in particular in the summer of 2022 made it possible to verify the actions implemented over the years in order to **increase the resilience of the aqueduct systems**, and to launch a variety of projects aimed at increasing the level of service with a view to sustainability and efficiency.

From the point of view of management interventions, the strategy linked to the **use of innovative technologies in leak detection** continued in 2022, in order to increase the resilience of the aqueduct system by combining experimental technologies with traditional acoustic detection. In addition to the use of satellite radars in the Ravenna area, we point out to the application of cosmic ray technology in the Modena and Forlì areas and the use of next generation metres equipped with an acoustic sensor in the municipality of Conselice. This activity is developed in synergy with other activities aimed at increasing the resilience of aqueduct systems, such as predictive maintenance of networks and the creation of defined districts.

Alongside the development of an increasingly smart network, the **creation of districts** has in fact consolidated the network's effectiveness in reducing waste volumes, gradually integrating with other projects, such as the introduction of smart metres or the development of active leak detection, to increasingly refine district water amounts and monitor the trend of variables of interest for monitoring leaks. The progressive extension of districts led to the monitoring of 14,000 kilometres of network in 2022, with an increase of 700 kilometres compared to the previous year, covering 51% of the network managed by Hera Spa. The goal for 2026 is to extend the district network up to 70% of the total.

The use of **predictive algorithms** has been consolidated to minimise dispersions from the water network, to carry out active leak detection activities and to upgrade the network with greater effectiveness. The algorithms guide these activities, adopting typical variables of the reference area both of the aqueduct infrastructure and of the characteristics of the environment (soil, salinity, land subsidence, temperature). The project will continue by developing an algorithm at Hera Spa, with the support of the University of Bologna and the data intelligence skills present in the Group.

The **remote reading project for water-demanding users** continued also in 2022, in line with the objectives of the Business plan, which envisages the installation of remote reading devices for around

7,500 users by 2026, in order to measure 25% of the volumes distributed throughout the Hera Spa area of operation. At the end of 2022, the remote read volume corresponds to approximately 5% of the volume distributed within the Hera SpA area of operation. Remote read users can benefit from the remote reading dashboard, a tool which not only allows viewing consumption on a daily or even hourly basis, but also receiving alerts on significant events, such as a possible leak in the internal system.

Over the period of the Plan (2023-2026) systems for the automation of plant structures and **pressure adjustment** will be increasingly consolidated and extended, which will make water networks even more resilient to environmental stresses. Adaptive network management, regulated on the basis of variable demand profiles, will evolve towards **Smart water grids**, making it possible to actively control the network remotely with the possibility of adjusting the pressure.

For the Veneto and Friuli-Venezia Giulia areas, AcegasApsAmga also participated in the public tender "Procedures for the Submission of Proposals for Interventions aimed at **Reducing Leaks in the Water Distribution Networks**, including Digitisation and Monitoring of the Networks financed with PNRR Funds – M2C4 – I4.2". Measures such as the installation of smart metres, the efficiency of leak detection, the reduction of pressures and the application of algorithms based on machine learning to optimise pipeline repairs have been funded. With these interventions it is estimated that by 2026 it will be possible to save 4.5 million cubic metres every year.

Main interventions, in progress and planned

In addition to the management activities, interventions required to **enhance the sources** were of considerable importance, resulting in the construction of new wells in Modena, Ravenna and Rimini, the **interconnection of the aqueduct systems** in all the areas managed by Hera Spa, and the **upgrading of the collection pumps from the Po River** to Ferrara, for a total amount of approximately 1.4 million euro. In particular, we cite the continuation of the design and construction works relating to the upgrading of the water supply system of Castel Bolognese (Ra) and other municipalities in the Imola area, which will connect the current aqueduct systems, guaranteeing an important water reserve; a procurement procedure was launched in 2022 for the executive design and construction of the new 160 litres-per-second purifier and the optimisation of the water treatment section for industrial use. In the area of supply and distribution of treated water, works were started for the construction of the first section of the network up to Imola, while the executive design of the second section of the network, from Imola towards Castel Bolognese, was completed.

As regards the **main investments**, the interventions that will be partly designed and partly designed and implemented within the Hera Spa area are listed below:

- Construction of the Centro Manzolino treatment plant, in the municipality of San Giovanni in Persiceto (Bologna)
- Upgrading of the Arpoli aqueduct supply system in the municipality of Gaggio Montano (Bologna)
- Renewal and upgrading of the Feoga adductor in the municipalities of Castiglione dei Pepoli and Grizzana (Bologna)
- Construction of the new tank and upgrading of the adductor serving the water network of Borgo Tossignano (Bologna)
- Renewal of the wells at the Tiro a Segno and San Vitale plants, in the municipality of Bologna (Bologna)
- Upgrading of the water supply system from the plains to the mountains in the municipalities of Prignano sul Secchia and Sassuolo (Modena)
- Replacement of floodplain wells, new wells and increase in concessions at the Stellata plant, in the municipality of Bondeno (Ferrara)
- Construction of new wells and increase in concessions at the Pontelagoscuro plant, in the municipality of Ferrara (Ferrara)
- Upgrading of the supply network of Santarcangelo di Romagna (Rimini)
- Rationalisation of the Senatello system in the municipality of Casteldelci (Rimini)

The **connection between the aqueduct of Trieste and the Slovenian** one of Capodistria-Pirano and Isola d'Istria is underway at AcegasApsAmga, to ensure the possibility of mutual aid in the event of a water shortage in one of the two aqueduct systems. In addition to technical issues, in this case it is necessary to solve problems of a geopolitical, administrative and water quality nature. For this reason, the work of a cross-border working group is underway, and the group is expected to conclude its work by the next summer season.

In the Padua area, AcegasApsAmga has created **interconnections with the Veneto regional aqueduct system** in the last five years, benefiting from alternative supply sources. Other activities are underway to upgrade the water interconnections with the operators adjacent to the area served by AcegasApsAmga, planned for the years 2023-2024.

For a more resilient management of the system and to manage the water network in a flexible way, guaranteeing continuity of service even in the event of emergency situations, **redevelopment projects for five tanks** were planned in the period 2023-2026 (and partially started), which provide for the construction and hydraulic redevelopment of damaged components, as well as the review of the piping and functional efficiency interventions that will allow the reduction of leaks.

Finally, to deal with the reduction in water availability due to drought, AcegasApsAmga is providing for the **upgrading and extraordinary maintenance of some strategic water collection systems** (adaptation of wellheads for installation of mechanical lifts, purchase of new pumps, special maintenance to maintain performance supply hydraulics, etc.), and for the energy resilience of the nerve centres of the aqueduct system through the installation or preparation of generators (interventions planned for the 2023-2024 period).

The overall amount of interventions described above totals roughly 30 million euro, partially financed by the NRRP.

In the **Marche** region, interventions are being studied to further differentiate the sources of supply, develop the interconnection of the aqueducts and further develop systems of hydraulic districts of the distribution networks. These projects are currently waiting for funding from the competent bodies.

Evaluation of hydraulic risk and Group asset flooding for insurance purposes

The risk assessment project called “**Analysis of Hydraulic Risk in the Context of Climate Change**” was completed in 2022 within the risk management activities carried out within the Hera Group.

The purpose of the project was to investigate the **hydraulic risk**, in terms of material damage and damage from interruption of operational activities, that the physical assets of the Hera Group (plants and infrastructures) may suffer, assessing their exposure both to the current climate situation and to future climate scenarios. Indeed, climate change affects rainfall, the frequency and severity of extreme events such as **floods**.

The result of the project was to provide the Group companies with a series of **tools to support decisions** aimed at increasing resilience to flooding events. The following two types of flood events were evaluated:

- **flash floods:** intense rainfall in a short period of time capable of generating damage from wetting even in the absence of a watercourse or river flooding;
- **river floods:** intense rainfall in a short period of time capable of generating damage from wetting caused by the overflowing of watercourses or river flooding.

In particular:

- through a probabilistic simulation model, some economic quantities have been defined capable of expressing hypothetical material damage to corporate assets following **flood events**, considering both the current and hypothetical future climate conditions;
- a single key risk indicator (KRI) was defined and calculated in order to represent the **level of hydraulic risk** of each of the 137 physical corporate assets under investigation, using a single measurement scale and taking into consideration the characteristics of each single asset also in terms of hypothetical damages from operational interruption;
- **suggestions were provided to the Group companies for the prevention and mitigation of damages** (as defined above) in order to deal with the adverse atmospheric events associated with climate change;
- following an analysis of the characteristics of the insurance coverage currently in place, it was established that these are **suitable for dealing** with the economic aspects of the damages resulting from flood events deriving from the current and hypothetical future climate events.

Interventions in gas and electricity networks to deal with hydrogeological instability

In the face of adverse climatic events and situations of **hydrogeological instability** found in the Emilia-Romagna area, in recent years an intense **partnership** has been in place between the company Inrete Distribuzione Energia, the Emilia-Romagna Region and the Department of Civil Protection, aimed at allocating some funding to restore emergency situations and increase synergies between infrastructure managers and public bodies.

In particular, the Civil Protection Department is responsible for carrying out a preliminary reconnaissance phase to capture any problems on the regional area. The proposed interventions are evaluated and, in the event of a positive outcome, financed, following the collection of reports, which may be provided by infrastructure management bodies, municipalities, public bodies and reclamation consortia. Inrete Distribuzione Energia manages electricity lines and about two thousand kilometres of gas network in the foothills and mountains, often subject to instability; this makes it necessary and desirable to collaborate closely with the entities responsible for **safeguarding the local area**.

The interventions implemented in this perspective are numerous. Indeed, between 2019 and 2021, a total of **22 interventions** (19 in the gas sector and 3 in the electricity sector) were brought to the evaluation of the Emilia-Romagna Region for possible overall approval of 3.9 million euro in loans covered by the Region. Of these interventions, **18 received approval** for the regional funding, for a total amount of 2.7 million. Of the 18 interventions:

- **seven were completed in 2020** and fully paid with the disbursement of 1.1 million euro;
- **three were completed in 2021** and fully paid with the disbursement of approximately 460,000 euro;
- **seven more were completed between 2021 and 2022** and paid in 2022 for a disbursed amount of around 960,000 euro;
- an intervention is currently excluded from funding due to failure to complete it within the times set by the Decree. It could be completed by 2023, and the possibility of requesting the re-allocation of the previously authorised amount will be evaluated.

Of the four interventions not financed by the Region for which a request for financial assistance with reconnaissance was made in 2020 and 2021, two interventions were completed with **internal financial resources** and two are still in the study/planning phase.

Electricity grid resilience

Inrete Distribuzione Energia has developed a multi-year work plan to **increase the resilience of the electricity system in accordance** with the ARERA guidelines. The Plan takes into consideration the risk factor deriving from the **formation of sleeves of ice and snow**.

The specifications of the plan was defined on the basis of the mechanical stresses and the mechanical characteristics of the conductors, the geometric characteristics of the lines and their geographical location and altitude; it includes the **Modena-province municipalities** of Fanano, Fiumalbo, Guiglia, Lama Mocogno, Montecreto, Montese, Pavullo nel Frignano, Pievepelago, Polinago, Riolunato, Sestola and Zocca. An analysis of the medium voltage distribution network was performed in order to identify the scope of the works at hand; the process identified the secondary substations which feed the most critical users and considered the best supply route, subsequently pinpointing all the stretches of overhead conductors with an unsuitable section which needed to be replaced.

The type of intervention planned for the resolution of the identified criticalities mainly consists in the **replacement of stretches of bare overhead conductors**, whose sections are not suitable to withstand the stresses considered, with overhead corded cables. The plan is made up of **54 interventions** over 15 medium voltage distribution lines. The goal is to optimise activities, giving priority to the most critical areas and with a view to **minimising any adverse impact on the distribution service**, to reducing the risk of disservice and to upgrading of power supply lines.

As of 2022, a total of **28 interventions** have been completed, with five more in the execution phase: this is a medium voltage lines of **38.3 km** (there were 19 at the end of 2021), which matches **56.7% of the expected total**.

For 2023, the expectation is to complete the upgrading of 54.8 km of medium voltage lines (81.1% of the total).

Furthermore, among the various projects intended to promote the resilience of the electricity grid, there are also **new operating methods of remote inspection and management**. In order to manage the electricity distribution network more effectively, the Group is in fact implementing projects aimed at optimising the inspection and maintenance of assets through the use of technology. Among these, the **use of drones** will make it possible to carry out a significantly higher number of preventive inspections of overhead power lines, capturing potential infrastructure problems more frequently. The use of **robots** and the extension of the remote control of the secondary substations and their fibre optic connection will allow to intervene remotely without the need for teams, thus reducing costs and intervention times. The project will play an even more decisive role in the Apennine areas, where atmospheric events often cause difficulties for technical operations.

Health and safety management during the health emergency

A regulatory document was developed to implement the national protocol signed by the social partners with government representatives in attendance. The document represents the set of prevention and protection measures adopted by the Hera Group to combat the spread of the virus. The document has been the subject of various assessments by the competent authorities (AUSL Health Authority/Labour Inspectorate), which confirmed the validity of its contents, and was presented and signed by national trade union organisations as early as 15 May 2020. The protocol is continuously updated in order to always be consistent with the development of the national regulatory framework and the evolution of prevention and protection measures.

With reference to the specificity of its business and its territorial presence, the Group has established criteria for identifying risk scenarios due to the spread of the Covid-19 virus, within an Enterprise Risk Management view. These criteria, together with the measures defined in the Group protocol, were used to update the risk assessment document. The choice made to have a single Group model for risk assessment and the definition of prevention and protection measures has made it possible to have an integrated and synergistic approach to the pandemic emergency, which is still ongoing. Indeed, the protocol is supplemented by measures adopted, with implementation being periodically monitored. In this regard, a specific control checklist has been developed for periodic monitoring by the managers of the various organisational units.

In line with the guidelines issued by the Health Authorities and for the protection of employees, the Company defined and updated over time a dedicated procedure for the management of employees who are deemed fragile due to current or previous medical conditions that render them susceptible to particularly serious in case of infection. This procedure was developed with the collaboration of competent doctors, always ensuring the implementation of patient confidentiality.

Additional activities (other than standard ones) for cleaning and sanitising the corporate premises have been envisaged; they require the use of disinfectants and their frequency has been intensified. All personnel assigned to external premises were constantly provided with the personal protective equipment necessary to cope with the health emergency (e.g., respiratory protection masks, disinfectant gels, gloves and disposable overalls). In the company offices, disinfectant gel dispensers were placed in the entrances and near common areas, and respiratory protective devices such as FFP2 masks were made available to employees. Behavioural rules have been defined in the company canteens and other common areas which provide for staggering entry times and specific space management logistics that allow for adequate social distancing.

Finally, methods for carrying out field services were defined by introducing health safety standards for workers, including the reduction of travel (also through the application of the “half at home” mode for maintenance workers), shifts to access changing rooms or a review of work shifts to reduce the overlapping of the operating teams.

In the spring of 2021, the Group promoted an additional campaign to prevent the spread of Covid-19 by giving employees the possibility to get vaccinated, on a voluntary basis, in workplaces or facilities affiliated with and authorized by the competent regional health authorities. More than 400 colleagues joined this initiative.

5. Governance and creating value

5.01 Objectives, performance and targets

What we said we would do	What we did	SDGs	Progress*
Sustainability and risk management			
Purpose-driven Code of Ethics: update the Code of Ethics (fifth update) based on the corporate purpose included in the Articles of Association with the participation of all employees.	The Code of Ethics was updated, following a participatory review process involving workers in various forms. The corporate purpose was included. (see p. 194)	-	
Economic value to stakeholders			
Approximately 2 billion euro: added value to stakeholders by 2025 (+13% compared to 2021).	In 2022, added value for stakeholders came to 1,674 million euro (-5.4% compared to 2021). (see p. 202)	8	
3.8 billion euro. Investments made in the period 2021-2025.	709.5 million euro. Investments made in 2022 (+21% compared to 2021). (see p. 204)	8	
Shareholders and financial institutions			
Increase ESG debt instruments.	At 2022, the share of sustainable bonds issued by Hera Spa out of the total is 49% (40% in 2021). The 2022 share is increasing due to the issuance of the Green Bond in line with the European Taxonomy set up in May 2022. (see p. 212)	-	
Communications with our stakeholders			
Continue to listen to and involve the local area's stakeholders through the launch of the new HeraLAB model for two areas beginning in June 2022. Complete the three local HeraLAB initiatives in the Rimini area and the three initiatives in the Bologna area.	Engagement activities launched in 2022 for the two new HeraLABs in Modena and Imola, whose discussion activities will focus on the topic of carbon neutrality. Two projects currently being implemented in the Rimini and Bologna areas. Work begun on seven of the eight initiatives proposed by the Modena and Forlì-Cesena Labs. (see p. 220)	11; 17	
*  Result achieved or in line with planning;  Result with slight variance compared to planning;  Result with significant variance compared to planning.			
What we will do		SDGs	
Sustainability and risk management			
Organise initiatives to distribute the new purpose-driven Code of Ethics, update and continue training on the Code of Ethics for new employees.		-	
Economic value to stakeholders			
2.1 billion euro: added value for stakeholders by 2026 (+25% compared to 2022).		8	

What we will do	SDGs
4 billion euro: investments made between 2022 and 2026 (54% by 2022).	8
Shareholders and financial institutions	
60% of 2022-2026 investments in activities aligned with the EU Taxonomy.	8
Communications with our stakeholders	
Complete the 4 local HeraLAB initiatives: 2 in the Modena area and 2 in the Forlì-Cesena area.	
Launch the third edition of HeraLAB in the Imola and Modena areas (6 meetings planned for 2023). Define the local areas and the topic on which to focus the 2024 HeraLABs.	11, 17

5.02 Sustainability and risk management

Corporate governance

Hera is a multi-utility company with a majority public sector shareholding and a markedly diversified shareholder base. In terms of corporate governance, the Group has adopted statutory procedures, paying specific attention to the implementation of the principles contained in the code of corporate governance drafted by the Corporate Governance Committee of listed companies.

[2-9]
[2-12]
[2-13]
[405-1]

The main governance bodies of Hera are the Board of Directors, the Executive Committee, the Board of Statutory Auditors, the internal committees and the Shareholders Meeting. The Board of Directors is supported in its duties by two committees: the Remuneration Committee and the Control and Risks Committee. The Board of Directors has also established a Supervisory Board pursuant to Legislative Decree no. 231/2001, as well as an Ethics and Sustainability Committee to monitor, disseminate and implement the principles in Hera Group's Code of Ethics and the supervision of the sustainability aspects linked to the business activities.

All detailed information concerning the Group's corporate governance and the functioning of its main bodies is dealt with in the Corporate Governance Report in the Group's consolidated and separate financial statements approved by the Board of Directors on 21 March 2023.

The Ethics and Sustainability Committee

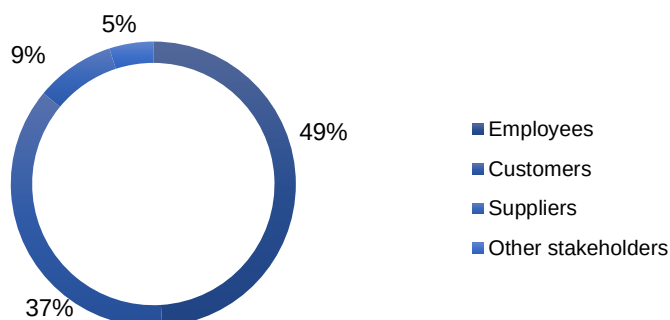
[2-12]
[2-13]
[2-16]
[2-25]

The Ethics and Sustainability Committee, appointed by Hera Spa's Board of Directors on 13 May 2020, has the task of monitoring the divulgation and implementation of the Code of Ethics and exercising the functions for the supervision of the sustainability aspects associated with the exercise of the business activities. In particular: it receives reports of violations of the Code and assesses whether or not proceedings may be initiated, monitors the implementation of sustainability policies, formulates, at the request of the Board of Directors, an opinion on specific sustainability issues, examines company procedures on social and environmental issues, and examines in advance the sustainability report to be submitted to the Board of Directors.

The Hera Ethics and Sustainability Committee is made up of four members, including at least one Independent Director of Hera Spa, the Director of the Shared Value and Sustainability Department and at least one external member with experience in social responsibility and sustainability. The Committee met eight times in 2022. On 21 March 2023, the Ethics and Sustainability Committee submitted the annual report on the activities carried out and on reports received during 2022 as well as a summary of the main business outcomes over the three-year period 2020-2022 to the Board of Directors of Hera Spa.

In 2022 the Ethics and Sustainability Committee received 9 reports. Five reports came from workers, two from customers, one from suppliers and one from other stakeholders; 271 reports have been examined by the Ethics and Sustainability Committee since 2008.

REPORTS TO THE ETHICS AND SUSTAINABILITY COMMITTEE FOR STAKEHOLDERS (2008-2021)



The five reports from **workers** concerned the health and safety of workers, time management and flexible working and the valorisation of employees and collaborators. The reports received from workers at 31 December 2022 are all closed. On the basis of the investigations concluded, the Committee found no violations of the Code of Ethics. The **Committee's contribution** consisted in facilitating dialogue between the worker and the company and verifying the conformity of reported behaviour with the Code of Ethics. For some of the issues raised, the reports were referred to the relevant structure, on the basis of Article 73 Limits to the Committee's authority.

The two reports received from **customers** concerned the clarity and completeness of a response to a complaint (and subsequent repeated complaint), the timeliness of the resolution of the problem highlighted by the customer through the complaint, and the clarity and completeness of a commercial communication addressed to customers. The reports received from customers at 31 December 2022 are all closed. On the basis of the investigations concluded, the Committee found no violations of the Code of Ethics. The **Committee's contribution** was aimed at facilitating dialogue between the reporting party and the company, promoting improvements in processes directed towards internal structures, and ensuring that the report file was properly closed. With regard to one report, the Committee suggested Hera Comm pursue greater clarity and completeness in its commercial communications to customers.

The Committee received a report from a **supplier** concerning social responsibility in procurement (Art. 52), in particular to a request for amending the tender conditions defined by the Hera Group. On the basis of the investigations carried out, the Committee found no violations of the Code of Ethics, as the supplier's request was not acceptable and constituted a conditioning of the offer during a tender procedure. Some aspects of reporting were not addressed, based on Art. 73 Limits on the Committee's authority.

A final report received from a **citizen** (other stakeholders) was related to the topic of community and citizen relations (Art. 66), in particular regarding the handling of a report made by a citizen via the call centre and the "Rifiutologo" app about a damaged waste bin. On the basis of the investigations carried out, the Committee found no violations of the Code of Ethics. The **Committee's contribution** consisted of an audit of compliance with the timeframe of internal procedures and an in-depth examination of the way in which reports are handled through the "Rifiutologo" app and call centre. The Committee acknowledged the error to the reporting person and valorised the data on the number of reports received by the "Rifiutologo" and call centre in 2022, which shows the company's willingness to implement Art. 66 of the Code of Ethics.

In the area of sustainability, in 2020 the Committee defined **three areas for action for the three-year mandate** listed hereafter: replanning the training programme for the 5.0 Code of Ethics, updating the Creating shared value framework, and reporting and monitoring the adoption of the **Task Force Recommendations on Climate-related Financial Disclosure**.

Following the shared action plan, over the course of 2022, the Committee discussed the draft **Sustainability Report** and preventively examined its main contents before it was sent to the Board of Directors, discussed the four Group **sustainability reports** (Building the Future Together, Energy for the Climate, In Good Waters and On the Tracks of Waste), examined in detail the 2021 reporting in line with the European Taxonomy for Sustainable Finance and update of the Group's Green Financing Framework and the first Taxonomy-compliant Green bond issued in 2022, and oversaw the process of updating the Code of Ethics.

Risk management

[2-12]

Hera adopts an organisational structure that appropriately and conscientiously manages the **exposure** and **risk appetite** arising from its business, defining an integrated approach aimed at ensuring the effectiveness, profitability and sustainability of management throughout the entire value chain.

Top management plays a fundamental role in this process and is called upon to express the medium/long-term vision of the desired risk profile for the Group defining the risk areas within which the Group intends to move.

The Group's risk appetite is managed through three fundamental pillars which are:

- the establishment of a Governance system that through the definition of roles and responsibilities approves **risk limits** and the **risk management policy**;
- the development of a **method** to measure risk exposure in relation to which risk limits are set;
- the implementation of a **risk monitoring and management process** and remediation actions in the event of overrun.

The main risk categories identified in the **Group's risk management policy** and **risk model**, **associated with the strategic aspects of the Business plan** and identified as having a potential impact on the company for 2022 are shown in the table below:

THE HERA GROUP'S RISK MODEL

DRIVER	EXTERNAL			STRATEGIC
Categories	TE R RI Natural and catastrophic events	O Financial	TE R O T Competitive and regulatory context	O R Aims
Types	- Climate factors R RI - Catastrophe events R RI - Natural events R RI - Acts of terrorism / sabotage / vandalism R RI - Pandemic R RI	- Commodity prices O - Interest rate O - Liquidity O - Counterparties O - Credit O - Downgrading rating O	- Regulatory changes TE T O - Macroeconomic scenario O - Authorisation process O - Competition O - Availability of waste RI O - Supervisory / regulatory investigative bodies conduct O	- Business plan and investment O O - M&As O O - Business model O O - Investor relations O - Organisational framework & Governance O O - Strategic partners O O
DRIVER	INTERNAL			
Categories	R O T Operational	O RI HR/Organisational	R T ICT	O RI Legal & Compliance
Types	- Environmental R RI - Business continuity operations R - Breakdowns and failures R T - Service quality for customers O	- Human resource management and development RI - Health and safety O - Change management RI - Adequacy of process functionality RI	- Business continuity ICT R - IT provisioning T - IT security R T	- Internal compliance O - External compliance O - Litigations O RI - Contractual conditions O RI - External and internal fraud O RI
TE Energy transition R Resilience RI Regeneration T Technology O Communities RI O Opportunities				

For a description of the corporate governance system for the management of the risk and for the nature of the risks and their handling, please see the Group's Corporate Governance Report and the Management Report included in the Group's Consolidated Financial Statements at 31 December 2022. For a description of the risks linked to climate change, see the section "Hera for climate" (chapter "Pursuing carbon neutrality").

Compliance system for corruption and fraud prevention

Importance for the Hera Group and monitoring of this aspect
[2-26]
[2-25]

Corruption and fraud pose a significant risk to business activities as they can significantly compromise the company's reputation and image and cause significant financial damage. HERA promotes the combating of corruption by taking a "zero tolerance" stance towards corruption and fraud in any form, reiterated both in the **Code of Ethics** and in the **Corruption prevention model**. Furthermore, Hera Spa, again in 2019, obtained ISO **37001** certification for the Management system for the prevention of corruption.

Hera's commitment applies to both employees and third parties (e.g. consultants, suppliers and business partners) through appropriate preventive measures, a disciplinary system and specific ethical clauses that all employees and third parties must accept and adopt.

Hera has adopted a structured compliance system consisting of tools and policies designed to prevent and combat active and passive corruption, in addition to the matters envisaged in the Group's **Code of Ethics** and the **231 Organisational Model**.

Hera's anti-corruption system comprises the following:

- the Code of Ethics;
- the Quality and sustainability policy;
- the **Corruption prevention model** that supplements the existing **231 Organisation Model**, which already covered the types of corruption included in Legislative Decree no. 231/2001;
- **guidelines** for the prevention and management of fraud;
- periodic **audits** and **training** activities with a view to corruption and fraud prevention;
- a "**whistleblowing**" system for handling reports relating to offences concerning both corruption and those potentially significant for 231-related purposes.

The 231 organisational model

Legislative Decree 231/2001 introduced a **regime of administrative liability** into the Italian legal system for crimes committed, in their own interest or to their own advantage, by natural persons acting as representatives, directors or managers on behalf of the entities, or by natural persons acting under the supervision of such persons or subjected to supervision or management on their part.

The Board of Directors of Hera Spa and the boards of the main Group subsidiaries have adopted the Organisation, management and control model (231 Organisation Model) aiming to ensure conditions of **correctness and transparency** in conducting business and company activities. 231 Organisational Model is aimed at **preventing all 231 offences**, including bribery and corruption; conflict of interest cases are regulated and measures to protect the confidentiality of information are foreseen. The model includes the principles of conduct formalised in the Code of Ethics. In December 2021, the Group approved the revision of the organisation, management and control model pursuant to Legislative Decree no. 231/2001, which renewed the Hera Group's commitment to combating corruption and any offence relevant to 231 and to preventing situations involving a risk of crime being committed, spreading a culture of ethics and legality.

The **companies equipped with a 231 Model** are: Hera Spa, Acantho Spa, AcegasApsAmga Spa, ASA Sspa, ASE Spa, Biorg Srl, Estenergy Spa, Etra Energia Srl, Feronia Srl, Frullo Energia Ambiente Srl, Hera Comm Marche Srl, Hera Comm Spa, Hera Luce Srl, Herambiente Servizi Industriali Srl, Herambiente Spa, Hera Servizi Energia Srl, Heratech Srl, Hera Trading Srl, Hestambiente Srl, Inrete Distribuzione Energia Spa, Marche Multiservizi Spa, Recycla Spa, Uniflotte Srl, Vallortigara Servizi Ambientali Spa. All these 24 companies encompass **94% of Group employees**. Marche Multiservizi Spa set up its own "231 Model".

The Group companies, supported by the Supervisory Board, after a mapping of company activities sensitive to the risks of offence included in Italian Legislative Decree no. 231/2001, have defined 30 protocols to be followed when carrying out sensitive company processes given that they are exposed to the potential risk of committing 231-related crimes, a number of which were specifically tailored to meet the specificities of companies. In addition, companies periodically provide 38 information flows informing the Supervisory Board of processes at risk of 231 offence, including fraud and corruption. The protocols are widely distributed to all workers through their publication and periodic updating on the corporate intranet. Their application is analysed and monitored during the audit phase. In 2022, 231 Protocols were approved and published: "Prevention of tax offences" - "Management of relations with Authorities and Public Administration", and seven were revised ("Management of relations with Authorities - Integrated Water Service" and "Management of relations with Authorities - Urban Waste Management Service" - "Management of relations with the Authority for Electricity, Gas and the Water System - Gas and Electricity Services" - "Management of reports to the Supervisory Body (Whistleblowing)". - "Prevention of offences and protection of health and safety at work" - "Sales activities" - "Separate financial statements and consolidated financial statements AAA Group".

For more information on 231 Model, see the Corporate Governance Report in the 2022 Annual Financial Statements.

231-related risk assessment activities
[205-1]

The risk assessment activity (both standard and for 231 Model purposes) carried out by the Internal Auditing Department concern all the business processes of the Hera Group. A mapping of the activities carried out by the business and staff units was carried out, determining whether they are exposed to risk. The **risks examined** are: regulatory compliance, reliability and integrity of information, protection of company assets and effectiveness and efficiency of operations. The risk map has logics and assessment scales in line with those used by the **Enterprise risk management**. It includes the risks of fraud, corruption (also in relation to ISO 37001 Certification) and the offence referred to in Italian Legislative Decree 231/2001. Specifically, **1000 risk scenarios** were identified (the monitoring of which is constantly being updated), against which the inherent risk (i.e. not yet involving mitigation measures) was initially assessed and, downstream of the mitigation actions carried out by the internal control system, the residual risk as well. These activities were carried out on the basis of the results of the previous assessments, on the outcomes and the key aspects of the audit activities performed, the Enterprise Risk Management analysis presented to the Board of Directors of Hera Spa in January 2021 and in relation to the sector risks deriving from benchmarks of other companies. The assessments, referring to the risk event, were guided and gauged in relation to the type of the processes or the business: the drivers which supported the assessments and the prioritisation of the risk aspects also took into account the peculiarities of the Group. The risks as per Italian Legislative Decree no. 231/2001 have been identified by macro-processes, assessed ad hoc and included in the risk assessment within the sphere of the compliance risks.

As part of the risk assessment activities, the areas of risk from the **crime of corruption** are identified mainly in the dealings with Authorities and supervision and control bodies governed by public law that the Group maintains, for example, within the scope of participation in public tender procedures, in the application for licences, administrative measures and authorisations, in the sending of reporting documents, in the stipulation and execution of contracts with public administrations. These areas, together with spheres such as tenders, donations and sponsorships, entertainment expenses and the management of credit positions and tax risk, are constantly monitored. In addition to these areas, there are areas exposed to the offence of corruption between private parties, such as the management of active contracts (preparation, participation in tenders, negotiation, etc.), commodity trading, dealings with third parties, the selection, recruitment and administrative management of personnel and the procurement of goods, work and services.

The risk assessment activities generated a **risk-based audit plan** for the Hera Group. The risk assessment, developed for the three-year period 2022-2024, was approved by the Board of Directors of Hera Spa in the meeting of 15 December 2021, along with the audit plan for 2022-2024. On 14 December 2022, the relevant annual audit plan for 2023 was approved. During the year the related audits were conducted, the most significant risk areas were identified and the related risk mitigation actions were agreed with management.

Based on the matrix identified in the risk assessment, the Hera Group's Internal Auditing Department specifically focused on the risk of **fraud and corruption**, examined in its implementation methods with respect to the various processes and stakeholders of reference (e.g., Public Officials or Hera business partners). During 2022, the audits envisaged in the plan that are significant for anti-corruption purposes were carried out. The analyses **did not reveal any corruption incidents**; furthermore, there were no reports of proven corruption incidents pursuant to Decree 231.

[205-3]

On 12 April 2019, the 231 protocol "Handling of reports to the Supervisory Board (whistleblowing), that governs the process of reporting offences to the Supervisory Board and the subsequent investigation activity that involves the Internal Auditing Department, with the involvement of the competent company departments (Central Legal and Corporate Affairs Department). There are channels for reporting to the Supervisory Board both by post and by email. In 2021, a web tool was developed to enable reports to be submitted to the Supervisory Board in a timely and completely anonymous manner; the platform replaced the option to submit reports by e-mail beginning in mid-January 2022. These channels are made public through indications on the Group website. Over the course of 2022, the Supervisory Board received nine reports, four of which were assessed to be not pertinent or not relevant for 231 decree purposes. Those considered to be relevant mainly concerned: sales activities, external communication and relations with suppliers.

Management and prevention of fraud

During 2018, the Hera Group drew up Fraud Risk Prevention Guideline for the purpose of facilitating the further development and co-ordination of the **internal control system** supporting the prevention and management of fraud.

The Guidelines assign roles and responsibilities within the sphere of the prevention, detection and investigation of potential frauds promoting within the organisation consistent behaviours in line with the principles expressed.

[205-3]

In compliance with the requirements of the Guideline during 2020, a “self-assessment” process on fraud issues was carried out, involving the majority of the Corporate Structures, aimed at measuring the degree of maturity in the identification of risks and related prevention controls and to further raise the awareness of corporate representatives on this issue, subsequently outlining the most effective strategic lines. The assessment was positive with respect to corporate maturity.

At present, fraud risks are assessed and managed in the Internal Auditing Department's Risk Assessment, and the associated reports are dealt with through the Compliance Function/Supervisory Board's own whistleblowing tool, in close correlation with 231 and anti-corruption issues.

As part of the 262/05 compliance activity, the control matrices (Risk Control Matrix) are supplemented with fraud risks, whenever considered potential; the result of the testing activity is considered to cover both compliance risk and fraud risk.

Main activities and results achieved [2-16]

Since 2019 a comprehensive management system for the prevention of corruption and fraud has been operational which in 2021, after an audit by the third-party certification body Bureau Veritas, allowed to maintain the ISO 37001 certification obtained in 2019 by Hera Spa, the parent company that manages the most important services, also being the entity most exposed to the risk of corruption. The system is based on the Quality and Sustainability Policy which guarantees the Group's commitment not to tolerate any form of illegality, corruption and fraud and envisages a system of sanctions for such behaviour, also encouraging the reporting of illegal or even only suspicious events, without fear of any retaliation. All the Hera Group Companies which adopt the Group's 231 Organisation Model implemented the **Corruption prevention model**, which supplements the already existing model for the prevention of 231-related offences. This document defines the concept of corruption, both active and passive, and disciplines the measures to prevent corruption and unpermitted conduct in the various dealings subject to risk of offence: with public officials, customers, suppliers and all other business partners.

Moreover, the Compliance Unit is operational, supervising the anti-corruption management system, examining the results of the audits conducted to these end by the Internal Auditing Department and monitoring corruption risk and preventive and risk mitigation actions.

The cited procedure for “whistleblowing” envisages **measures to protect the confidentiality** of those who makes reports and establishes a specific channel for receiving reports on 231-related corruption in addition to the one envisaged by the Group's Code of Ethics.

In relation to activities in **compliance with Law No. 262/05**, the planning foreseen in the reporting Manager's Plan for the year 2022 was adhered to, with the exception of changes occurring during the year. The controls in the matrices used for assessing the processes were integrated with fraud risks in cases in which the risk existed; the result of the test for the purpose of proper preparation of the financial reporting also covers the linked fraud risk. The tests carried out **did not find any anomalies linked to fraud**.

Training and information activities continued on “**self-assessment**”, a tool for self-assessment and support in identifying fraud risks and their prevention controls, which involved some group companies for which the document had not yet been prepared.

With regard to the separation of roles and activities (SoD-Segregation of Duties), the verification of the correct definition of roles continued in order to avoid functional overlaps and operational allocations that concentrate critical activities on a single subject, taking into account the correct alignment between the IT profile and its related organisational role.

Risk rules in the SAP environment for the Active Cycle and the Passive Cycle were mapped in specific SoD Matrices; the activity will continue in the coming years for all further processes identified.

Managing sustainability

[2-9]
[2-12]
[2-13]

In order to ensure **social responsibility** and **sustainability in planning and corporate management**, in May 2005, the Board of Directors of Hera Spa set up a Corporate Social Responsibility Organisation Unit, reporting to the CEO, which has become a Department since 2010. Hera has thus been one of the first companies in Italy to endow itself with a unit dedicated to corporate social responsibility. As from 1 March 1 2019, consistently with the development process undertaken in the last few years, the CSR Department was renamed the **Shared Value and Sustainability Department**. Management is responsible for proposing and defining the company guidelines on corporate social responsibility and on the creation of shared value as well as the policies concerning reporting on the shared value and on sustainability; it oversees the **balanced scorecard** system, drafts the **reporting on sustainability** and shared value and proposes initiatives and pilot projects within the CSR/CSV sphere; it works together on the stakeholder engagement initiatives and is responsible for the periodic up-date of the Group's Code of Ethics. The SVS Director is a member of the Group's Ethics and Sustainability Committee.

At **AcegasApsAmga**, the sustainability report unit is part of the Administration, Finance, Control, Sustainability Report and Regulatory Department. It carries out the sustainability accountability activities, laying down in the context of AcegasApsAmga the corporate guidelines related to corporate social responsibility, and ensures that top management is informed on the progress of the pertinent issues. It also guarantees the implementation of the balanced scorecard system in line with the Business plan, the Budget and the Group guidelines.

At **Marche Multiservizi**, the sustainability report unit is part of the External Relations, Institutional Relations and Regulatory Affairs department and carries out sustainability accountability work.

Code of Ethics

[2-23]
[2-24]

The Code of Ethics is the document that contains the **commitments** and **ethical responsibilities** to be implemented by the managers, the workforce and collaborators of the Group for the achievement of corporate objectives. The Code of Ethics guides the business management and the individual conduct towards the observance of the ethics values and the functioning principles of Hera which represent, together with the mission, the basis of the principles contained in the articles which make up the Code. **Supplier qualification** is subject expressly to acceptance of the Code and the supply contracts drawn up by the Group companies include **termination clauses** in case suppliers fail to comply with the principles of the Code of Ethics.

The Code of Ethics was approved by the Board of Directors in 2007 and is subject to **checking and updating on a three-yearly basis** by means of a participative process which involves all the workers and trade unions. The sixth and current version of the Code of Ethics was approved by the Board of Directors on 8 February 2023. This review process involved management, workers in various forms and trade unions and was one of the most attended in the history of the Code. The Code was updated in the light of Hera's purpose introduced in 2021 in the Articles of Association of Hera Spa and the major changes in the external scenario that have taken place over the last three years. Commitment to a just ecological and digital transition, attention to vulnerable customers, the promotion of the working and personal well-being of our people, and the importance of engaging in dialogue and listening, even in times of crisis, were also introduced. In addition, more emphasis was placed on striving for environmental and social sustainability together with local communities and integrity in dealing with institutions and authorities. The language, a fundamental tool for transmitting and grounding the contents of the Code, was subject to innovation and simplification.

The Code of Ethics is one of the main instruments underpinning Hera's commitment to **human rights and workers' rights**: it ensures that international reference texts are applied within the company and disseminated to all stakeholders. In fact, Article 6 of the Code provides that the **implementation and dissemination of the Code is the responsibility of all addressees**, in proportion to their responsibilities. The main ethical references of the Code are the International Labour Organisation (ILO) Declaration on Fundamental Principles and Rights at Work, its eight main Conventions and the UN International Bill of Human Rights, the OECD Guidelines for Multinational Enterprises, the Charter of Fundamental Rights of the European Union.

All the new recruits and the new employees entering the Group further to corporate acquisitions are involved in a training session on the contents of the Code of Ethics via the ethic game **AlfabEtico**.

In 2022, **CSR seminars** were designed dedicated to the management of relations with suppliers in the event of anomalies: they were formulated in pills involving employees. A number of articles of the Code

of Ethics are part of the teaching materials. Seminars will be held in distance-learning mode beginning in 2023.

Quality, safety, environmental and social responsibility management system

In 2022 as well, the activities with the certification body for the renewal and maintenance of the various certification schemes of the Group companies were conducted using the right balance of in-person and remote audits, taking the opportunity to conduct remote audits of document processes that do not require on-site presence. All the audit activities concluded positively making it possible to **maintain the certification of quality, safety, environment and energy system** of Hera Spa and the other Group's companies including Inrete Distribuzione Energia, Uniflotte, Heratech and Acantho, as well as the Herambiente, AcegasApsAmga and Hera Comm Groups.

[403-1]
[403-8]

This was approved by the Board of Directors of Hera S.p.a. over the course of 2022. the **Hera Group's new Quality and Sustainability Policy**, which was revised consistently with the amendment to the Articles of Association that integrated the Group's purpose, reinforced the commitment to environmental and energy transition, integrating the principles of Circular Economy and Business Continuity.

The Group's commitment to respecting the **values of social responsibility**, embraced as its own in the Code of Ethics, is therefore significant, and reinforced by the parent company Hera SpA maintaining ISO 37001 certification of its management system for the prevention of corruption, as well as SA 8000 certification within the AcegasApsAmga Group and Marche Multiservizi. In 2022, Marche Multiservizi also started implementing a **corruption prevention management system** with the aim of obtaining certification by 2023.

In order to support the transition path towards a circular economy, and with the aim of achieving the ambitious sustainability targets required by the European Green New Deal directives and the UN 2030 Agenda, Hera Spa obtained the **new AFNOR XP X30-901** certification by integrating its environmental management system with the requirements of a Circular Economy project management system. Subsequently, at the end of 2022 AcegasApsAmga, ASE and Hera Luce also achieved the same certification.

Hera's commitment to quality, safety, environment and social responsibility certification

The management systems adopted establish the requirements that are necessary in an organisation to improve corporate processes in order to increase the satisfaction of the end customer, who is the end beneficiary of the services provided by Hera, to develop and improve its environmental and energy performances, to improve workplace health and safety and its social performance. The high diffusion of the Group companies' certified management systems is shown in the following table.

CERTIFIED MANAGEMENT SYSTEMS AT GROUP COMPANIES (2022)

Management system	Group	
	No. of companies	% of employees
ISO 9001 - Quality	29	99%
ISO 14001 - Environment	22	88%
ISO 45001 - Health and safety [403-8]	21	88%
ISO 50001 - Energy	11	72%
SA 8000 - Social responsibility	5	24%

The percentage of energy consumed at Group companies that have **ISO 50001 energy certification** is 96% of the total (unchanged in relation to 2021).

In addition to the certified management systems described above, Group companies hold the following certifications:

- ISO 37001 (management system for corruption prevention): **Hera Spa.**
- UNI 11352 (energy provider companies - ESCO): **Hera Spa, AcegasApsAmga Servizi energetici, Hera Luce, Hera Servizi Energia and Marche Multiservizi.**

- ISO 17025 (labs accreditation): **Herambiente Servizi Industriali, HeraTech and Marche Multiservizi.**
- ISO 27000, ISO 27017 e ISO 27018 (set of rules comprising the data security management system), ISO 27701 (privacy certification) and Tia-942 Rated 3 (international standard that evaluates the configuration and maintenance of the key aspects of Data Centres): **Acantho and Aresgas** (the latter only for **ISO 27000**).
- AFNOR (circular economy project management system): **Hera Spa, Hera Luce, AcegasApsAmga, AcegasApsAmga Servizi Energetici.**
- EuCertPlast (European certification of companies that recycle plastics), ISO 22000 (international standard governing food safety regulations), ISO 28000 (Security Management System for the Supply Chain): **Aliplast.**
- **AWS International Water Stewardship** (international standard in water conservation): Hera Spa's Val di Setta drinking water treatment plant.

The Group's main waste treatment plants are **EMAS registered**. Therefore, the new objectives envisage the maintenance of the results achieved to date for the plants registered and any implementation of the registrations for the new plants that will be created or that will enter the Group. At the end of 2022, **30 facilities had EMAS registration. 100% of the waste treated by the Group was treated at plants with ISO 14001 certification.**

5.03 Economic value for stakeholders

The production and allocation of added value

[201-1]

In this Sustainability Report, added value is understood as the difference between revenues and production costs not constituting corporate stakeholder remuneration and the purchase costs for goods and services useful for the production process. It is therefore the difference between the revenues and costs incurred for the purchase of the production factors from other businesses and thus **represents the value that the production factors within the company, its own capital and labour, "added" to the inputs coming from outside.** The concept of added value adopted here is distinct from the definition of added value applying strictly to accounting practices. Here, the methodology applied is the one proposed in 2001 by the Gruppo di studio per il Bilancio Sociale (GBS). With respect to **GBS methodology**, rental payments for the use of assets owned by shareholder municipalities and sponsorship costs are considered, as they are deemed significant for stakeholders. In addition, in contrast to the proposal of the GBS, the portion of value allocated to financial institutions was calculated considering the balance of financial income and charges, as this is deemed a better quantification of the relationships with this type of stakeholder as opposed to the sole figure of financial charges. With this framework, the gross overall added value distributed is almost equal to the gross added value produced by normal operations.

There are two important reasons for using the indicator of added value. Firstly, it enables **quantification of the wealth generated by the company**, and accounts for how this wealth was generated and how it is allocated to stakeholders; it is therefore useful for comprehending the economic impacts the company produces. Secondly, through this report it **connects the sustainability report with the annual financial statements**. In this sense, production and distribution of added value is an instrument by means of which we can reconsider the corporate annual financial statements from the vantage point of stakeholders.

PRODUCTION OF ADDED VALUE

(mn €)	2020	2021	2022
Revenues	7,053.8	10,377.1	19,871.3
Other operating and non-operating revenues	467.8	400.1	548.2
Grants received from public institutions	-35.2	-36.0	-60.6
Consumption of raw materials and consumables (net of changes to raw materials inventories and stocks)	-3,410.6	-6,668.5	-16,730.0
Costs for reclassified services	-2,340.4	-2,380.2	-2,023.1

(mn €)	2020	2021	2022
Bad debt provisions	-83.4	-94.4	-133.9
Accruals to risk provisions and other provisions	-32.8	-54.4	-56.1
Other reclassified operating costs	-26.0	-25.8	-31.6
Capitalised costs	43.3	60.8	82.5
Core gross added value	1,661.7	1,756.8	1,684.1
Portion of profit (loss) pertaining to associated companies and joint ventures	8.2	13.2	10.0
Gross overall added value	1,669.9	1,764.4	1,674.1
The values of the consumption of raw materials and consumables, costs for services and other operating costs are indicated net of the costs considered as stakeholder remuneration.			

Gross overall added value generated for stakeholders in 2022 came to 1,674.1 million euro, with a decrease of 90.3 million euro on the previous year (-5.4%).

DISTRIBUTION OF ADDED VALUE TO STAKEHOLDERS

(mn €)	2020		2021		2022	
Employees	572.7	34.3%	592.8	33.6%	601.1	35.9%
Shareholders	183.9	11.0%	217.9	12.4%	236.3	14.1%
Company	594.4	35.6%	618.1	35.0%	546.1	32.6%
Financial institutions/Banks	124.9	7.5%	218.0	12.4%	135.0	8.1%
Public Administrations	190.7	11.4%	115.1	6.5%	151.8	9.1%
Local community	3.3	0.2%	2.5	0.1%	3.8	0.2%
Gross overall added value	1,669.9	100%	1,764.4	100%	1,674.1	100%

The amount of added value allocated to the **workforce** increased by 8.3 million euro over 2021 (+1.4%). This increase is due to the salary increases provided for in the national collective labour contract and changes in the scope of consolidation generated by the acquisitions described above; These effects were partly mitigated by the lower average presence over the period in question.

The share allocated to the **shareholders** of Hera Spa and the minority shareholders of the subsidiaries rose by 18.4 million euro (+8.4%) and equates to 14.1% of the total, up compared to the previous year. This share comprises 186.2 million euro allocated as dividends distributed to Hera Spa shareholders (up with respect to 2021) and 50.1 million euro allocated as the portion of earnings pertaining to the minority shareholders of the subsidiaries of Hera Spa.

A portion totalling 33% of the added value generated in 2022 was **re-invested in the company**. This portion decreased with respect to 2021 (-11.6%) and includes the profit for the year not allocated to shareholders (69,0 million euro) and depreciation of investments made (477.1 million euro).

The portion of added value allocated to **lenders** in 2022 came to 135.0 million euro (8.1% of the total, down by 38.1% compared to 2021, returning to 2020 levels). This share comprises 217.2 million euro in financial charges (300.3 million euro in 2021), and 82.2 million euro in financial income (in line with 2021). The increase in financial expenses that had occurred in 2021 was connected to special items mainly arising from the partial repurchase of five bonds, for a total book value of 1,780 million euro, which had led to the recording of charges of 82.6 million euro due to a repurchase price higher than the book value.

The portion allocated to **public administrations** came to 151.8 million euro, 9.1% of the total (up by 31.9% compared to 2021, and 20% lower than 2020). Note that in 2021, the reduction of this share was mainly a consequence of special items arising from (i) the tax realignment of certain goodwill values booked at 31 December 2019, pursuant to Art. 1, paragraph 83, of Law 178/2020. This operation led to

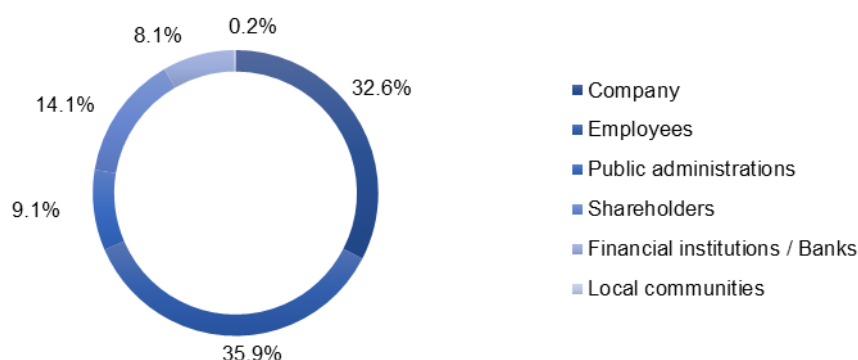
the tax recognition of such values, which resulted in the recording of a tax benefit of 87.0 million euro, against the payment of a 3% substitute tax, amounting to 9.2 million euro; (ii) tax effect of 19.8 million euro related to the partial bond repurchase transaction already highlighted in the notes on financial performance.

Duties and taxes amounted to 119.1 million euro (7.1% of the total added value distributed) up by 113.8% compared to last year. Of the taxes and duties, 68.7 million euro was allocated to the State (17.3 million euro in 2021), 25.2 million to the Regional authorities and 7.7 million to the Provincial and Municipal authorities. In 2022, corporate income taxes were stable at 103.5 million euro (previously 34.2).

The production plants and installations used by the company are in part owned by shareholding municipalities, and rental payments are made for their use; the portion for public administrations also includes environmental compensations paid to the municipalities regarding the waste treatment plants. In 2022, total rental payments for use of the assets of shareholder municipalities and environmental compensations came to 10.6 million euro. There was also 5.9 million euro relating to the running costs of the national (ARERA and AGCM) and local authorities. **Public contributions** received in 2022 amounted to 16.2 million euro.

Lastly, an amount of 3.8 million euro was allocated to **donations** (1.2 million euro) and **sponsorships** (2.6 million euro); details on these items can be found in the section Economic development and social inclusion.

ALLOCATION OF ADDED VALUE TO STAKEHOLDERS (2022)



[203-1]

Investments

In the financial year 2022, Group investments amounted to 688.7 million euro. Gross of contributions to capital account, the Group's **operating investments**, amount to **709.5 million euro**, an increase of 120.8 million euro compared to the previous year (+20.5%) and mainly concern **work on plants, networks and infrastructures**. In addition, regulatory adjustments were made, particularly on gas distribution for the mass replacement of meters and for the purification and sewage sectors.

Hera Group tax strategy and model

[207-1]
[207-2]
[207-3]

With the aim of ensuring full control over tax risk, the Group launched a project in previous years to improve its procedures and organisational set-up, i.e. to promptly detect all potential factors that generate it and that are partly exogenous (interpretative uncertainty caused by ambiguity or lack of clarity in tax regulations) and partly endogenous (incorrect and/or untimely compliance with mandatory requirements, failure to detect new regulations, conducting operations that may be disputed by the tax authorities as abusive).

The first part of the project concerned the introduction for the parent company Hera Spa of a **Tax control framework (TCF)**, which may be defined as a set of rules, procedures, organisational structures and controls, aimed at detecting, measuring, managing and controlling tax risk, understood as the risk of

incurring tax violations or conflicting with the principles and purposes of the Italian legal system (abuse of law). The second part of the project, currently underway, envisages the launch of a **cooperative compliance** process with the tax authority (a collaborative compliance regime in Italian law) that has the prerequisite that the taxpayer adopts a TCF model.

The **TCF model** is based on four fundamental pillars:

- **control environment:** adopting a tax strategy, approved by the Board of Directors, aimed at defining the principles and limits guiding tax risk management;
- **risk assessment:** identifying potential tax risks impacting the company and introducing appropriate safeguards to detect their emergence and mitigate their effects;
- **governance:** identifying the roles and responsibilities of the actors involved in the management of the tax variable, defining information flows between these actors and processes for the effective and, whenever possible, preventive control of tax risk;
- **monitoring:** verification activities carried out on an ongoing basis to assess the adequacy and effectiveness of the implemented tax control framework.

The Hera Group's TCF is part of the internal control and risk management system set up by the Group. As part of the internal control system, TCF integrates and borrows the operating logic of the accounting and administrative control system, aimed at ensuring the reliability, accuracy, trustworthiness and timeliness of financial reporting in accordance with the regulations governing its preparation. At the same time, the presence of an internal control model on tax risks makes it possible to introduce specific policies with regard to the organisational model of management and control for the purposes of the liability of the entity, pursuant to Legislative Decree no. 231.

The design, implementation and maintenance of this system, as well as its periodic evaluation, are inspired by international best practices (i.e. "CoSo" framework). TCF's monitoring activities are entrusted to the **tax risk officer** who, as head of the tax control department, has the role of verifying the adequacy and effectiveness of the control system adopted for tax risk management.

The tax risk officer guarantees autonomy and impartiality in carrying out of tax audits and coordinates with the activities conducted to provide assurance within the other internal control systems, also in order to ensure efficiency in monitoring activities. The tax risk officer also provides an annual report, submitted to the Board of Directors for approval, describing the monitoring activities and adequacy of the TCF.

The internal audit department, as a third-level control function, ensures that the control system, and thus also the TCF, is adequate overall.

From a formal point of view, the TCF model comprises three fundamental governance documents:

- **tax strategy:** principles governing the management of taxation;
- **Tax compliance model:** roles and responsibilities for TCF management;
- **Interpretation risk management policy:** regulating the process of detecting, assessing and assuming interpretation risk.

Currently, the parent company Hera Spa has approved the Fiscal Strategy document approved by resolution of the Board of Directors, while the remaining documents are being completed and approved. These documents have, in any case, already been translated into applicable operating policies, yet have not completed the Board of Directors' approval process because they are subject to fine-tuning with the relevant tax authority, as the cooperative compliance process discussed below has begun.

In the course of 2022, the TCF model was extended to other Group companies, with the aim of having full protection and control of tax risk.

Cooperative compliance

The most advanced countries, under the leadership of the OECD, have developed an innovative model for the relationship between the tax authorities and larger taxpayers, called "**cooperative compliance**", which was enabled by the implementation of the Tax control framework. In Italy, the **collaborative compliance regime** provides for constant interaction between the taxpayer and the Inland Revenue office, making it possible to move from a system based on post tax audits, initiated years after the end of the tax year in question, to a system of continuous preventive audits, through which the taxpayer and the Internal Revenue office discuss the best way to manage the tax variable; hopefully but not necessarily this leads to the sharing of the company's choices before the tax return is sent. The regime, which was introduced in 2015 and has been operational since 2017, was adopted by several of the country's largest taxpayers.

Adopting the cooperative compliance regime entails, in summary, the following advantages:

- evolved methods of interacting with the Inland Revenue office, being able to count on a single interlocutor, part of the Large Taxpayers and International Central office, with a view to obtaining prior certainty on the tax handling of doubtful cases, with a reduction in potential liabilities and disputes;
- reduction of the applicable administrative fines (by half of the minimum amount) for any violations subject to assessment, as well as suspension of the relevant collection until a judgement is made, and mitigation of the risk of criminal liability for any tax offences that may occur;
- reputational benefits, linked to the fact that the list of adhering entities is published on the official website of the Inland Revenue office, as well as positive spin-offs in terms of corporate social responsibility;
- compliance with the highest international standards of tax compliance.

In December 2022, Hera Spa submitted to the relevant tax authority the application to join the co-operative compliance regime and, during 2023, once the preliminary investigation and interlocutory phase will be completed, it will formally enter this regime.

The main tax figures for Italy, which accounts for more than 99.5% of total Group values, are summarised below.

[207-4]

TAX REPORTING ITALY

(mn€)

2022

Revenues from sales to third parties	19,791.4
Pre-tax profit/loss	415.4
Tangible assets, other than cash holdings and cash equivalents	1,978.6
Corporate income taxes paid on a cash basis	165.9
Corporate income taxes accrued on profits/losses	115.3

5.04 Shareholders and financial institutions

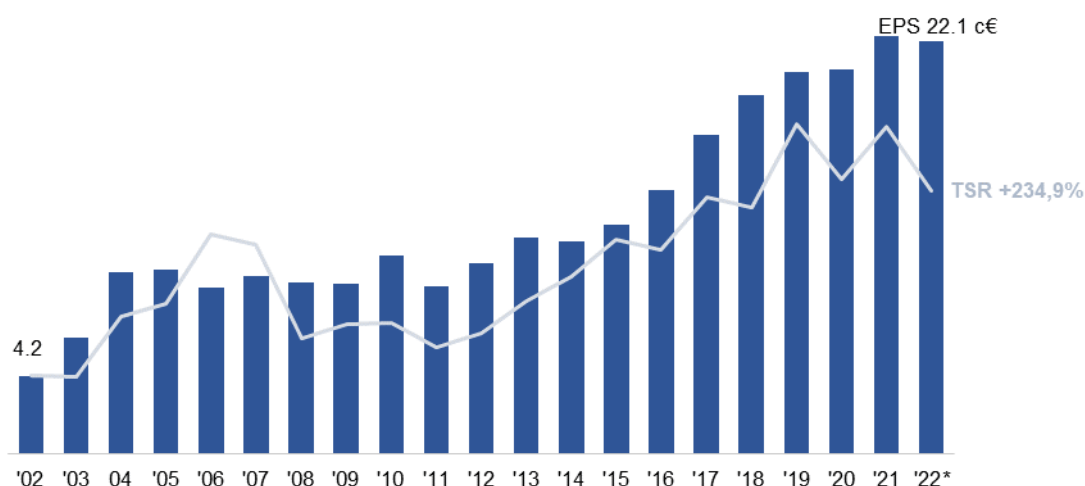
Hera's commitment towards investors

Hera undertakes to create value by placing the quality and efficiency of the services managed and the growth by lines, both internal and external, at the centre of its strategic approach; at the same time, it pursues a balanced development of the strategic areas of its business portfolio.

The stability of these strategic policies over time, the low risk appetite and the sustainable management approach have contributed towards producing economic-financial results constantly on the up over 20 consecutive years, also under adverse market conditions.

Total Shareholders return with respect to the initial public offering (IPO), came to **+234.9%** at the end of 2022: a value which has always remained positive in periods characterised by considerable volatility on the financial markets.

TOTAL SHAREHOLDER RETURN (TSR) FROM IPO COMPARED TO EARNINGS PER SHARE (EPS) GROWTH



* Values adjusted to exclude transitory accounting effects due to gas inventory valuation. See the Directors' report on the economic performance for more details.

Complete transparency with shareholders and financial markets on the creation of value

Hera promptly provides the market with significant economic-financial information in a **timely** way, facilitating the correct assessment and the transfer of the value generated by operations to the listed shares, respecting the different categories of shareholders by addressing dedicated communications to them.

Hera continues to make the greatest commitment so as to ensure a **plurality of professional and independent appraisals** of the company's value and the Group's sustainable approach.

In order to offer professional third-party opinions on the Group and its results, under the direct control of the Executive Chairman the Group Investor Relations maintain constant monitoring of the analyses conducted by financial analysts, even **ESG**, that cover the stock in order to intercept any changes in sensitivity and the evolution of the best practice, not to mention to promote ongoing improvement of the fulfilment of investor requests.

Beginning in 2019, the Group has an **ESG analyst management policy** to select the most authoritative external stakeholders with the best research quality, to whom it will provide the necessary assistance so

that they can fine-tune their knowledge of the Group in order to more closely adhere to the practices and strategies undertaken since its foundation.

ESG RATING OF HERA STOCK

Company	Rating	Comment
	81/100 (December 2022)	One of the top 15 companies in Italy to have published its ESG Evaluation, achieving an overall score of 81/100, thus ranking among the top 15 companies internationally as rated by S&P Global Ratings

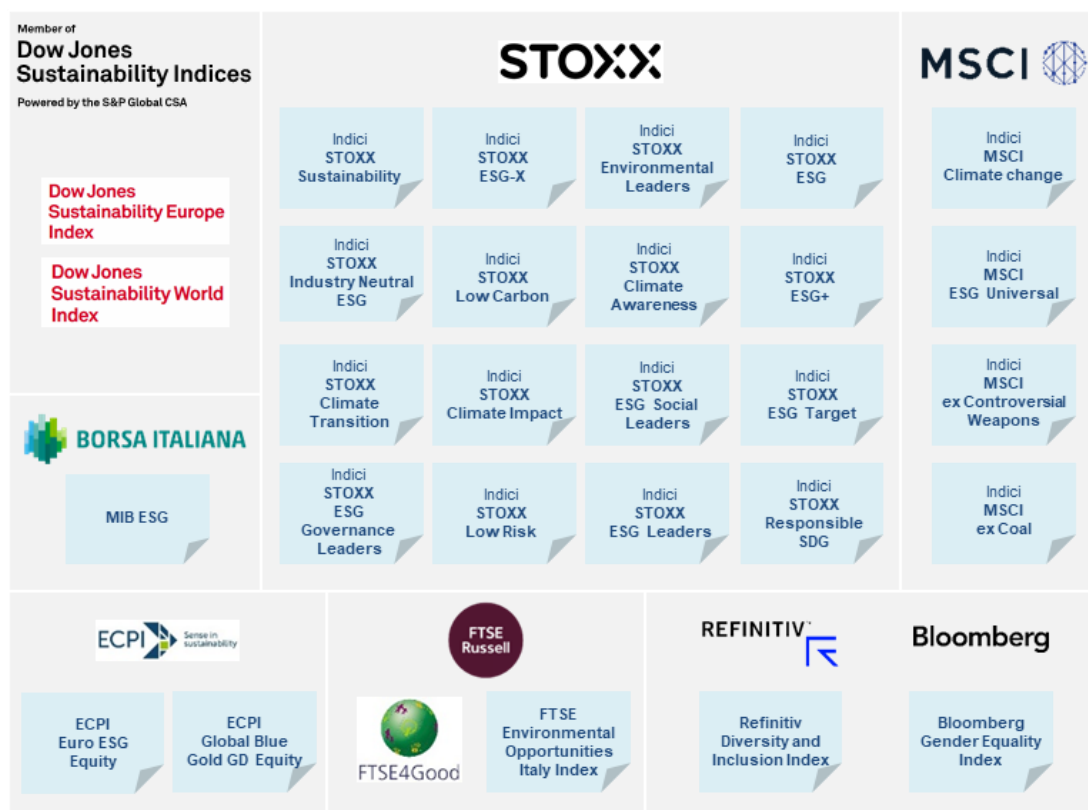
ESG SCORING OF HERA STOCK

Company	Scoring	Comment
	90 Industry leader (December 2022)	Hera earned an overall score of 90/100 in 2022 as well, an outcome that places it as the best multi-utility worldwide (32/100 the sector average). Hera also achieved the best score in all areas of sustainability (Environment, Social and Governance)
	18.2 low risk (January 2023)	Hera earned an overall score of 18.2, an outcome that includes it in the companies with a low ESG risk (best European multi-utility). The score increased +0,6 points in relation to 2021
	Advanced (September 2022)	Hera was ranked in the Advanced category, preliminary for inclusion in the Italian Stock Exchange's 'Mib Esg' index, which is based on assessments by Vigeo
	A (January 2023)	Hera confirmed A rating by MSCI. In particular, the score shows a strong outperformance in the 'Carbon Emissions' category with a score of 9.8/10
	B (December 2022)	In 2022, Hera achieved level B, above the global average (C) and in line with European companies and energy utilities. Maximum rating (A) for governance, climate change opportunities, emission reduction initiatives and targets.
	1st place (June 2022)	In 2022, Hera ranked first for the second consecutive year for integrating sustainability policies into its business strategies
	Top 100 (September 2022)	In 2022, Hera ranks ninth at the global level for the score achieved, first among multi-utility companies and first in Italy in the ranking drawn up by Refinitiv on the promotion of diversity, inclusion and development of people
	80/100 (January 2023)	With a score of 80/100, in line with last year and better than the average for both the sector and the Italian companies examined, Hera is one of the 484 listed companies included in Bloomberg GEI 2023, selected out of over 11,700 companies

The Hera Group is the first company in Italy to have published its **ESG Evaluation** carried out by the Sustainable Finance analysts of **S&P Global Ratings**. Hera achieved an overall score of 81/100, thus ranking among the top 15 companies internationally as rated by S&P Global Ratings. The score achieved (81) is higher than the international average (72) as well as the European average (76).

The **ethical indices** include securities of excellent companies from the standpoint of business sustainability in order to facilitate the investment choices of socially responsible funds (Sri). The organisation of these indices considers that the companies with sustainable management, from an environmental standpoint, as well as with regard to the dealings with the stakeholders and the corporate governance, obtain **significantly higher results than their competitors over the long-term**.

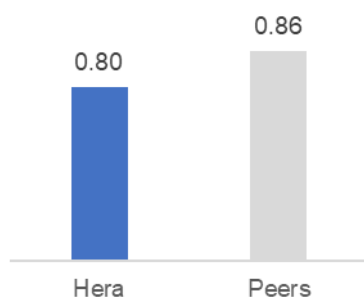
SUSTAINABLE INDICES IN WHICH HERA STOCK IS PRESENT



The commitment to reducing investment risk

Hera pays great attention to the **monitoring of the risk components** associated with the trend of its stock on the stock market, such as the volatility of the listed prices (beta index), which was lower than other local utilities over the three-year period.

HERA AND PEER 3-YEAR BETA (2022)



These characteristics of the stock are consistent with the strong **resilience of economic results**, the low risk profile of the portfolio of assets under management, the **solidity of the governance** and the business model, oriented towards constant growth also through M&A.

In **2022**, the **contacts** were 352, including the launch of new relations with professional investors which have an investment style consistent with the Group's share profile. Management has participated in theme-based and sustainability conferences, meeting with investors who combine ESG aspects with

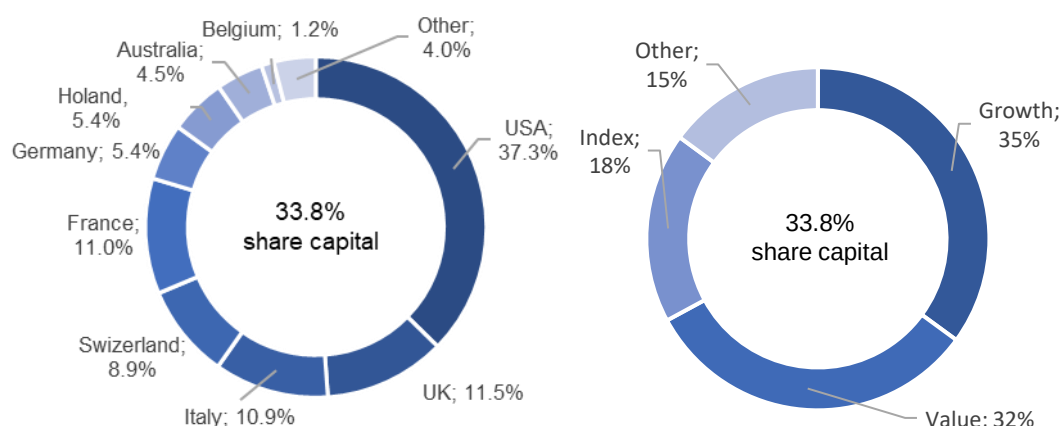
financial assessments and now account for approximately 30% of total assets under management globally.

Institutional shareholding

The **diversification of the institutional investors** between the shareholders of the company is an important factor for facilitating an on-going evolution of the shareholding structure and a balance of the listed prices of the stock over time.

As the following diagrams show, Hera presents a balanced geographic and investment style diversification of the professional investors, benefiting the resilience and low volatility of the stock.

INVESTMENT FUNDS BY GEOGRAPHICAL AREA AND INVESTMENT STYLE AT 31 DECEMBER 2022



In the graph on the left, the item Other includes: Australia, Austria, Belgium, Canada, Hong Kong, Ireland, Liechtenstein, Luxembourg, Portugal, South Korea, Spain, Taiwan

In the graph on the right the item Growth refers to investors looking for companies that are likely to grow at a higher rate than the market and competitors or companies operating in sectors with high current or potential growth; Value, to investors looking for companies whose market price is discounted compared to their intrinsic value or companies that trade at low valuation multiples; Index, to investors using passive investment strategies, structuring portfolios in imitation of benchmark indices and following their performance.. The item Other includes: hedge funds (investors who use investment strategies with the intention of maximising the return on investment in any market situation), long/short (they undertake investment strategies to exploit the return differential between financial instruments), momentum (they use quantitative investment strategies that seek to exploit trends in financial instruments), sector specific and specialty (they invest only in particular equity sectors (e.g. financial, utility, industrial sectors), yield (look for companies that provide the highest return from dividend distribution).

Source: Refinitiv and dividend Shareholders book

The Hera stock is included in the FTSE Mib, FTSE All Share and FTSE Italia Servizi Pubblici di Borsa Italiana **share indices**.

The last Shareholders Meeting authorised the exercise of a plan for the repurchase of treasury shares for a maximum of 60 million shares (equal to 4% of the share capital) for the purpose of creating value for the shareholders, contributing to the liquidity of the trading, avoiding anomalous fluctuations with respect to the benchmark and serving M&A transactions with the intention of counter-diluting the shareholders.

Corporate Governance and safeguards for shareholders

Since its establishment, the Group has adopted a Corporate Governance system based on the traditional model, with a Board of Directors made up of **executive and independent directors**, which ensures, in line with the company mission, the **protection of the shareholders**, the **return on invested capital** and **satisfying stakeholders' interests**.

Hera's activities are handled by management in accordance with the Code of Ethics adopted by the Group and are in line with the Code of Conduct furthered by Borsa Italiana Spa.

Hera's management body has always been heedful of aspects of good governance and protection of the interests of the shareholder: any change to its structure which meets these objectives is promptly adopted without delay.

With this intention, in 2020 the **minimum threshold for electing the less-represented gender** on the Board of Directors was raised to 40% (from 33%), immediately accepted with the renewal of the officers of the Shareholders meeting on 29 April 2020.

Similarly, in 2015 the **loyalty vote** was established, an instrument which makes it possible to assign up to two votes for each share held by the same shareholder for a period of at least 24 months. Shareholders who demonstrate - with the stability of their investment - a greater sensitivity to the long-term growth of the Group and to the active participation in the appointment of the Shareholders representatives, are thus rewarded. However, in order to fully safeguard the interests of the minorities, the loyalty vote was applied in a reduced version with respect to that envisaged by legislation: in fact, it has exclusive efficacy for the appointment and/or removal of the Board of Directors and the Board of Statutory Auditors, for the changing of the limit to share possession, and for the amendment of the same article which established the loyalty vote.

During the same meeting which established the loyalty vote, the shareholders also approved the increase from three to four of the number of board directors appointed from the lists presented by the minorities: this innovation proposes to attract greater participation of private capital in the choice of the Group's strategies. Furthermore, to encourage greater participation of the minority shareholders, the percentage of share capital required to present a list for the election of the Board of Statutory Auditors has been reduced from 3% to 1%, as already envisaged for the election of the Board of Directors.

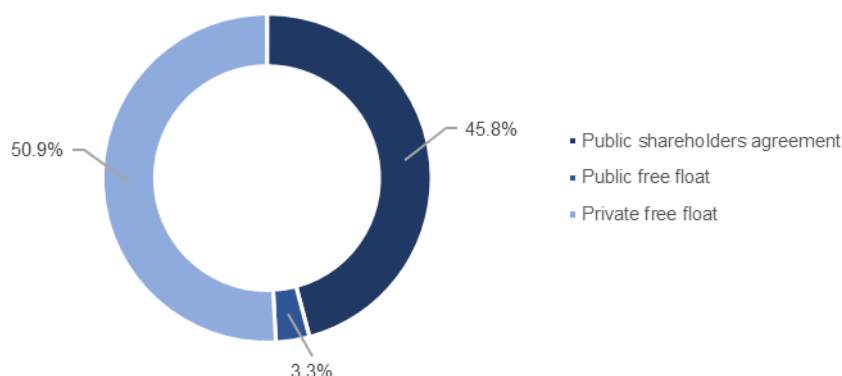
Shareholding structure breakdown

[2-1]

Hera's past has a peculiar aspect: the Group is considered to be one of the main interpreters of the sector consolidation process with a combination model which has involved approximately 50 utility companies **since 2002**, ensuring approximately 40% of the growth of the results in the last 20 years. The merger operations were financed mainly by issuing new shares and have almost **doubled the overall number of shares representing the share capital**: from 789 million in 2002 they became 1,490 million at the end of 2022. These operations did not have diluting effects for the shareholders, as the annual average growth of the earnings per share of around +9% bears witness to. Value was created also thanks to the extraction of synergies and the increased economies of scale. The Group's capitalisation thus reached almost 3.8 billion euro (compared to 1 billion euro in 2003) on average in 2022, i.e. an average annual growth of +7% in line with the growth in earnings per share.

The expansion of the shareholding structure maintained a constant **balance between the public and private components**, and extended the diversification of the shareholders both in terms of number and geographic origin.

SHAREHOLDING BREAKDOWN AT 31 DECEMBER 2022



Hera Green bonds

Green bonds are those which associate environmental-type investments and activities with the funds raised. The first financial instrument of this type was issued by the World Bank in 2008. Interest in Green bonds has grown over time, but after years of growth, 2022 marked a decline in new bond issues, including Green bonds, due to rising interest rates, inflation and geopolitical tensions.

At 2022, the share of sustainable bonds issued by Hera Spa out of the total is 49% (40% in 2021). The 2022 share is increasing due to the issuance of the Green Bond in line with the European Taxonomy in May 2022.

Green bonds 2014-2024

The Hera Group was the **first in Italy to launch Green bonds**, paving the way for other operators in the utility sector or other sectors. With the first Green bond, 26 projects belonging to the categories indicated in the table below were financed or refinanced totalling 500 million euro.

Green bonds 2019-2027

In 2019, five years after the issue of the first Green bond in Italy, **Hera launched its second Green bond**. The financial instrument was presented by means of a roadshow in the main European markets, to illustrate to investors and analysts the allocation of resources in environmental sustainability projects in the fields of environment, water, energy. The Group's second Green bond amounts to 500 million euro. The operation enjoyed a significant participation by international investors (France, Germany, Great Britain, the Netherlands), who were largely focused on the environmental and social performance of companies.

The funds raised will be used to finance or refinance numerous projects, already launched or planned in the Group business plan, which pursue one or more of the objectives of the 2030 UN Agenda:

- **energy efficiency** (SDGs 7 and 13): installation of innovative electronic gas and electricity meters (NexMeters), development of district heating networks, public lighting projects;
- **circular economy and sustainable waste management** (SDG 12): innovative projects in waste collection systems, extension of the quantity-based tariff, construction of facilities and infrastructures for recycling and energy recovery (including biomethane production);
- **sustainable management of the water service** (SDGs 6 and 14): sustainable wastewater management infrastructures, sewage and mains water infrastructure projects for resilience and adaptation to climate change.

These projects were defined on the basis of precise environmental criteria, described within the **Green financing framework**, published by Hera in June 2019 and verified by ISS ESG, to guarantee that funds are properly allocated. The environmental benefit produced by the projects was quantified using 11 performance indicators that are accounted for annually in the sustainability report, included in the GRI content index and, therefore, subject to external auditing.

USE OF FUNDS RECEIVED WITH THE GREEN BOND 2019-2027

Area	Total collection (mn €)	% of total
Sustainable management of the water service	188.4	37.7%
Circular economy and sustainable waste management	188.6	37.7%
Energy efficiency and gas infrastructures	45.9	9.2%
Energy efficiency and electricity, district heating and public lighting infrastructure.	77.1	15.4%
Total	500.0	100%

The definition of the funded projects was validated by a "Second Party Opinion", drawn up by ISS-Oekom, which ranked Hera "Prime" in terms of ESG performance (sixth in a panel of 43 global companies) and highlighted its particular excellence in the water sector.

Green bond report 2022-2029

In 2022, Hera updated its 2019 **Green financing framework (Gff)** by bringing it in line with the principles of the European Taxonomy and market best practices. The updated Gff has thus become a policy document defining the categories of “green projects” in line with the European Taxonomy that can be financed through a Green bond, the process and criteria for selecting “green projects”, the process for managing the funding received, and the commitments in terms of reporting and external auditing.

Based on the updated Gff, in 2022 the Hera Group issued its **first Green bond in line with the European Taxonomy** totalling 500 million euro repayable in 7 years with a coupon of 2.5% and a yield of 2.639%.

The funds collected are being used to finance or refinance numerous projects, already launched or foreseen in the Group business plan to 2025, selected on the basis of the Gff, which pursue one or more of the goals of the 2030 UN Agenda, or Sustainable Development Goals (SDGs), divided into 3 areas:

- **energy efficiency and energy infrastructures** (SDGs 7, 11 and 13): installation of innovative electronic gas and electricity meters, development of district heating networks, and public lighting projects;
- **circular economy and sustainable waste management** (SDG 11,12 and 13): innovative projects in waste collection systems, extension of the quantity-based tariff, construction of facilities and infrastructures for recycling, recovering and reusing materials as well as plants for bio/chemical waste treatment and the reuse of materials from plants that convert waste into energy;
- **water infrastructures** (SDGs 6, 13 and 14): sustainable wastewater management infrastructures, sewage and mains water infrastructure for resilience and adaptation to climate change.

The environmental benefit produced by the projects was quantified using 18 performance indicators that are accounted for in the sustainability report, included in the GRI content index and, therefore, subject to external auditing.

Hera's Gff aims to finance **16 eligible economic activities** in line with the European Taxonomy, within the three categories outlined above.

“Green projects” refer to those projects that aim to achieve **five environmental objectives** laid down in the European Taxonomy:

- climate change mitigation;
- climate change adaptation;
- natural resources preservation;
- biodiversity preservation;
- pollution prevention and control.

Sustainalytics, a leading independent sustainable research and rating company, certified that Hera's framework is in line with the technical criteria of the European Taxonomy for the corresponding 16 economic activities and in line with the 2021 Green bond and Green loan principles.

The Green bond provided for a 45% refinancing share for investments incurred in 2021 and a 55% financing share for investments incurred in 2022.

Below is the allocation of funds collected through the Green bond issued in 2022 by single economic activity eligible for the EU Taxonomy.

USE OF FUNDS COLLECTED WITH THE GREEN BOND 2022-2029

Area (EU Taxonomy Activities)	Total collection (mn €)	Shares (%)
5.1 Construction, expansion and operation of collection, treatment and supply systems	183.5	36.7%
5.3 Construction, expansion and operation of collection and treatment of wastewater	109.0	21.8%
Total of sustainable management of water and wastewater	292.5	58.5%
3.17 Manufacture of plastic materials in primary forms	11.4	2.3%

Area (EU Taxonomy Activities)	Total collection (mn €)	Shares (%)
4.13 Production of biogas and biofuels for transport and bioliquids	1.4	0.3%
5.5 Collection and transport service of non-hazardous waste in portions sorted at source	55.0	11.0%
5.7 Anaerobic digestion of organic waste	1.6	0.3%
5.8 Organic waste composting	1.1	0.2%
Total circular economy and pollution prevention and control.	70.5	14.1%
4.1 Electricity generation through photovoltaic solar technology	6.0	1.2%
4.9 Electricity transmission and distribution	78.4	15.7%
4.15 District heating and cooling distribution	6.0	1.2%
4.22 Production of heat and cooling from geothermal energy	0.2	0.0%
7.3 Installation maintenance and repair of energy efficiency devices	2.0	0.4%
7.5 Installation, maintenance and repair of instruments and devices for measuring, regulating and controlling the energy performance of buildings	43.0	8.6%
7.6 Installation maintenance and repair of renewable energy technologies	1.4	0.3%
Total energy efficiency and energy infrastructures	137.0	27.4%
Total	500.0	100%

The first sustainable revolving credit line in Italy

In May 2018 a new credit facility was taken out for 200 million euro, entitled “**ESG Linked RCF Facility**”, which introduces elements of sustainability by means of an incentive mechanism linked to the achievement of specific environmental, social and governance objectives. In the commitment undertaken with the banks, a number of **sustainability performance indicators** have been defined, by virtue of which Hera may benefit over time by more favourable rates.

The areas of the identified indicators coincide with the two drivers identified for the creation of shared value (Energy - pursuing carbon neutrality and Environment - regenerating resources and closing the loop) and these are: carbon footprint of energy production, separate waste collection rate and reduction of energy consumption.

This line was repaid in 2022, in advance of the scheduled maturity in May 2023, in conjunction with the subscription of a **number of sustainability-linked revolving credit facility lines** that refer to the indicators and targets included in the Sustainability-linked financing framework adopted by Hera in 2021.

Specifically, the first indicator relates to the Group's greenhouse gas emissions (Scope 1+2+3 from electricity sales and downstream gas) while the second relates to the amount of plastics recycled by the Group. In both cases, the target is set for 2030 and, for the first indicator, the target has been validated by the Science-Based Targets initiative (see next section).

Sustainability-linked financing framework and Sustainability-linked bond

In October 2021, Hera published its **Sustainability-linked financing framework**, a tool that further strengthens the integration between the Group's financial strategies and sustainability emphasis, with a focus on carbon neutrality and circular economy projects.

In particular, the Group introduced **two key indicators** in its bond, in line with the strategies outlined in the Industrial Plan for the energy and environmental transition, and representative of the multi-utility's commitment to achieving the objectives of the 2030 UN Agenda. Specifically, the first indicator relates to the Group's **greenhouse gas emissions** (Scope 1+2+3 from electricity sales and downstream gas)

while the second relates to the amount of **plastics recycled** by the Group. In both cases, the target is set for 2030 and, for the first indicator, the target was validated by the Science-Based Targets initiative.

INDICATORS SET BY THE SUSTAINABILITY-LINKED FINANCING FRAMEWORK

	Basic year	2022	Target 2030
Reduction of CO2 emissions compared to 2019 emissions using the SBTi method (Scope 1+2+ from energy sales and downstream gas) (%)	11,781.3 kt (2019)	10,406.6 kt -11.7%	7,459.5 kt -36.7%
Plastic recycled by Aliplast (thousands of tonnes)	59.6 (2017)	79.2	148.9

The Scope 3 data relating to the sale of methane gas do not consider the transitory increases in volumes sold in last-resort services.

In addition, for both indicators, interim sustainability performance targets were defined that will be reported annually in the sustainability report, included in the GRI content index and, therefore, subject to external auditing. In 2022:

- Total GHG emissions (excluding last-resort services) decreased by 12% compared to 2019 against a projected reduction of 23% in 2026;
- recycled plastics increased by 33% compared to 2017 against a projected increase of 102% in 2026.

For more details on this, see the sections “Hera for the climate” and “The Hera Group’s contribution to the plastics of the future” as well as the case study “Hera Group’s commitment to the new plastics economy”.

Following the publication of the Sustainability-linked financing framework, the Hera Group issued its **first Sustainability-linked bond** of 500 million euro, repayable in 12 and a half years. An annual fixed-rate coupon of 1% will be paid, while the yield at the time of issuance was 1.077%. From the interest payment date of 2032, a possible step up (an increase in the interest rate) is foreseen in the event that the company does not achieve the targets for the reduction of the greenhouse gas emissions (rate increase of 0.20%) and the quantity of recycled plastic (rate increase of 0.15%).

Sustainalytics, one of the leading ESG rating agencies, validated and deemed ambitious the indicators, strategies and targets included in the Sustainability-linked financing framework; the agency also issued a **second party opinion** attesting to the framework’s consistency with the main international reference standards, beginning with the Sustainability-linked bond principles 2020 of the Icma (International Capital Market Association).

Communications with our stakeholders

5.05 Communications and consultation initiatives

[2-29]

Hera's significant commitment to involving stakeholders is by now part of the operational structure of the departments that deal with relations with various stakeholders and has continued throughout 2022.

The main engagement and dialogue activities carried out with the company's stakeholders and the method used to identify the material issues that guided this activity are described in the methodological guide of this report in the section "Stakeholders and materiality analysis".

Customer satisfaction survey

Since 2005, the quality of our services has been assessed through annual customer satisfaction surveys aimed at defining improvement measures. Since 2014, in addition to Hera's residential customers, the survey has also included the customers of AcegasApsAmga (Padua and Trieste), Hera Comm Marche (Pesaro and Urbino) and Amga (Udine). Since 2020 monitoring has also been extended to EstEnergy and Ascoss. The 2022 edition of the survey also involved Marche Multiservizi.

ASSESSMENT OF RESIDENTIAL CUSTOMERS' OVERALL SATISFACTION

CSI (from 0 to 100)	2020	2021	2022
Overall satisfaction index (CSI)	73	73	72
Overall service satisfaction index (Services CSI)	78	78	75

Data from 2020 to 2021 do not include Marche Multiservizi.

The 2022 **overall satisfaction index** decreased by one point compared to the previous year, remaining however over the 70-point threshold that indicates a high level of satisfaction.

Rising energy prices and the related national debates affect **satisfaction levels for individual services**, which stands at 75 points, down three points from 2021. The decline appears across the board on individual services, particularly gas and electricity services. Waste management is less affected by this negative trend, losing only one point. However, all services exceed the 70-point threshold that indicates a high level of satisfaction.

The **contact channels** show a decline, but continue to indicate excellent customer satisfaction and, above all, remain consistent at a high level: help desks, call centres, online services, and apps all have ratings of over 77 points. This ensures that customers will always find competent customer assistance operators and appropriate procedures, regardless of the contact channel.

The customer loyalty reported by clients and word-of-mouth recommendation remain at excellent levels, 82 and 75 points respectively.

SATISFIED CUSTOMERS

%	2020	2021	2022
Percentage of satisfied customers	92%	92%	91%

The **percentage of satisfied customers** (customers who expressed a satisfaction rating of 6 or higher) was **91%** in 2022, down slightly from previous years.

The survey was also carried out for **business customers** in order to monitor customer satisfaction levels for both the free market and for those still in the protected market. In the case of companies, the survey involved interviewing the contact person for the services provided by Hera.

The results of the 2021 survey are reported here since the results for 2022 were being processed on the date of approval of this report.

ASSESSMENT OF BUSINESS CUSTOMER SATISFACTION

CSI (from 0 to 100)	2019	2020	2021
Overall satisfaction index (CSI)	72	73	72
Overall satisfaction index for services (Services CSI)	75	77	74

There was a slight decrease for **CSI**, which stood at 72 points, in line with 2019 and above the high satisfaction threshold for the third consecutive year.

Average satisfaction with the services provided stands at 74 points, down from 2020 and in line with the 2019 results. Contact channels show excellent satisfaction in the case of business customers, achieving close to 80 points.

Methodology used for the customer satisfaction survey

The customer satisfaction survey has been carried out since 2005 by an external company and is based on an internationally recognized methodology for assessing the quality of services offered and customer satisfaction with Hera as a whole. A total of **9,948 telephone interviews** were conducted for the 2022 survey, from the end of September to mid-November 2022. The survey was conducted by Computer Aided Telephone Interviews (CATI) with a survey population chosen so as to ensure that the sample is representative of the customers of all of the Group's services. Monitoring was carried out by interviewing the main contact person for Hera within the household. The questionnaire, which lasts around 15 minutes, is designed to monitor the various satisfaction components and measure future behaviour (word-of-mouth, loyalty, etc.) in relation to the company. The assessments of the results are expressed in numerical scales, divided into levels of satisfaction: less than 50 points indicates insufficiency; up to 60, minimal satisfaction; between 60 and 70, a good level of satisfaction, and more than 70, a high level of satisfaction.

Since the second half of 2017, call centres, branch offices, online services and apps have been monitored as contact channels through **daily interviews** conducted the day after the contact took place, in order to gain insight into the customer's satisfaction while the experience is still fresh. Around 15 thousand interviews a month are carried out using IVR (by telephone with pre-recorded questions) and CAWI (by email) methods. Thanks to the portal used for analysing customer evaluations, it has been possible to constantly improve channel performance. Around 180 thousand interviews were carried out in 2022 to monitor the contact channels.

Other customer communication initiatives

Our **web portal for consumer groups** has been online since 2011: the section of the Group's corporate website is reserved specifically for representatives of the main associations operating in the local areas Hera serves, who are key contacts for the company in its relations with end customers. For associations, this web channel is an important interface with Hera. They can use it to handle reports and procedures, prevent disputes, and minimise the time needed to respond to and solve problems. In 2022, the web portal reported **5,146 visitors** and a total of **13,930 page views**.

In addition to the portal, the contact people and members of the associations can use dedicated email addresses, and phone and fax numbers that, together with the web component, represent a genuine communication channel dedicated to consumer groups. In 2022, 529 cases were managed through this dedicated channel (compared to 536 in 2021), 100% of which were resolved successfully; average case resolution time was 4 business days.

Furthermore, in order to build positive relationships and create an increasingly open dialogue, in 2022 Hera once again organised specific meetings with consumer group contact people. As in past years, periodic meetings were held dedicated to provincial and local association contact people: as in 2020 and 2021, these events were held online. A total of **two meetings** were held in the month of December involving a total of **18 representatives from the main consumer associations operating throughout the local areas**. During the meetings, topics of interest to the associations were discussed, including regulatory updates on end-of-protection electricity and transition to free market and minimum protections for users in case of "hidden water losses," leak fund performance, the renewal of AWS certification for

the Sasso Marconi drinking water treatment plant, water management and water saving initiatives, and, finally, the system of protections.

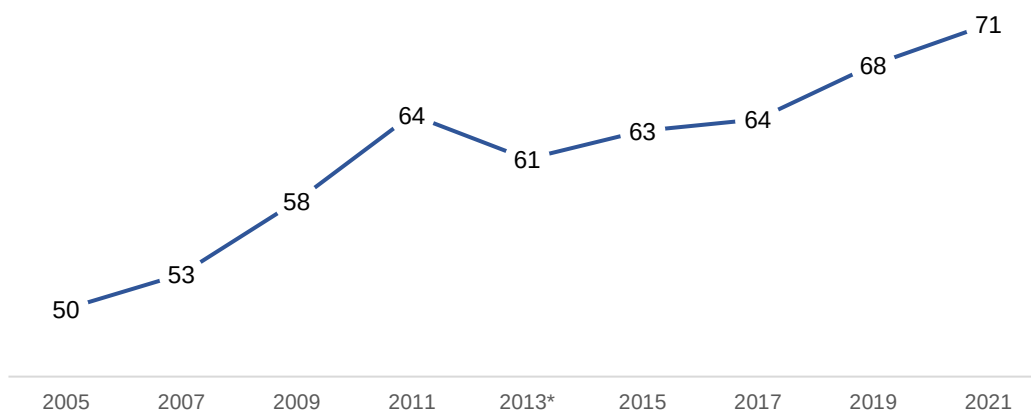
Throughout the year, the company also engaged in discussions with representatives of the **eight major national and regional consumer associations**, holding **nine meetings** with these representatives, in this case as well taking place online. Following an agreement reached between Hera and such consumer associations at the beginning of 2022 concerning concessions granted with respect to **bill instalment payments**, these events have made it possible, in particular, to continuously monitor the aspects of the energy crisis related to gas, electricity, and district heating services.

Internal climate survey and other dialogue initiatives

The first climate survey was conducted sixteen years ago, in 2005: today, with nine surveys now completed, we can confirm the soundness of the path taken by the Hera Group.

The overall satisfaction score (ESI) **increased by more than twenty points**, and in general, the various areas investigated by the questionnaire (me, my team and manager, the company) received excellent scores.

ESI (EMPLOYEE SATISFACTION INDEX) TRENDS OVER THE YEARS



*The 2013 value was reconstructed using data from Hera, AcegasAps and Amga collected in 2013-2014. The decrease in 2013 and 2015 values is mainly due to the acquisition of AcegasApsAmga in 2014.

The 2021 survey involved all 9,240 people in the Group, and **82% of the population** responded (amounting to 7,546 people).

ESI, the main indicator of employee satisfaction, continues to show a positive trend in all Group perimeters: **satisfaction stands at 71** (scale in the hundredths) and has increased by more than 20 points. This data is the result of employees' appreciation of the ability shown by the company, top management and its leadership to define processes, projects and activities that meet the changing needs of people and the market. Satisfaction has improved across all company positions, with blue-collar and white-collar ESI in particular increasing significantly, reaching or exceeding the 70-point threshold. Younger employees (≤ 34 years old), as well as women, on average express greater satisfaction with their managers.

Conducted every two years, the climate survey has ensured that the various pointers and suggestions provided by workers have been incorporated over time and has allowed for the structuring of timely improvement plans defined on the basis of the findings revealed by the survey. These results attest to employees' appreciation of the company's ability to define processes, projects and activities that meet the changing needs of people and the market.

The path of continuously listening to employees has supported the Group, not only in addressing and accommodating changes, but also in its ability to incorporate the different populations that have become part of the Hera Group over time by aligning and developing a shared culture.

The initiatives most appreciated by workers include:

- smart working / remote working;
- courses/training/skill updating;
- the company welfare plan;
- Covid19 management (safety equipment, prevention, vaccination campaign, information...);
- technological innovation/updating of IT tools/digitalisation;
- attention to the environment/climate change/sustainability.

The percentage of satisfied employees (employees who expressed a satisfaction rating of 7 or higher) was 82% in 2021.

Planned improvement actions, impacting the entire Group across the board as well as specific business units, **were concluded during 2022**, involving listening initiatives, workload, compensation, the welfare system, internal communications, and word-of-mouth.

In particular, Hera Group's main investments have been focused on ensuring the following:

- sharing of the purpose, mission and values;
- employee safety;
- refurbishment of work environments and instrumentation (equipment and devices);
- improvement of company communication;
- the development of some specific areas such as training, the leadership model, the welfare system and performance management.

Internal communication

The **purpose of internal communication** is to facilitate the dissemination of information within the company, promote collaboration and cooperation among colleagues, encourage the exchange of knowledge and experiences in an increasingly inclusive way, foster a positive work climate, and consolidate the corporate culture.

In a year such as 2022 characterised by an energy crisis and the increasingly evident climatic emergency, communication initiatives aimed at supporting colleagues to orient their responses to and behaviours in relation to these issues have been particularly important. One example is the implementation of the **"Insieme dalla parte dell'energia"** (Together on the side of energy) campaign, featuring video interviews, answers to frequently asked questions, and articles on the topic of "high energy prices," with the goal of raising awareness.

The need to communicate with and inform the corporate population in a timely manner also prompted the strengthening of digital tools, enhancing the **inHera internal portal**, which, a year after its go-live and thanks to suggestions sent in by colleagues, has been updated with new features that have made the intranet an increasingly interactive, participatory, and engaging tool. In addition, the **inHera News app** has been activated for the **"Buongiorno" newsletter**, which allows news to be received directly on Teams. Unlike e-mail, for the app it is also possible to measure how much it is being read, showing that an average of 4,000 employees read the post every day.

In addition, internal communication produced more than **40 videos and video interviews** in 2022, which were well received by employees and met their needs for information, communication, immediacy, involvement, and accessibility. The videos of the **Digital Workplace miniseries** inspired by TV shows and starring colleagues were a success, with more than 7,000 total views. The **HEXTRA campaign** on performance bonus conversion inspired by cult movies was another successful example, with nearly 3,000 views.

In 2022, the **Ambassador project** carried out in collaboration with the Central Personnel and Organization Department continued, involving employees in social media activities with the aim of improving the company's online reputation.

The issues championed by **Diversity management** were also emphasized through articles, videos, and the implementation of in-person events targeting employees.

Ample space was devoted to **celebrating the 20th anniversary of Hera's founding** with a multifaceted project involving management and about 30 employees who have been key players in the most important stages of the company's history. Their stories, videos, photos, and interviews were collected in the column **Twenty Years - A Story of Growth**, published on HO and inHera.

Finally, in 2022 internal communication accompanied the in-house presentation of the new CEO with interviews, videos and dedicated news items.

In parallel, all the routine internal communication activities continued:

- 226 paper HO articles;
- 362 digital HO articles;
- 120 morning “Buongiorno” communications;
- 15 communication campaigns (Digital workplace, smart working, development process, Hextra, cybersecurity, “insieme dalla parte dell'energia”, 20-year anniversary celebrations, etc.);
- 45 videos.

Relations with the local community

HeraLAB, a tool for listening to local communities
[413-1]

HeraLABs are multi-stakeholder boards that the Hera Group set up in 2013, in seven areas of Emilia-Romagna. The primary objective of these participatory processes is to provide a structured channel for listening and dialogue with local communities in the areas where Hera provides its services.

In 2022, a process of **internal assessment and sharing** was initiated with various management offices and Group companies that led to the development of a new HeraLAB mechanism and identified the **issue of carbon neutrality** as an area of focus for dialogue and discussion with stakeholders in the Imola and Modena areas. On the basis of this identified issue, engagement activities were launched in the two selected areas in collaboration with local stakeholders and the management of companies most impacted by carbon neutrality projects. Following this engagement, the participants for the third edition of HeraLAB were appointed by the Board of Directors at its meeting in December 2022, with 13 participants named for the LAB in Modena and 15 for the one in Imola.

An internal Group discussion will also be initiated in 2023 to define the new areas and subject matter on which the 2024 LABoratory will be focused.

Regarding the initiatives proposed by the **Rimini LAB**, two of the three projects (“Testimonial dell'Acqua” and “Il Circolino”) have been suspended while it will be evaluated together with Rimini's economic actors whether to implement one (“Riempimi d'immenso”) for the next tourist season. Regarding the initiatives proposed by the **Bologna LABs**, two have been suspended (“Acqua bene comune” and “Collezione differenziata dall'inizio alla fine”) while for one (Giardini Margherita Plastic free) the necessary authorization processes on the part of the applicable authorities are pending completion.

During 2022, work began on **7 of the 8 initiatives proposed by the Modena and Forlì Cesena LABs**. Modena's local initiatives plan includes the following.:

- **Environmental transition in the agri-food supply chain.** The project is aimed at facilitating an investigation of the agri-food supply chain to identify the main processes into which environmental transition initiatives can be most effectively inserted. The results of the study should encourage the application of virtuous measures throughout the supply chain (industrial production, distribution and sales, catering). To this end, thanks to coordination by the University of Modena and Reggio Emilia's Department of Economics and in collaboration with the area's economic associations, a questionnaire has been developed and will be administered to approximately 400 Modenese businesses by March 2023.
- **Dialogue round tables.** To support the transformation of the waste collection service that will involve 32 municipalities in the province of Modena, opportunities for dialogue with the citizenry will be enhanced and innovative channels of contact will be activated, engaging the third sector, young people, and trade associations. The project was completed in September 2022.
- **“Le vie dell'acqua”.** This initiative aims to complement the historical-naturalistic trails in the Modena area (“la via Romea/Nonantolana” pilot project) by telling the “story” of the water that flows under them. Public drinking fountains will be installed along the route, which will function as strategic points for anchoring various communicational initiatives, supported by the Aquologo app as well. A memorandum of understanding has been reached, and is being formalized, with 15 municipalities in the Modena area to initiate and manage this project.
- **“Il tutor energetico”.** This initiative is aimed at setting up structured channels dedicated to training staff at third-sector help desks to raise awareness about the possibility of accessing bonuses and all the benefits introduced by Hera and others to curb energy poverty and payment delinquency. The project started with the signing of the first two protocols with the “social stores”

run by the “terre estensi” voluntary services centre (seven from Modena and two from Ferrara) and Caritas of Pavullo, and the first 40 volunteers were trained.

The local initiatives plan for Forlì-Cesena includes the following:

- **“Green” hotels.** With this project we aim to identify the most effective ways (trademark, brand or protocol) to bring together and characterise the hotel facilities in Cesenatico using a green/environmentally friendly approach. To this end, a working group consisting of government agencies and tourism providers will be formed to define both the standard of best practices for “green” hotels and ways to promote this type of facility.
The project was publicly presented on 26 January 2023 in Cesenatico where a memorandum of understanding was signed among the Municipality of Cesenatico, Federalberghi Adac and the Hera Group to begin presenting the project. In February 2023, the working group to support the trial run was established.
- **Ecological transition in the San Mauro Pascoli footwear district.** In collaboration with public administrations, companies, trade associations and universities, a study will be sponsored in the San Mauro Pascoli (FC) district to learn about the various types of production waste in the footwear supply chain and understand how companies manage them. This study is designed to identify potential processes where circularity initiatives can be applied. In 2022, a scientific research grant was funded at Ciri frame (Interdepartmental Centre for Industrial Research on Renewable Sources, the Environment, Sea and Energy) - Rimini Polo Technopole aimed at collaborating to study the possible use of circular economy initiatives in the footwear district. This initiative is part of already ongoing activities and aims to broaden and further explore the research areas involved.
- **Protocol with the third sector.** In order to engage the different targets components of the local community and in general the stakeholders of the various projects whose priority goals will be waste reduction, quality of sorted waste collection, and improving urban upkeep, working tables and structured discussions will be organised with VolontàRomagna (an association resulting from the merger of VolontàRimini and Assipro, the volunteer service centres of Rimini and Forlì-Cesena, respectively). In May 2022, an initial memorandum of understanding was signed among Auser Volontariato Cesena, the Municipality of Cesena and Hera to provide residents with the necessary support to improve the quality of sorted waste collection.
- **“Sono circolare?”** This project aims to make people more aware of good circularity practices that can be applied in their daily lives to improve their impact on the environment. Ten good circularity practices in energy, water and waste will be selected. These practices will be promoted through a handbook produced in collaboration with environmental and consumer associations. With the participation of a number of local companies, a feasibility study will be launched to develop an app aimed at measuring the circularity of the most common everyday habits. The project is currently being evaluated.

At 31 December 2022, a total of **120 meetings (equal to over 2,700 hours of listening)** had been organised as part of the HeraLAB project. The community involved in HeraLAB over the years consists of **116 members**, and the total number of projects approved during the workshops' activities stands at 78, 60 of which have already been implemented.

Nine years after the start of the HeraLAB project and before implementing the third edition, an assessment was conducted, following which, the **guidelines for the new edition of the LABoratory** were developed in 2021.

As set forth in the HeraLAB regulations, appointment as LAB member and attendance to the LABs are **free of charge**.

Hera has chosen to provide an attendance allocation for each meeting, set at 100 euro per participant for the first edition of the project and since increased to 200 euro. The accumulated attendance allocations go into an annual fund that the LAB uses every year to support sustainability initiatives and projects promoted by local public bodies or non-profit organisations identified by the LAB. Since the start of the HeraLAB project at the end of December 2022, 97,750 euro in attendance allocations have been donated to 23 public and non-profit organizations in the areas where HeraLAB operates.

Associations in which Hera participates

[2-28]

The Hera Group is active in the highest levels of the organisations representing the system of local public services, first and foremost Utilitalia. Hera participates actively in the association's activities and supports its institutional communication through the identification of its representative in the various round tables set up with regulators by the associations. At the local level, Hera takes an active part in Confservizi Emilia-Romagna and Confservizi Tuscany and Confservizi Veneto (the regional association for the companies, firms and public and private bodies managing local public services in their reference area), as well as Confindustria, Unindustria and Apindustria in many of the local areas it serves.

In the **energy field**, the Group is also a member of ANIGAS (National Association of Gas Industrialists), AIRU (Italian Urban Heating Association), FIRE (Italian Federations for the Rational Use of Energy), Assorisorse (Natural Resources and Sustainable Energy Association) APCE (Association for the Protection of Electrolytic Corrosion), IATT (Italian Association for Trenchless Technology), UNI (Italian Standards Body), CTI (Italian Thermotechnical Committee) and participates in the work of CIG (Italian Gas Council). In the European arena, it participates in the ECC (European Cooperation Council), particularly on issues related to energy transition.

In the **waste management sector**, the Group also participates in the national association Fise Assoambiente and Eurits, the European association for hazardous waste. Also in Europe, it participates in the Rdf Industry Group, which brings together organizations from across the waste-derived fuel supply chain. In addition, it participates in the supply chain consortia Polieco, Conip, and CIC as well as EMAS Ravenna, the first entity nationwide to obtain district EMAS registration, and Unichim (the Association for Unification in the Chemical Industry).

The Group also contributes to **research activities** in the utilities sector carried out by leading institutions, either as a commissioning party for specific research or by participating in the scientific debates fostered by such research projects with contributions published in the proceedings: Agici Corporate Finance, Fitchner, Ref Ricerche, Florence School of Regulation, and I-Com, the Institute for Competitiveness, Aspen Institute (an international nonprofit organization whose mission is the internationalization of business leadership and discussion of major contemporary issues).

As regards **corporate social responsibility and sustainability**, Hera is also a member of Asphi Foundation (supporting and integrating people with disabilities through the use of Information and Communication Technology), Impronta Etica (an association of companies for the promotion of social responsibility); it also adheres to the Ellen MacArthur Foundation and Circular Economy Network (for supporting and promoting the development of the circular economy), Sustainability Makers (for sustainability issues), Aziende Modenesi per la Responsabilità Sociale, the Rubes Triva Foundation (for training and promoting occupational safety in environmental sanitation companies) and, finally, the Fondazione Global Compact Network Italia (for fostering the culture of corporate citizenship).

[415-1]

In 2022 as well, consistent with the provisions defined in its Code of Ethics and Group Protocol 231, the Hera Group **did not make contributions of any kind to political parties or politicians**.

CONTRIBUTIONS TO POLITICAL PARTIES AND TRADE ASSOCIATIONS

thousand euro	2020	2021	2022
Politicians and political parties	0	0	0
Trade associations	1,304	1,284	1,276
Other associations/organizations (promotion and dissemination of sustainability, industry/sector-specific research and studies)	153	178	176
Other contributions	0	0	0
Total	1,457	1,462	1,452

The main contributions made in 2022 include 947,285 euro to sector associations and 72,546 euro to associations involved in CSR. The first category mainly includes Utilitalia (691,285 euro) and Confservizi

Emilia-Romagna (184,500 euro), while the largest single contribution given to the second category was to the Circular economy network (15,000 euro).

Communication

Hera on the internet

Hera is continually committed to ensuring **effective online communication** that fully meets the transparency expectations of its various stakeholders. The portal www.gruppohera.it represents an important tool for communication and interaction between the company and residents, and is continuously updated: the portal, together with the websites of the Group companies, constitutes the digital ecosystem of the Hera Group in which content and traffic are integrated and organised, conveying them towards the channels dedicated to the various business areas in order to help stakeholders find information of interest more quickly.

During 2022, the web portal www.gruppohera.it, which was completely renovated in 2021 following an inclusive approach aimed at simplifying the browsing experience, was enriched in 2022 with approximately 4,000 new pieces of content; approximately **1.5 million visits** were recorded alongside 3.4 million page views. The most viewed areas are the “**Support**” and “**Offers and Services**” areas that offer information about services for residents, with about 1,840,000 page views (around 53% of the total) and the “**Group**” area that talks about the company and its values, goals and achievements, with about 696,000 page views (around 16% of the total). For the “Support” area, the “Waste Management” service was confirmed as the most viewed one in 2022, with nearly 640,000 page views, while for the “Group” area, the most viewed subsections are “Work with Us” (140,000 views) and “Media” (127,000,000 views).

The “**Together**” section, the most narrative area of the portal www.gruppohera.it featuring a collection of stories, projects and initiatives engaging people in the areas served to build a more sustainable future together, totalled 28,000 page views. In the “Together” area, users can subscribe to the Hera Group’s newsletter by the same name, “Insieme. Per condividere storie e idee” (Together to share stories and ideas), a tool for keeping abreast of sustainability issues and reporting on activities that have a positive social and environmental impact: during 2022, 11 issues of the newsletter were sent to about 40,000 subscribers.

Starting in March 2022, a focus piece on the first 20 years of the Hera Group was published online together with a photographic timeline (available at 20anni.gruppohera.it) that recounts, through images, the most significant events of these first 20 years of the Group’s history (in 2022, the 20anni.gruppohera.it website garnered about 8,500 visits and 20,000 page views).

What is Hera's presence on the web?

The Hera Group dialogues with the outside world by synergistically using both **traditional communication tools** and **social media channels** to reach all stakeholders in an increasingly effective way. The use of social media channels allows for a more engaging and interactive digital narrative, which, combined with the measurement and analysis of online conversations, provides interesting feedback on our reputation and allows us to better understand interests and opinions.

In 2022, the Group’s online visibility rose sharply (+54%) in the wake of the sharp increase in conversations and news about the energy sector during the year as a result of the conflict in Ukraine and the energy crisis in Europe.

Hera’s online presence is focused on blogs, forums and social networks, platforms where the Group monitors issues that are relevant to its reputation and business operations. Despite the difficult economic period, an analysis of more than 11,500 posts referring to Hera shows very positive opinions about the Group’s image. As a matter of fact, the numerous steps taken by the Group, such as supporting the families most affected by high utility bills, collaborating closely with municipalities and Consumer Associations, offering tools to help customers monitor their energy consumption, such as the Consumption Log, as well as the timely information campaign on rebates and payment by instalment options available to customers, helped to offset the negativity generated by the severe energy crisis that affected the country during the year.

Our **Instagram** page addresses some corporate topics of more general interest through images and videos and using simple language, with the aim of appealing to and engaging a young and active target audience, including through a friendly communication style. The year 2022 was distinguished by telling

the story of Hera's 20th anniversary through a dedicated editorial format. Space was devoted to content that emphasises the dedication of the multi-utility and the people who work there, paying attention to the most socially relevant and innovative issues with an emphasis on sustainability. In 2022, the page grew to 7,500 followers (up 21% from 2021) with posts generating about 11,000 interactions and 300,000 organic post views (impressions).

The **YouTube** channel provides all stakeholders with a vast archive of corporate videos divided into theme-based playlists, a collection that is constantly being expanded with newly created videos. Storytelling through images is very timely and effective, capable of capturing the attention of many people; among the most viewed videos during the year were those dedicated to "20AnniInsieme," new workshops, and the circular economy featuring Aliplast. In 2022, it reached nearly 7,000 subscribers (up 121% from 2021) and recorded a total of 5.8 million views. In 2022, a total of one hundred Hera Group videos were published on the channel, which obtained more than 1.5 million views (+15% compared to 2021).

The Sorted Waste Collection Assistance page on **Facebook** has an informational role but also represents a truly innovative "social care" service dedicated entirely to waste collection in the areas served by Hera. In fact, the page handles numerous requests for assistance and offers posts featuring information on waste management services, available tools, and advice on all the topics that might help residents improve the quality of recycling and urban upkeep. In 2022, it reached 6,386 fans (up 11% from 2021), its posts were viewed by about 3.5 million people (up 84% from 2021), and it garnered approximately 6,000 interactions, including likes, comments, and shares.

The Hera Group's **Twitter** account approached 7,200 followers in 2022, with a total of 1,821 posts published (more than 150 posts published each month). The tweets had a total of about 5.3 million views, averaging 440,000 views per month, and generated nearly 7,400 interactions including likes, comments and retweets. The account continues in its goal of conveying institutional content to enhance the reputation of the multi-utility company and has evolved over time to ensure timely information on services, expand opportunities for communication with customers, and engage all stakeholders by capitalising on local rootedness and shared value creation.

Hera Group's **LinkedIn** account reached approximately 109,000 followers in 2022, an increase of 17% over 2021. There were 741 posts published on the profile during the year, reaching more than 2 million people and obtaining about 191 thousand interactions, +9% compared to 2021. The account continues to be a place for professionals working in the company's business sectors to meet and exchange ideas. Wide visibility was given to the issues of sustainability, circular economy and innovation, in part by reporting on projects and partnerships involving various actors in the area, including institutions and businesses. With a view to enhancing reputation, employer branding and inclusion, more and more space is given to initiatives involving the company's managers and its personnel policies for selecting and attracting talent and training and empowering people.

Relations with the media

The press office manages **Hera Group's communication on local, regional and national news media outlets**. This work is accomplished by continuously drawing attention to the company's many initiatives by disseminating press releases and organising press conferences and press tours at the Group's main plants. This effort is paralleled by the organisation of in-depth interviews with management on specific topics and the drafting of position papers and dedicated communicational materials on the various business areas, based on journalists' needs or the latest issues on the media agenda. The press office also promptly responds to any criticisms expressed about the company or the services it provides, ensuring there is a direct line of communication, through the media, with local communities and customers. These activities are carried out in collaboration with all of the company's departments and all Group companies. Lastly, the office handles relations with the press offices of public and private institutions, associations or third parties to grant visibility to joint activities.

A **qualitative and quantitative analysis** has been in place for some time now to gauge this daily work, carried out by a specialised outside company that constantly monitors national, regional and local press coverage (press, web and audio-video). All the articles are assessed and weighed according to specific criteria: for the press, for example, the circulation of the publication, the size of the article, the position on the page and the presence of any photographs are evaluated. The pieces are then grouped according to their tone: positive, neutral, or critical.

HERA-RELATED NEWS ITEMS IN THE NATIONAL PRESS

%	2020	2021	2022
Favourable or highly favourable articles	96.3%	98.7%	96.8%
Neutral articles	3.6%	0.9%	2.7%
Critical or extremely critical articles	0.1%	0.4%	0.6%
Total articles (no.)	641	718	840

HERA-RELATED NEWS ITEMS IN THE LOCAL PRESS

%	2020	2021	2022
Favourable or highly favourable articles	84.6%	78.6%	84.2%
Neutral articles	10.1%	10.9%	10.3%
Critical or extremely critical articles	5.3%	10.6%	5.5%
Total articles (no.)	5,625	5,621	6,589

Thanks to the work that has been carried out, in 2022 **Hera's positive visibility** in the national press was confirmed at very high levels. Quantitatively, the number of articles published in the national press amounted to 10% of the total: 641 out of 6,266 articles published globally. The year 2022 was characterised by a significant increase in the number of articles published compared to 2021, up 17% both nationally and locally. This figure reveals the attention paid to Hera by the press and the Group's firm involvement in national and local dynamics, whether specific or general, and demonstrates the company's role among the leading players in the sector, a role that has increased particularly in the national media in recent years following its inclusion in the FTSE MIB index and Dow Jones Sustainability Index. From a qualitative standpoint, the positive tone of articles about Hera stands at 96% in national publications and over 85% in regional and local publications. The main issues that have contributed to positive feedback include: the business plan, economic and sustainability results, investments and spin-offs in local areas, the company's human resources management policies (from training and development to welfare and the promotion of talents and diversity), energy efficiency projects for businesses and condominiums and the upgrading of public lighting in several municipalities, initiatives to foster the circular economy, energy transition, decarbonization and the regeneration of resources (including water), the reorganization of waste management services in multiple local areas, sponsorships and numerous free educational projects for schools at all levels.

The **trend for critical articles** has been at a very low level for years now: in 2022 it was less than 1% for the national press and 5% for the local press, which represents a further improvement from the previous year (when it came to 10%). In both cases, these figures are to be expected and remarkably low when one considers the multi-business nature and size of the Group's activities, which cover an increasingly wide geographical area.

Pending legal proceedings

[2-27]

In addition to the disputes involving customers and suppliers which are discussed in the corresponding sections of this report, at the end of 2022, an additional **847 disputes** were pending, mainly concerning disconnections of gas supplies to late-paying end customers who, having signed contracts with salespeople for the redelivery points on the distribution network managed by Inrete, were subject to administrative termination as governed by ARERA legislation (specifically the Consolidated Law on gas delinquency). The remaining disputes refer to highly varied types of issues regarding claims for damages associated with the management of the services performed by Hera or Group companies. During 2022, 899 disputes were settled, including: 248 with energy customers, 25 with water service customers, 11

with suppliers, nine with environmental service customers, and the remaining 606 disputes with other types of company stakeholders.

In 2022, **82 letters of formal notice** were received, mainly concerning disputes detected by controlling bodies and referring to violations of the provisions of Italian Legislative Decree 152/2006 (Consolidated Environmental Act), mainly related to the integrated water services, particularly the failure to comply with the provisions set out in the relevant authorisation documents. After receiving these communications, Hera complied with all the obligations prescribed by the controlling bodies.

With regard to the networks and plants managed by the Group, the following litigation proceedings brought by associations, residents and/or other parties/authorities are to be noted:

Flood in Rimini

With reference to the criminal proceedings in which an Hera Spa employee and two other external parties were charged with the crimes of disaster and manslaughter in connection with the flooding that, on 24 June 2013, following a violent storm, had submerged Via Santa Cristina S.P. 69 in Rimini and caused the flooding of the Rimini prison and neighbouring dwellings (including that of an inhabitant who died on the same day due to illness), the Rimini Court acquitted the defendants of the crimes charged and, in particular, acquitted the employee involved “because there is no case to answer,” recognizing his lack of responsibility for the alleged actions.

Odorous and noisy emissions

Of note is the notification in July 2017 of the decree that ordered the committal to trial of two Herambiente managers, who the Rimini Public Prosecutor's Office charged, in particular, with odorous and noisy emissions from the Rimini recovery and storage plant that allegedly caused a disturbance to neighbouring property owners. At the first hearing scheduled for 28 November 2017, a local committee was set up as plaintiff for damages. On 30 November 2021, the Rimini Court declared that one of the two employees was not to be prosecuted and ordered the other to pay damages to the plaintiff as well as a fine. The relevant ruling is being appealed and is, therefore, not final.

Economic and financial plan appeals

With appeals notified in 2019 before the Regional Administrative Court of Emilia Romagna against Atersir, and against Hera Spa as other party to the proceedings, the municipalities of Sassuolo, Formigine, Maranello, Fiorano Modenese, Castelvetro di Modena, Savignano sul Panaro, Imola, and Castel Guelfo, respectively, challenged the Regulating Authority Council no. 18 and no. 19 of 13 March 2019, as well as the Regulating Authority Council resolution no. 14 of 5 February 2019 through which the Economic and Financial Plans for the 2019 municipal waste management service covering the local areas related to the above municipalities were approved. Hearings were held before the Regional Administrative Court on 16 January 2020 as regards the appeal filed by the Municipality of Sassuolo, on 28 January 2020 for the appeals filed by the Municipalities of Maranello and Fiorano Modenese and on 19 February 2020 for the appeal filed by the Municipality of Formigine.

All of the appeals brought by the municipalities were either rejected by the Emilia-Romagna Regional Administrative Court or settled out of court, with the exception of the following:

- the appeal brought by the City of Imola for the Economic and Financial Plans through the year 2022, which is still pending;
- the appeal brought by the Municipality of Castelguelfo against Atersir regarding the 2019-2022 economic and financial plans, which was upheld in part by the Regional Administrative Court of Emilia-Romagna.

Finale Emilia (MO) landfill

In the proceedings before the Regional Administrative Court of Emilia-Romagna against the Regional Government of Emilia-Romagna, and against Feronia Srl as other party to the proceedings, the Municipality of Finale Emilia challenged, subject to suspension, Regional Authority decision no. 356 of 11 March 2019 which approved the Environmental Impact Assessment of the project for the optimisation of the technological area and volumetric expansion of the existing landfill in the Municipality of Finale Emilia. The municipality also challenged, among others, the Integrated Environmental Permit. The Regional Administrative Court rejected the request for suspension and, in a ruling issued in July 2021, declared the appeal brought by the Municipality of Finale Emilia inadmissible; the municipality subsequently appealed to the Council of State and the latter, in July 2022, rejected the appeal and ordered the Municipality of Finale Emilia to reimburse the legal costs of the court case.

On 10 December 2019, the Judge of Preliminary Investigations of Modena placed under preventive seizure a segment of the special and urban waste landfill in Finale Emilia. Two former officials of Feronia Srl are under investigation for aiding and abetting in the approval of the Integrated Environmental Permit

renewal for the landfill despite its having exceeded the maximum capacity under the Permit and despite CTC (Contamination Threshold Concentration) parameters having been exceeded at the same landfill, as well as for environmental pollution, while the company is charged with an administrative infraction in connection with the same offenses. The Court of Cassation rejected the appeal filed by Feronia Srl against the order confirming the preventive seizure issued by the Court of Appeals. The company subsequently filed a petition to revoke the preventive seizure of the landfill, which was rejected by the Modena Preliminary Hearing Judge. Against this latest denial order, in May 2022, the company appealed before the Modena Court of Appeals. In an order dated 26 September 2022, the latter ordered the revocation of the preventive seizure of the landfill in light of the outcomes of the local authorities planning conference, which concluded that the exceedance of CSC levels in the landfill complex were not related to contamination from the landfill. The order was appealed by the prosecutor before the Court of Cassation.

On the merits of the case, at the hearing held on 29 April 2022, the defendants were remanded for trial. On 21 February 2023, the Court of Cassation upheld the seizure of the landfill. The next hearing is scheduled for 28 June 2023.

Serravalle Pistoiese landfill

Herambiente Spa (as the successor entity to Pistoia Ambiente Srl as of March 2020) and two former officials of Pistoia Ambiente were served subpoenas in connection with the fire that occurred at the "Cassero" landfill on 4 July 2016. The proceedings are currently in the hearing stage.

No new third-party disputes were reported in 2022.

Relations with public administrations

Relationship with local authorities

The Central Strategy, Regulation and Local Authorities Department continuously and effectively oversees the **relationship with member municipalities and local authorities** through the role of Area Managers, ensuring the right level of attention to the local area for a Group whose operations bring it to interact with local areas and communities, with a view to continuous industrial and organizational growth. All the Local Authorities served are thus provided with a direct and constantly accessible contact person from whom to obtain answers to questions and problems related to the services provided by the Group, guaranteeing that they are always in contact with the right people and can obtain the necessary feedback within a reasonable timeframe.

In 2022, the synergistic integration of Area Managers with Strategic Planning, Regulatory Affairs, and Policy Making was further enhanced. In particular, cross-sectoral monitoring of the opportunities offered by the National Recovery and Resilience Plan has been activated, thereby enhancing occasions for bi-directional dialogue between the Group and the local area it serves. Area managers have also continued to support the development of HeraLABs, fostering the necessary coordination between relations with Local Authorities and those with other area stakeholders.

It is to be noted that, in relations with Local Authorities as well, 2022 was marked by the easing of the restrictive measures, resulting from the health emergency. This has enabled the improved development of the service model of local-area relations. During the year, in fact, Area Managers presided over **more than 4,500 relationships with local stakeholders**, regaining a greater capacity to manage in-person meetings, but nonetheless building on stakeholders' experience in using digital communication channels as well. Constant dialogue has also enabled the Group to strengthen its relational capabilities on emerging issues in its relationship with Local Authorities, such as the National Recovery and Resilience Plan and the local consequences of the global energy crisis. This emergency has also inspired the evolution of HeraLABs, which in 2023 will have carbon neutrality as their overarching focus.

In terms of number, in 2022, **relations mainly concerned waste management services** (34%), which, as a result of the start of the new concessions, required a large number of one-time meetings with individual municipal administrations. These were followed by the integrated water service (30%), other network services (9%), the market area (13%) and business topics of general interest (8%).

Relations with the Italian regulatory and supervisory authorities
[2-27]
[417-2]
[417-3]

The Italian regulatory authorities that mainly impact the Group's management and activities are the **Regulatory Authority for Energy, Networks and the Environment (ARERA)**, and the **Italian Antitrust Authority (AGCM)**.

With reference to the preliminary investigation that was closed due to failure to comply with the obligations to **replace the cast iron pipelines with hemp and lead joints** (VIS 39/2011), after following through with our commitment to rapidly replace all of them in the Ferrara distribution system, Inrete Distribuzione Energia is going ahead with its commitment to inspect the entire hemp asbestos cement network, which will involve the complete replacement thereof as per the timescales set by the Regulation of gas distribution service quality (Rqdg).

On 13 December 2022, **AGCM** launched seven investigations with the adoption of seven precautionary measures against major operators, including Hera Comm Spa, for **alleged unlawful unilateral changes** in the supply price of electricity and natural gas.

The preliminary investigation and precautionary measure originated from AGCM's interpretation of Art. 3 of Legislative Decree 115/2022 (known as. "Aiuti bis"), according to which even renewals of expired economic conditions would be prohibited from 1 September 2022 to 30 April 2023 (a period later extended to 30 June 2023).

Hera Comm Spa has not communicated or applied to customers (households, micro-enterprises) any unilateral changes in the economic conditions in force, or proposals for the renegotiation of economic conditions; nor has Hera Comm Spa terminated or threatened to terminate contracts with its customers (households, micro-enterprises) due to excessive unforeseen costs.

Hera Comm Spa only proceeded to renew the economic conditions as they expired. More precisely, in the case of economic conditions with contractually predetermined validity, Hera Comm Spa has provided for a renewal mechanism that involves notifying the customer of the new economic conditions (to be applied upon the expiration of the previous ones) under the same economic conditions as before, with the customer remaining free to accept or reject the new conditions.

Hera Comm Spa **appealed** AGCM's precautionary measure before the **Lazio Regional Administrative Court** with a request for suspension.

Prior to the hearing set for 11 January 2023, the Council of State intervened to uphold the appeal brought by another operator. The Council of State noted, consistent with the interpretation of the rule made by Hera Comm Spa, that the "Aiuti bis" Decree "refers only to the ius variandi for contracts that have not expired and not to contract renewals resulting from expiration dates agreed upon by the parties...."

On the basis of the statements made by Hera Comm Spa in the defense briefs submitted as part of the proceedings and the intervening order by the Council of State, on 30 December 2022 the AGCM ordered the revocation of the measure challenged by Hera Comm Spa, while for other operators the precautionary measures were partially confirmed.

Therefore, with regard to the interlocutory appeal brought by Hera Comm, the matter in dispute has been dropped.

At the approval date of these financial statements, the main preliminary investigation procedure initiated by the Authority on 13 December 2022 remains open, as part of which Hera Comm Spa has submitted the required documentation to the Authority.

It should also be noted that so-called "Decreto Proroghe" (Legislative Decree 29 December 2022 no. 198) confirmed the interpretation made by Hera Comm Spa with reference to Art. 3 of the "Aiuti bis" Decree, expressly stipulating in paragraph 8 of Art. 11 that the prohibition on unilateral contract amendments does not apply to contract clauses "that allow the supplier company ... to update the contract terms upon the expiry of the contract terms...".

Penalties imposed on the Group
[2-27]
[417-2]
[417-3]

With regard to the most significant penalties imposed in recent years, note that:

- With reference to the penalty of approximately 1.9 million euro imposed by AGCM on Hera and Herambiente for allegedly **abusing their dominant position** by directly granting to the Akron Group company (later merged into Herambiente) the cellulosic waste from urban sorted waste collection service that had been withdrawn from the "Comieco Consortium system" in the years 2011, 2012 and 2013, the Lazio Regional Administrative Court upheld Hera and Herambiente's appeal and consequently annulled the penalty imposed by AGCM. Essentially, the Lazio Regional Administrative Court stated that AGCM "did not carry out the required preliminary

'contextualisation' of the market and potential competition applicable at the time of the events, from the point of view of the actual distortions of competition". This is because "at the time there was not a fully liberalised and competitive market for the recovery of cellulosic waste from municipal sorted waste collection, since sector legislation at that time outlined an area of public service over which a monopoly could be granted following a tendering procedure for the market which could include the recovery phase, but this was not compulsory", reads the ruling. Hera, therefore, as operator for the relevant public service, had to ensure - for reasons of public sanitation, health and environmental protection - the continuity, safety and efficiency of the entire waste cycle, including the final recovery phase. In the case in question, as pointed out by the Regional Administrative Court, AGCM did not examine Hera's position as a public service operator but, taking the local reference market for granted, simply asserted that the contested lack of competition had taken place because Hera had failed to implement any competitive procedures to select a party entrusted with the recovery phase and thus to put the intra-group operator Akron in competition with third parties. According to the Regional Administrative Court of Lazio, Hera and Herambiente provided solid evidence that entrusting the intra-group company with the recovery phase - yet exercising a higher-level control (of order, direction, planning, monitoring, etc.), which would be unthinkable with a third-party operator - was the only way to ensure service quality, for the benefit of the public interest in greater environmental sustainability of the waste cycle and, therefore, also for the benefit of users/consumers. AGCM appealed against the aforementioned judgments by the Lazio Regional Administrative Court, and the related case is currently pending before the State Council, Sec. VI.

Both Hera Spa and Herambiente Spa have already filed suit and the State Council, on 9 February 2023, reduced the penalty imposed on Hera and Herambiente from 1.9 million euro to approximately 300 thousand euro.

- In November 2015, the **Italian Antitrust Authority (AGCM)** imposed a **sanction** of 366 thousand euro on Hera Comm for violation of the Consumer Code with regard to customer contracts. According to the opinion of the Authority, Hera Comm and other companies in the sector signed a number of supply contracts without the consumer's explicit consent and using methods that altered the consumer's freedom of choice because insufficient information had been given regarding the offers and nature of the contracts. Specifically, certain methods used for signing contracts through phone and sales agent channels were criticised, accused of putting pressure on customers and preventing them from making free and informed choices. During the proceedings, the companies submitted proposals for improving the procedures: for example, making the contractual documentation available to customers before binding them to the contract and making a second phone call to confirm the customer's consent. Moreover, Hera Comm challenged the sanctioning measure before the Lazio Regional Administrative Court. The Authority Board decided "to invest the Court of Justice of the European Union with the question related to the interpretation of Art. 27, paragraph 1 bis, of the Consumer Code in relation to the Euro-unitary measures applicable to the electricity and natural gas supply sector, as already implemented by the State Council for the telecommunications sector". The Court of Justice joined Hera Comm's prejudicial case with other similar cases and, by order dated 14 May 2019, confirmed AGCM's competence (instead of ARERA's) in sanctioning the conduct covered by the proceedings pending before the Lazio Regional Administrative Court. Following an application by Hera Comm for continuation of the proceedings, the Lazio Regional Administrative Court rejected the appeal with ruling no. 9764. Hera Comm appealed against this ruling to the State Council, which is still pending at the time of publication of this report.
- With reference to the sanction of December 2016 imposed by the **Italian Antitrust Authority (AGCM)** against Hera Spa for an alleged abuse of **economic dependence** consisting of the violation of the provisions set forth in Italian Legislative Decree no. 231/2002, as amended and supplemented, regarding payment terms for the supply of latest-generation meters, Hera Spa paid a total amount of 800 thousand euro. An appeal against this decision was lodged with the Lazio Regional Administrative Court. At the date of drafting of this report, the hearing is yet to be scheduled.
- Following the inspection carried out by ARERA in October 2018 at the premises of Hera Spa on the subject of tariffs for the integrated water service (Resolution 170/2018/E/IDR), with Determination DSAI/41/2019/Idr, ARERA initiated a sanctioning procedure that concluded with Resolution Arera 149/2022/S/Idr, confirming the imposition of a penalty of €378 thousand.

- Starting in September 2021, in the midst of the increase in commodity prices (both electricity and gas), EstEnergy launched an information campaign for the benefit of customers who had existing contracts that provided for the application of fixed prices. The campaign was aimed at reassuring customers that their economic conditions would not be affected by rising prices. The company's initiative was therefore characterised by a laudable intent, namely to send a direct communication only to customers with contracts temporarily characterised by fixed price conditions, in order to reassure them of the economic conditions applicable in accordance with the contracts. Due to an IT problem, however, the messages were also mistakenly sent to customers with variable-price contracts. Starting from October 2021, when it emerged that a customer with economic conditions already switched to variable price had received the communication at the end of September, EstEnergy immediately stopped, as a matter of utmost precaution, the publication of the communications, at the same time launching an investigation process aimed at understanding the causes of the unforeseen event, to define exactly the perimeter of customers erroneously affected by the aforementioned communications, as well as to identify the corrective actions to be implemented. Once the aforementioned processes were completed and the customers erroneously reached by the communication were identified, the Company immediately took action by sending the customers specific communication aimed at clarifying their contractual position. Despite the fact that the erroneous communication was generated by an obvious computer problem and that the company EstEnergy acted promptly to stop the campaign and inform customers, the AGCM has decided to impose a fine, albeit in a reduced amount, for an amount of one million euro; EstEnergy will challenge the sanctioning measure before the Administrative Judge.

[2-27]

With regard to minor sanctions reported in 2022, administrative sanctions were imposed in an amount of approximately 180 thousand euro, mainly relating to waste management issues. These disputes, identified by the monitoring bodies, mainly refer to violations of the requirements laid down in Legislative Decree 152/2006 (Consolidated Environmental Act) and mainly concern the integrated water service with regard to plant operation, and the exceeding of the limits set out in the discharge tables. The infringements charged are of an administrative nature and usually require the filing of defence briefs by the complainant requesting withdrawal of the measures and, alternatively, the payment of a fine in accordance with the minimum amounts established by sector regulations.

Litigation proceedings brought by the Group

Details are given below on some of the litigation proceedings brought by the Group against the public administrations:

- By means of an appeal filed in 2014 before the Regional Administrative Court of Emilia-Romagna against the Emilia-Romagna Regional Authority and Atersir, Herambiente requested the cancellation of Resolution 380 of the Regional Council of the Emilia-Romagna Regional Authority dated 24 March 2014, containing "Amendments to the Regional Authority Resolution 135/13 - Provisions concerning the definition, and handling of the increase limit, of the fee for the disposal of municipal waste". Resolution 380/2014 was challenged with regard to the part where it has the effect of laying down the full deduction, from the waste disposal fee, of the revenues from incentives to generate electricity from renewable sources. The Regional Administrative Court of Emilia-Romagna rejected this appeal as well as the subsequent one (2015) filed by Herambiente, and the latter challenged the ruling before the Council of State. The Council of State, in an order issued in July 2021, combined the two proceedings, given their objective and subjective connection, partially rejected Herambiente's claims, and partially referred the case to the Constitutional Court, raising a question of constitutional legitimacy. The matter was remanded for decision by the Constitutional Court.
- By means of an appeal filed in 2015 before the Regional Administrative Court of Emilia-Romagna against the Emilia-Romagna Regional Authority and against Atersir, Herambiente requested the cancellation of the Emilia-Romagna Regional Authority resolution dated 27 April 2015 no. 467, concerning the criteria for determining the fee for the disposal of municipal and similar waste in accordance with Art. 16, paragraph 1, of Regional Law no. 23 of 2011. The filed appeal objected in particular to two aspects of resolution no. 467, considered illegitimate, namely:
 - the erroneous inclusion of revenue from incentives for renewable electricity generation among the amounts to deduct from expected payments;
 - the lack of specific mention of tax charges among the costs incurred by Herambiente, not recognised by the contested resolution.

The Regional Administrative Court of Emilia-Romagna rejected this appeal as well as the previous one (2014) filed by Herambiente, and the latter challenged the ruling before the Council of State. The Council of State, in an order issued in July 2021, combined the two proceedings, given their objective and subjective connection, partially rejected Herambiente's claims, and partially referred the case to the Constitutional Court, raising a question of constitutional legitimacy. The matter was remanded for decision by the Constitutional Court.

- With separate appeals, which were then united, Herambiente challenged the following acts before the Regional Administrative Court of Molise:

- challenge of Regional Government Decree no. 231 of 19 May 2015 which identifies as substantial variations the introduction of the CER code 19.12.12, the adjustment of the authorisation for saturation of the thermal load and the introduction of a shredder.
- challenge of EIA regarding the plant of Pozzilli and, for additional reasons, the Integrated Authorisation.
- challenge of Regional Council resolution no. 341 of 28 December 2015 regarding the "Regional plan for waste management. Legislative Decree 152/2006. Conclusion of the Strategic Environmental Assessment procedure. Adoption of Plan proposal."

The Regional Administrative Court of Molise did not uphold Herambiente's appeals and the latter appealed the ruling before the Council of State, which took the case under advisement.

- Hera Spa, Inrete Distribuzione Energia Spa, AcegasApsAmga Spa and Marche Multiservizi Spa, as well as the other leading operators, challenged before the Regional Administrative Court of Lazio, the ANAC Guidelines no. 11 containing indications for verifying the obligations required by art. 177 of the Tender Code (Legislative Decree no. 50/2016). The Code lays down the obligation for public or private entities, holders of concessions for works, public services or supplies already in place on the date of entry into force of the Code, that were not awarded by a public tendering procedure, to award an 80% share of the contract for the works, services and supplies relating to concessions for an amount equal to or exceeding 150 thousand euro, through a public tendering procedure. The remaining part may be performed by in-house companies or by companies that are directly or indirectly controlled or affiliated. Separate complaints were filed for the waste management, district heating, gas distribution and electricity distribution services.

In June 2019, the Regional Administrative Court declared that the appeals were inadmissible, holding that the Guidelines challenged were not immediately harmful. The appellant companies appealed for overruling of the first instance rulings. The Council of State, deeming the questions of constitutional legitimacy of Art. 1, paragraph 1, letter iii), of Italian Law no. 11 of 28 January 2016 and art. 177, paragraph 1, of the Public Contracting Code to be well-founded with reference to articles 41, 3 and 97 of the Constitution ruled to suspend the judgment, and consequently the measures challenged therein, and referred the proceedings to the Constitutional Court, which by ruling no. 218 of 2021, declared the constitutional unlawfulness of Art. 177, paragraphs 2 and 3, of Legislative Decree no. 50 of 2016. Consequently, the National Anti-Corruption Authority annulled Guideline No. 11 and the Council of State, in ruling no. 7264 of 18 August 2022, then finally declared the matter in dispute to be definitively settled.

- Herambiente Spa filed an appeal before the Regional Administrative Court of Emilia-Romagna in which it challenged and requested the cancellation of Managerial decision no. 17621 of 30 September 2019 by way of which the Regional Government of Emilia-Romagna annulled ex officio the previous 10 August 2018 decision regarding the extension of the Environmental Impact Assessment in relation to the expansion of the landfill located in Baricella.

In a ruling dated 6 July 2021, the Regional Administrative Court rejected the claims made by Herambiente Spa and the latter appealed to the Council of State, which took the case under advisement.

- At the end of 2019, Hera Spa and AcegasApsAmga, as well as the other major operators, challenged before the Regional Administrative Court of Lazio the statement of the Chairman of ANAC dated 16 October 2019 containing "Instructions on the obligation to acquire the CIG (Contract Reference Number) and to pay the contribution to the Authority for cases excluded from the scope of application of the Public Contracting Code" and the statement of the President of the Authority dated 18 December 2019 containing "Instructions on the obligation to acquire the CIG, to submit the data and pay the contribution to the Authority for the special procurement regimes referred to in Part II, Title VI of the Public Contracting Code". In a ruling dated 1 December 2021, the Lazio Regional Administrative Court upheld the appeal brought by the companies and annulled the challenged measures. The same obligations were subsequently

reintroduced by National Anti-Corruption Authority resolutions no. 214 of 27 April 2022 (“indication regarding the Cig acquisition obligation, payment of the contribution to the Authority for cases excluded from the scope of application of the Public Contracts Code”) and no. 214 of 27 April 2022 (“indication regarding the Cig acquisition obligation, data transmission and payment of the contribution to the Authority for special procurement schemes under Part II, Title VI of the Public Contracts Code.”). Against these resolutions and the measures implementing them, Hera Spa and AcegasApsAmga have again appealed to the Lazio Regional Administrative Court. The hearing is pending.

- During 2022, Herambiente challenged the measures taken by Atersir regarding the determination of the tariff (so-called Waste Tariff Method - MTR) and, specifically, the part in which they stipulate that the determination of tariffs for access to treatment plants shall be calculated according to the regional regulations of Regional Law no. 23/2011 and Regional Council Decree 467/2015, as an exception to the Waste Tariff Method defined by the Authority and, in particular, by the 3 August 2021 Resolution no. 363/2021/R/RIF (“MTR-2”).

6. Customers

6.01 Objectives, performance and targets

What we said we would do	What we did	SDGs	Progress*
Service quality			
98% second generation electricity meters (420 thousand meters), 50% of which in recycled plastic, and 98% gas meters installed by end 2025.	At the end of 2022, 6% of electricity meters are second generation (28 thousand, a slight increase due to supply problems), 4% of which in recycled plastic. Around 87% of gas meters are electronic (78% in 2021) (see p. 250).	9, 12	
More than 300 thousand NexMeter meters installed by the end of 2025 (18.2 % of the total), 200 thousand of which in recycled plastic	More than 180 thousand NexMeter gas meters were installed at the end of 2022 (approximately 11% of the total, in 2021 the number totalled 80 thousand). First installation of NexMeter Green, the gas meter made of recycled plastic, begun (see p. 250).	9	
Ensure compliance with commercial quality standards for gas, electricity, water and district heating services, in line with 2021.	99.6% of cases were compliant with commercial quality standards in 2022, in line with 2021 (see p. 248).	-	
Safety and continuity of the service			
Emergency gas services: maintain a much higher level than ARERA requirements for the percentage of calls with arrival at call location within 60 minutes.	97.3% arrival rate at the call location within 60 minutes (against a service requirement of 90%) (see p. 251)	-	
Customer relations			
10 minutes average waiting time at the branch offices and 30 seconds average waiting time for the call centre.	8.9 minutes average waiting time at the branch offices and 93 seconds average waiting time for the call centre in 2022 (up from 5.7 minutes and 32 seconds in 2021, as a result of the significant increase in contacts due to energy cost developments) (see p. 257).	-	
*  Result achieved or in line with planning;  Result with slight variance compared to planning;  Result with significant variance compared to planning.			

What we will do	SDGs
Service quality	
81% second-generation smart electricity meters (6% by 2022), of which 50% made of recycled plastic (4% by 2022), and 86% electronic gas metres installed and remotely read by the end of 2026 (77% in 2022). Roughly 100 thousand smart water meters installed by 2026.	9, 12
Roughly 300 thousand evolved NexMeter gas meters installed by the end of 2026 (18.3% of total meters), of which 100 thousand made of recycled plastic.	9
Guarantee respect for commercial/contractual quality standards concerning the gas, electricity, water and district heating services, in line with 2022.	-

What we will do	SDGs
Safety and service continuity Emergency gas interventions: maintain a level significantly higher than ARERA's requirements for the percentage of calls with arrival within 60 minutes.	-
Customer relations 10 minutes, average waiting time at help desks, and 80 seconds, average waiting time at the call centre.	-

6.02 Customers

ENERGY SERVICES CUSTOMERS

thousands	2020	2021	2022
Gas customers	2,076.2	2,072.7	2,066.4
Electricity customers	1,333.6	1,400.9	1,451.6
District heating customers	12.6	12.8	12.9

This data does not include AresGas and its subsidiaries in Bulgaria.

INTEGRATED WATER SERVICE CUSTOMERS

thousands	2020	2021	2022
Water customers	1,470.8	1,478.6	1,483.9

CITIZENS URBAN WASTE MANAGEMENT SERVICE

	2020	2021	2022
Municipalities served (no.)	188	189	188
Citizens served (thousands)	3,209.1	3,220.2	3,195.0

In 2022 as well, the Hera Group **recorded overall growth in the customer base**, particularly in electricity (+3.6%), despite a sharp increase in competitive pressure and turbulence in the energy markets. This result confirms the effectiveness of our **growth strategy**, even in the face of the extraordinary events that occurred over the last period.

Commercial policies

In 2022, commercial activities led to continued growth of the Hera Group's customer base. This was achieved by adapting the growth strategies pursued in recent years to the current context.

During 2022, Hera Comm's public website was adapted to highlight the bundle of initiatives available to customers **to cope with the price volatility** and market instability that characterised the past year. These sections, including SOSstegno Energia (see the paragraph "Hera's contribution towards social inclusion" for further details) received numerous customer views, as did the contact channels (including the real-time web chat and the mobile app), which continued to grow in terms of usage.

Continuing to offer customers the opportunity to reduce their carbon footprint through a '**100% green**' option, i.e. supplying renewable electricity and gas produced with full offsetting of CO2 emissions.

Along the same lines, in 2022 Hera Comm increased the number of photovoltaic system installations and customers served, thanks to the expansion of the network of installer technicians of its subsidiary Wölmann. The product portfolio was also expanded, extending the **Hera Photovoltaic** offer to meet the needs of business customers as well, and offer customised energy-efficient solutions. Commitment to sustainable, high quality services has enabled us to support customers in choosing the best solutions for their needs, contributing to the **energy efficiency performance** of their equipment. These achievements are complemented by the development of the HVAC (heating, ventilation and air conditioning) business, which expanded its offering with the **Hera Hybrid Heat Pump Boiler**. With this turnkey service, which starts with the survey and ends with the management of the required technical paperwork, customers can now purchase high-efficiency, professionally installed hybrid heat pumps.

Hera Comm's Sales Network and Commercial Conduct

With regard to sales channels, the presence of Hera Comm "comparison" in channels was reactivated in 2022, given the trend of customers increasingly turning to comparison sites. The strengthening of the "retail agent" sales channel continued, with excellent results in terms of sales of value-added products also thanks to the skills, professionalism and specific training of the agents.

Also in 2022, Hera Comm began making use of the new "master dealer" sales channel, widely used in the telecommunications market: these are large structures that affiliate various types of shops (e.g. electrical appliances, telephones, tobacconists) to which they supply products and services for sale. The idea is to use these channels to **further strengthen the company's local presence** even in small provincial towns and provide the current customer base (and potential future customers) with well-established commercial facilities in local areas.

The "business agent" channel (already used for sales to household customers of products such as boilers, air-conditioners and photovoltaic systems) was partly redirected to the sale of gas and electricity products and supplies to VAT-registered customers. In this way, two distinct and separate sales channels (retail agents and business agents) focused on specific market segments were outlined.

In the course of 2022, the introduction of the **new Customer relationship management** tool Salesforce made it possible to **strengthen all contract quality assessment activities** and monitor more closely the sales submitted by agencies and agents who had recently joined the Hera Comm sales network, in order to ensure the utmost fairness in the work of the sales network. In this area, attention continued to be given to four fundamental aspects:

- training: the training plan for agencies provides for initial training on all topics, in particular sector regulations (Codes of Conduct, Group Code of Ethics, etc.). This training is carried out either by the area managers themselves or by Hera Comm's trainer. Training sessions are also scheduled either on request by the agency or for any new offers/procedures.
- accompaniment: accompaniment on-field or via headphones is carried out constantly by area managers in order to verify the correct way of approaching customers.
- monitoring commercial KPIs: commercial KPIs are constantly monitored by area managers, who carry out periodic (weekly) progress reports with the structures in order to ensure compliance with the company's overall sales results.
- monitoring qualitative KPIs: as part of its quality and comfort call activities, Hera Comm periodically monitors the qualitative KPIs of agencies and provides reports to area managers to enable them to bring the structures into line with to excellent quality results.

In addition, Hera Group added **other safeguards** to those already required by ARERA such as afterthought management facilitated by email, regular mail or faxes (not only registered mail). For Hera, it is fundamental to **obtain the customer's consent clearly**, responsibly, and unequivocally. To do so, we have specific quality controls, in line with what is required by the Consumer Code:

- for contracts offered by phone, a second call must be made to check that the customer has received the contract and actually wants to accept it, and to monitor, at the same time, the quality of the sales efforts carried out by our teleselling channel. In addition, customers can retrieve the recording of their telephone conversation via the web portal or automated phone system;
- for contracts signed following a visit to the customer's home, besides the welcome letter that is sent to them, a phone call is made that assesses the quality of the sales channel and, by doing so, gives the customer a chance to exercise their right to change their mind.

Active monitoring of any agencies and agents whose quality proved to be below average was introduced, and contracts were not finalised in cases where the customer could not be contacted for confirmation.

The number of **complaints for unsolicited contracts** has further decreased: 99 in 2022, in relation to 730 thousand contracts signed outside business premises (58 in relation to 590 thousand in 2021). All complaints for unsolicited contracts were accepted and remedial measures were applied in 100% of the cases.

Even in the case of 2022, a year characterized by the very high and extraordinary volatility in the cost of energy carriers, Hera Comm did not notify or apply unilateral changes in economic conditions to customers (households, micro-businesses) due to excessive onerousness that had occurred.

Hera Comm in fact only proposes renewal conditions to its customers upon the expiry of supply contracts, notifying them in advance according to the form and timing established by the Code of business conduct.

6.03 Cost of services

The Hera Group manages **services held under concession** (integrated water service, waste management, distribution of gas and electricity) and **services managed according to free market criteria** (waste disposal, sale of gas and electricity).

For the services under concession, the tariffs Hera applies are **set by the regulatory authorities** (ARERA and the local municipal sanitation authorities), while Hera freely determines the tariffs for free-market services. For the supply of household electricity and for gas customers enjoying safeguarded regimes, ARERA sets and updates quarterly (monthly for gas, as of October 2022) the prices for sales tariffs to customers who have not subscribed to a free market offer. For the water service, on the other hand, ARERA has been updating the tariff method generally every three years since 2012.

The following table shows the average household expenditure in 2022 compared to the previous year for the four services provided by Hera based on the average consumption of gas, electricity and water over the two years considered: 768 m³ for gas in 2022 (-12.2% compared to 2021), 1,745 kWh of electricity (-10.4%) and 106 m³ of water (+1.3%). For the waste service, we considered a family of three people living in an 80 m² apartment.

THE COSTS OF HERA'S SERVICES FOR AN AVERAGE CUSTOMER (REAL CONSUMPTION)

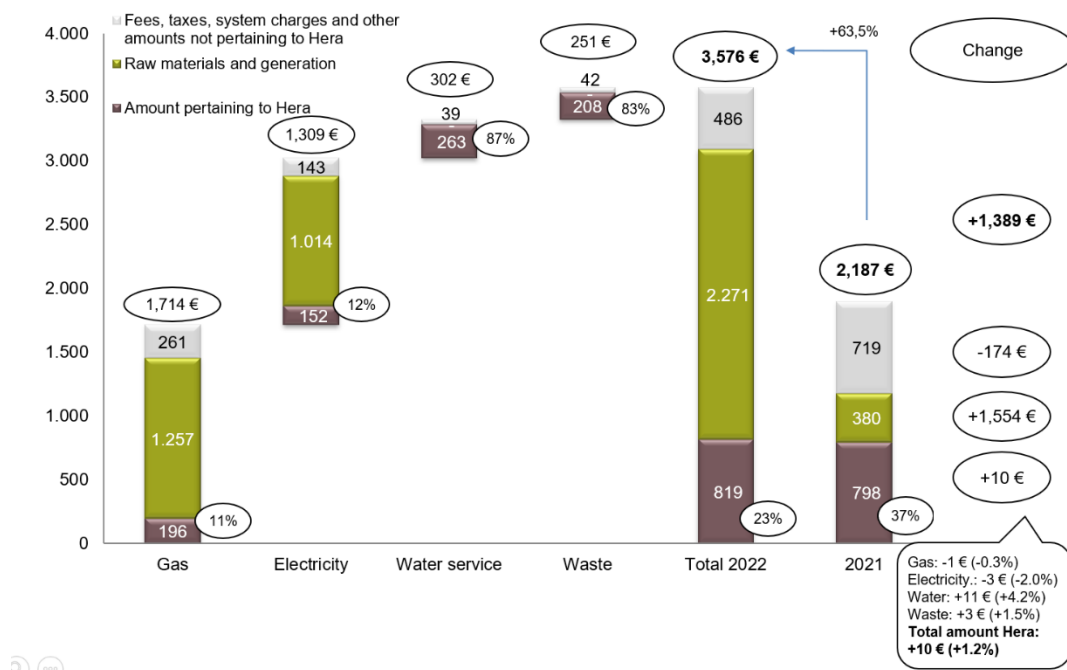
euro	2021	2022	Change 2022/2021 (€)	Change 2022/2021 (%)
Gas	758.88	1,101.75	+342.87 €	+45.2%
Electricity	475.67	878.90	+403.23 €	+84.8%
Water service	242.13	257.58	+15.45 €	+6.4%
Waste	249.39	250.74	+1.35 €	+0.5%
Total	1,726.06	2,488.97	+762.90 €	+44.2%
<i>of which pertaining to Hera</i>	<i>724.17 (42%)</i>	<i>743.77 (30%)</i>	<i>+19.60</i>	<i>+2.7%</i>
<i>of which falling under raw materials and generation</i>	<i>573.61</i>	<i>1,433.80</i>	<i>+860.19</i>	<i>+150.0%</i>
<i>of which duties, taxes, system charges, and other charges</i>	<i>428.28</i>	<i>311.41</i>	<i>-116.87</i>	<i>-27.3%</i>

Bill of a residential customer with an average annual consumption of gas, electricity, and water and, for waste disposal, considering a three-person household in a house measuring 80 m².

In 2022, the average household spent a total of 2,489 euro on the services supplied by Hera, 44.2% less than in 2021, amounting to approximately 763 euro. Compared to 2021, the increase in the raw material component of **gas and electricity bills** (861 euro more, 442 euro for gas and 418 euro for electricity) is the main factor, partly mitigated by the Government's measures that reduced system charges and taxes (for more details see the following paragraphs on gas and electricity bills). For the water service there was an increase of 15 euro compared to 2021. Lastly, the cost of waste bills remains steady.

29.9% of overall spending, amounting to 744 euro (42.0% in the previous year), was attributable to the components of bills paid by Hera. In 2022, this share decreased by approximately 20 euro, broken down as follows: -3 for gas, +7 euro for electricity, +13 euro for water and +3 euro for waste.

THE COSTS OF HERA'S SERVICES FOR AN AVERAGE CUSTOMER (REAL CONSUMPTION)

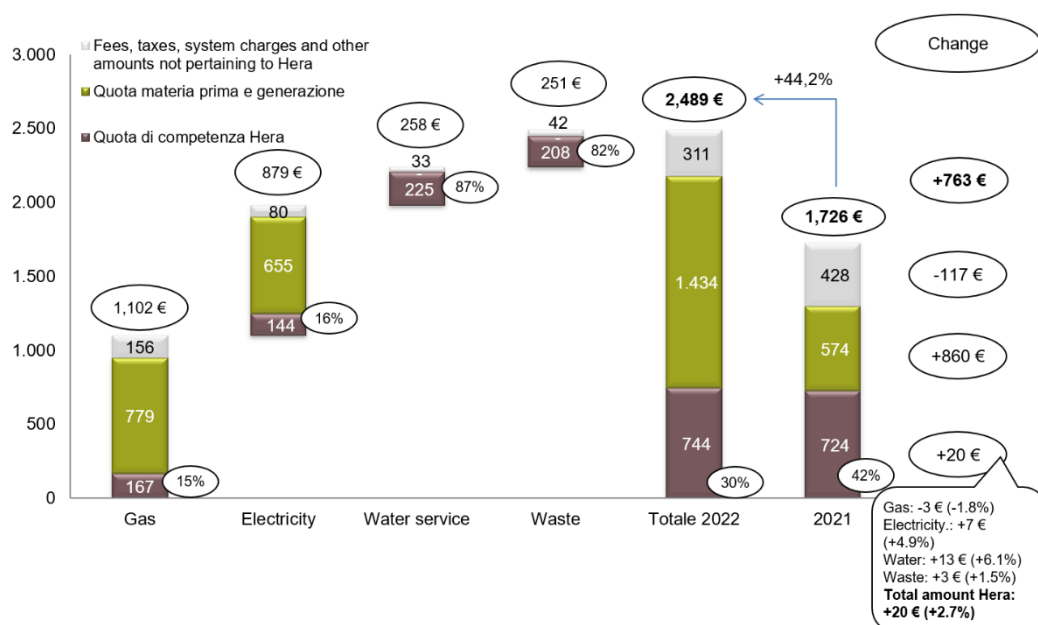


THE COSTS OF HERA'S SERVICES FOR AN AVERAGE CUSTOMER (CONSTANT CONSUMPTION)

euro	2021	2022	Change 2022/2021 (€)	Change 2022/2021 (%)
Gas	1,024.32	1,714.46	+690.14 €	+67.4%
Electricity	624.13	1,308.92	+684.79 €	+109.7%
Water service	288.71	301.88	+13.17 €	+4.6%
Waste	249.39	250.74	+1.35 €	+0.5%
Total	2,186.55	3,576.00	+1,389.45 €	+63.5%
<i>of which paid by Hera</i>	808.93 (37%)	818.89 (23%)	+9.96 €	+1.2%
<i>of which falling under raw materials and generation</i>	717.34	2,271.09	+1,553.75 €	+216.6%
<i>of which duties, taxes, system charges, and other charges</i>	660.29	486.02	-174.26 €	-26.4%

Bill of a residential customer with an annual consumption of 1,200 m³ of gas, 2,700 kWh of electricity, 130 m³ of water, and, for waste disposal, considering a three-person household in a house measuring 80 m². For the other conditions taken into account, see the following pages.

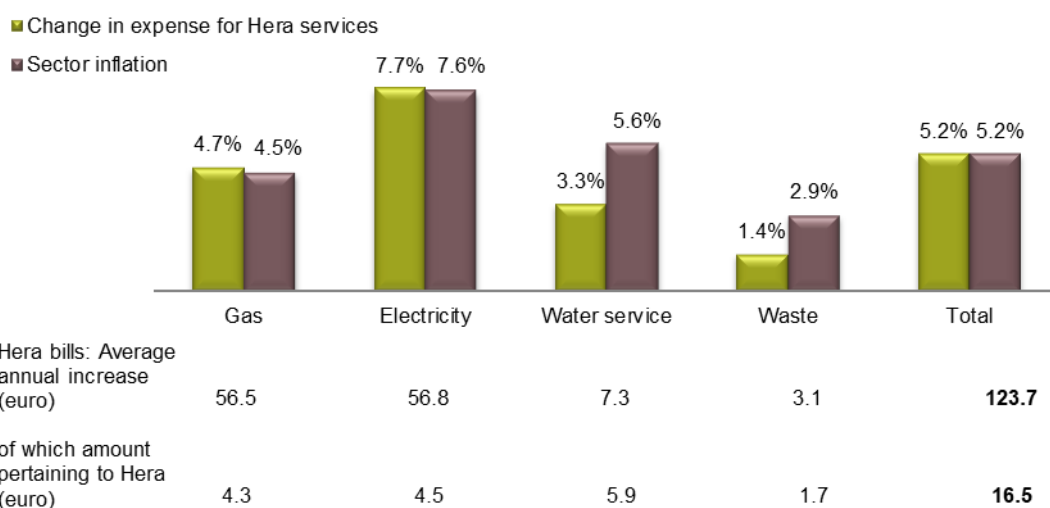
THE COSTS OF HERA'S SERVICES FOR AN AVERAGE CUSTOMER (CONSTANT CONSUMPTION)



Based on an analysis considering equal volumes used by an average Hera customer, for 2022, the overall cost of services increased by 63.5% compared to 2021, amounting to approximately 1,389 euro more. The increase is due to:

- the increase in the raw material item of gas and electricity bills (1,554 euro) (for more details see the following paragraphs on gas and electricity bills);
- an increase of the bill components paid by Hera (10 euro). This increase derives from: -1 in the gas bill, - 3 euro in the electricity bill, +11 euro in the water bill and +3 euro in the waste bill.
- decrease of 174 euro in taxes, duties, system charges and other charges not paid by Hera mainly as a result of the Government's measures to offset increases in energy bills.

COMPARISON BETWEEN BILLS FROM 2006 TO 2022 AND INFLATION (ANNUAL AVERAGE INCREASE, CAGR)



The long-term analysis shows that, between 2006 and 2022, Hera bills in Emilia-Romagna had an average compound annual increase in line with the Italian average (+5.2%) (Source: Eurostat). For the water and waste management services there was a gap markedly in favour of Hera customers.

Gas bills

The Regulatory Authority for Energy, Networks and Environment (ARERA) sets out the information that must appear on the bill. There are four cost items, outlined below.

The **expense for natural gas** includes amounts related to the different commercial activities performed by the seller to supply natural gas to the end customer. Until September 2022, the purchase cost of raw material was indexed according to the gas price of the Dutch hub TTF, which reflects the costs of the European market; as of October 2022, the cost of the raw material reflects the prices seen on the Italian PSV hub. The **sales charge** (paid by Hera), for the economic conditions of the supply for the service under safeguard is governed by the “Uniform Code Governing Retail Sales of Natural Gas” attached to ARG/gas resolution 64/2009. For customers served under the safeguard regime who receive their bill in electronic format and activated an automatic debit payment method, a discount for the electronic bill introduced by Resolution 610/2015/R/com is applied under this item.

The **expense for transporting and managing meters** includes amounts related to the different activities performed by the sellers to supply natural gas to the end customers. It includes **distribution and metering tariffs** (paid by Hera), transport and any municipal charges to cover the concession fees for the distribution service. It is updated by the Authority every year and is tailored for the seven macro-regional areas comprising the nation. The fixed rates for the distribution and metering charges are structured by metering unit class (meter class) installed at the point of supply; while the G4 metering class was taken as the reference for an average household with a consumption of 1,200 Sm³/year.

Another part of the bill is comprises components to cover **system charges**, i.e. amounts intended to cover costs related to activities of general interest for the gas system (e.g. costs for promoting energy saving) and are paid by all end customers of the service. Distributors pay the relevant revenue to the fund for energy and waste management services.

Lastly, **taxes** include a consumption tax, additional regional tax and VAT. Taxes are set by specific provisions by the Ministry of the Economy and Finance and the regional government authorities, and vary according to use (whether for heating or cooking, or industrial uses). Consumption tax (excise duty) is applied to the quantity of gas consumed, while VAT is applied to the total amount of the bill, including excise duty. To cope with rising raw material costs, the government reduced the value of VAT charged on consumption to 5 % for the whole of 2022. The regional additional tax applies to the quantity of gas consumed and is established autonomously by each region within the limits set by law.

GAS BILLS

euro	2020	2021	2022
Natural gas expense	311.78	474.60	1,333.22
<i>of which: sales share</i>	73.53	72.80	76.21
Meter management and transportation expense	183.29	184.82	245.13
<i>of which: distribution and measurement charge</i>	121.23	124.07	120.11
System charges	36.78	30.32	-179.39
VAT	135.31	105.92	81.64
Other taxes	228.71	228.67	227.86
Total	895.88	1,024.32	1,714.46
<i>of which: share paid by Hera</i>	194.76 (22%)	196.87 (19%)	196.32 (11%)

Bill of a residential customer with an annual consumption of 1,200 m³ of gas, and with direct debit and e-billing. A customer under the safeguard market regime was considered, based on the economic conditions set by the Regulatory Authorities: 29% of Hera's residential customers are included in this category. Municipalities considered: Bologna, Ferrara, Forlì, Imola, Modena, Padua, Pesaro, Ravenna and Trieste (weighted average of resident citizens). The grey areas show tariff components that are paid by Hera. The complete data on gas supply tariffs is available on the Group's website.

For the same consumption, on average, the 2022 gas bill of a Hera household customer under the safeguard market regime cost approximately 690 euro more (+67.4%) than the previous year. The expense for natural gas increased by 858 euro (+180.9%, almost tripled), while the expense for managing and transporting meters increased by 60 euro (+32.6%). System charges are in credit thanks to an extraordinary measure by the Authority, which cancelled the rates of the RE, GS and UG3 tariff components and applied the negative UG2 component (relating to compensation for the commercial costs of retail sales) to the benefit of gas consumption up to 5,000 cm³/year. VAT on gas was also confirmed at 5% for 2022, thus decreasing by 24 euro (-22.9%). Hera's share, which includes the sales share and the distribution and metering Tariff, remained stable; its weight on the overall bill decreases to 11.5% (19.2% in 2021).

2022 was strongly influenced by high volatility in energy commodity prices. Following the conflict in Ukraine, as of February 2022, the geopolitical and economic situation in Europe changed abruptly due to the proximity to the conflict zone and the continent's dependence on gas supplies from Russia. In particular, due to the strategic importance of Russian gas for Europe, the slowdown in supplies progressively reduced the available supply of natural gas and, as a result, caused the prices of this commodity to soar to previously unimaginable levels. In late August 2022, European gas prices at the Dutch TTF reached peaks of over €300/MWh, well over 10 times the prices seen in 2021. Conversely, from September onwards, the energy scenario showed a downward trend, with European gas spot prices falling thanks to particularly mild winter weather and the steady inflow of liquefied natural gas to Europe.

Electricity bills

The Regulatory Authority for Energy, Networks and Environment (ARERA) sets out the information that must appear on the bill. There are four cost items, outlined below.

The **expense for electricity** includes amounts related to the different commercial activities performed by the seller to supply electricity to the end customer. This item includes, in addition to the energy generation portion, dispatching and **marketing** tariffs (the latter, for which Hera is responsible, is regulated by the "Integrated text of the provisions of the regulatory authority for energy networks and the environment for the provision of electricity sales services of last resort" attached to Resolution 491/2020/R/eel). For customers served under the safeguard regime who receive their bill in electronic format and activated an automatic debit payment method, a discount for the electronic bill (Resolution 610/2015/R/com) is applied.

The **expense for transporting and managing meters** includes amounts related to the different activities performed by the seller to supply electricity to the end customers. This item includes the transportation, distribution and measurement fee (paid by Hera).

System charges cover the costs of general purpose activities for the electricity system (including, for example, the development of energy from renewable sources) and are paid by all end customers of the electricity service. In January 2020, the process begun in 2016 to reform network Tariffs and the tariff components covering these charges for household customers was concluded, implementing the 2012/27/UE regulation on energy efficiency, the tariff components were updated according to gradual adjustments, to stimulate virtuous behaviour by residents and encourage actions to achieve energy efficiency objectives.

Lastly, **taxes** include a consumption tax (excise duty) and VAT. The excise duty is applied to the amount of energy consumed; household customers with a power output of up to 3 kW benefit from preferential rates for supply to their place of residence. VAT is applied to the total amount of the bill, including excise duty. For household users it amounts to 10% and for non-household users to 22%; some productive activities enjoy the reduced rate of 10%.

ELECTRICITY BILLS

euro	2020	2021	2022
Electricity expense	192.78	364.49	1,064.29
<i>of which: sales share</i>	<i>51.14</i>	<i>48.95</i>	<i>50.21</i>
Meter management and transportation expense	105.53	108.24	103.85
<i>of which: transportation, distribution and measurement charge</i>	<i>103.59</i>	<i>105.68</i>	<i>101.29</i>
System charges	112.91	72.86	0.00
VAT	43.27	56.74	118.99
Other taxes	21.52	21.79	21.79
Total	476.01	624.13	1,308.92
<i>of which: share paid by Hera</i>	<i>154.73</i>	<i>154.63</i>	<i>151.50</i>
	<i>(33%)</i>	<i>(25%)</i>	<i>(12%)</i>

Bill for a residential customer with a 3 kW installed electrical capacity contract, whose yearly consumption totals 2,700 kWh, with direct debit and e-billing. A customer under the highest protection market conditions was considered, based on the economic conditions set by the Regulatory Authorities: 7% of Hera's residential customers are in this category. The grey areas show tariff components that are paid by Hera.

For the same consumption, on average, the 2022 electricity bill of a Hera household customer under the safeguard market regime cost approximately 685 euro more (+109.7%) than the previous year. The expense for electricity increased by 700 euro (+192.0%, almost tripled), while the expense for managing and transporting meters decreased by 4 euro (-4.1%). System charges were reduced to zero thanks to government measures, while taxes increased by 62 euro (+109.7%, proportionally to the total bill). Hera's share, which includes the sales and distribution shares, remained stable; its weight on the overall bill decreases to 11.6% (24.8% in 2021).

The significant increase in the price of electricity is a consequence of the various causes already highlighted in the notes regarding the natural gas bill.

Water service bills

Average expenditure for the integrated water service varies among the areas Hera serves: it depends on the specific supply sources of the various areas served, the availability of water resources and the distance from the withdrawal source.

Since 2012, ARERA has been responsible for regulating the water service. It first set up a provisional tariff method for the 2012-2013 period and subsequently a permanent tariff method for 2014-2015, later updated for 2016-2019 and, subsequently, for the period 2020-2023 (ARERA resolution 580/2019). The 2022-2023 Tariffs were established by Atesir in December 2022 and also include the balances from previous years, determined in compliance with the tariff method rules.

WATER SERVICE BILLS

euro	2020	2021	2022
Aqueduct	111.23	113.11	117.92
Sewerage network	34.55	34.96	36.38
Purification	84.64	86.11	89.67
Fixed share	15.79	17.95	18.70
Equalisation components	9.13	10.33	11.79

VAT (10%)	25.53	26.25	27.45
Total	280.87	288.71	301.87
<i>of which: share paid by Hera</i>	<i>246.21 (88%)</i>	<i>252.13 (87%)</i>	<i>262.67 (87%)</i>

Bill of a residential customer (household of three) with a yearly consumption of 130 m³. Municipalities taken into account: Bologna, Ferrara, Forlì, Imola, Modena, Padua, Pesaro, Ravenna, Rimini, and Trieste (weighted average of residents). The grey areas show tariff components that are paid by Hera.

In 2022, the average bill of a residential customer with consumption of 130 m³ per year totalled 302 euro, an increase of approximately 13 euro compared to 2021 (+4.6%), in line with the variations decreed by local authorities.

The equalisation components are tariffs established by the Authority that operators must apply to end users for the three services: water, sewage and purification. They are allocated to cover the tariff concessions granted to populations affected by seismic events, to promote the quality of aqueduct, sewerage and purification services, to cover the costs of the water bonus, and to cover the operating costs of the Guarantee Fund for Water Works.

The leak fund for hidden water leaks

In 2014, **Hera Spa** outlined a joint regulation across all the local areas it serves, setting up a **“Leak fund”** to **protect customers in the event of water leaks in their plumbing system**, i.e. downstream from their meter. This voluntary instrument partially covers bills of even very high amounts that are due to accidental and unknown leaks within a customer’s own plumbing system. By paying 15 euro per year in their bill, participating customers **receive a reimbursement** for hidden water leaks in their system, for the entire amount of the volumes that exceed their usual average consumption by 80%, up to a maximum of 10,000 euro.

Participation in the fund is not compulsory, and customers may withdraw at any time simply by communicating their intention to do so.

The “Leak fund” is exclusively designed to cover the additional costs incurred by customers that had a water leak.

In the course of 2022, the Leak fund Regulation was updated, integrating it with **ARERA Resolution 609/2021**, which introduced minimum levels of protection for users in the event of hidden leaks downstream of their meter. In particular, the resolution provides for recalculating the bill with the application of certain voided or reduced tariffs according to the following constraints and modalities:

- access to minimum protection is possible when the leakage consumption is at least twice the average daily reference consumption (calculated over the two years preceding the leak and the same billing period);
- in the case of closely occurring events, users will be able to access minimum protection no earlier than three years after they last accessed it;
- to ensure that the leak is repaired, protection will apply up to a maximum of three months from the date of the leak detection;
- sewerage and purification rates will not be applied to the volume exceeding the average daily benchmark consumption amount;
- for the aqueduct service, the volume exceeding the average daily consumption amount will be charged at a rate equal to half the basic rate, subject to an exemption of 30% on billable volumes.

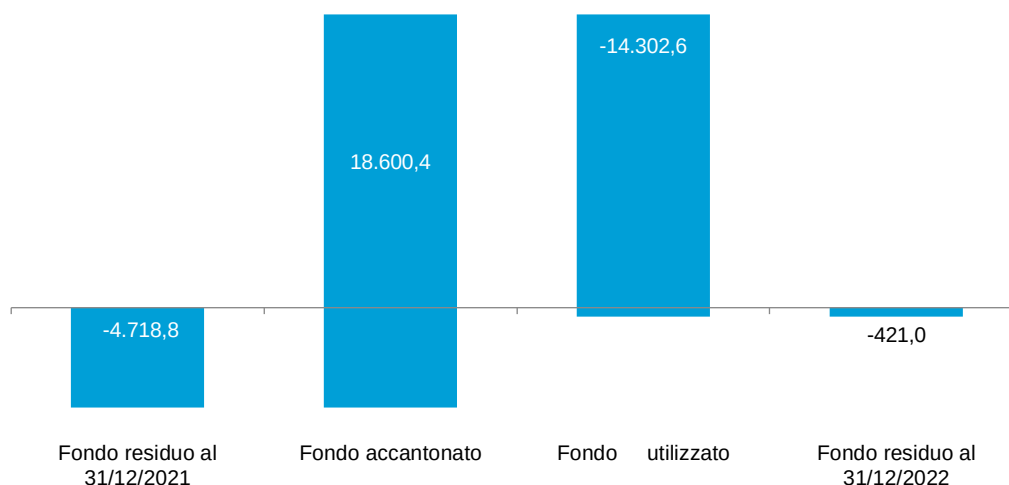
All users of the integrated water service are automatically entitled to the above minimum price protection, unless otherwise specified by the regulatory authorities in charge.

Therefore, beginning on 1 July 2022, Hera integrated the Leak Fund Regulation with the ARERA regulation, effectively providing **double protection for users of the integrated water service**. Complementing ARERA’s minimum protections, the Leakage Fund will serve in particular to cover both leaks of less than twice the average benchmark consumption amount established by ARERA (but higher than 80% as per the Regulation) and excess expenses that would in any case remain the responsibility of the user. Moreover, unlike the Authority’s minimum protections, the Leak fund may be activated, with a ceiling, more than once in the same three-year period. In addition, the Leak fund was **further improved** by introducing a number of more user-friendly innovations:

	Up to 30 June 2022	From 1 July 2022
Ceiling	10,000 euro in two years	20,000 euro in two years
Sewage and purification shares	Reimbursed above average daily consumption + exemption	Reimbursed above average daily consumption (when the fund is used to integrate ARERA's protections)
Protection beyond leak detection	Two months after leak detection (maximum time for repair)	Three months after leak detection (maximum time for repair)

In addition to the fee for joining the fund, the exemptions for access to the fund also remain unchanged; these are an improvement on the minimum ARERA protections (as per the Regulation, leak consumption greater than 80% of the average benchmark consumption amount, with a minimum of 50 cubic metres).

WATER LEAK FUND (THOUSAND EURO)



LEAK FUND AND BENEFICIARY CUSTOMERS

	2020	2021	2022
Funds disbursed (thousand euro)	19,331	19,901	14,303
Beneficiary customers	12,996	14,031	13,564
Average reimbursement (euro)	1,487	1,418	1,054

The fund's balance at 31 December 2022 is negative, -421 thousand euro (including interest income related to previous fiscal years). The balance, for 2022 alone, is positive by approximately - 4.3 million euro.

The introduction on 1 July 2022 of the new Leak Fund Regulations, which supplement ARERA's protections in the event of hidden leaks, allowed for an almost complete reversal of the fund imbalance recorded at 31 December 2021 (-4.7 million euro). The application of a reduced tariff, to be applied in the event of a leak (ARERA protections), has in fact significantly curbed the impact on the fund, also

making it possible to extend the maximum reimbursement ceiling provided by the fund per individual user from 10,000 to 20,000 euro over a two-year period.

One can also assume that, as early as the first half of 2023, after due analysis, it will be possible to intervene on the fund entry fee by reducing the annual amount charged to users.

Since the fund is exclusively designed to benefit its participating customers and the monthly balances were almost negative in 2021, no interest was calculated. Since its creation, the fund has **reimbursed more than 106 thousand users in the amount of over 144 million euro**. During 2022, 13,564 users benefited from the fund with an average reimbursement of 1,054 euro. Less than 4% of Hera Spa customers are not covered by the “Leak fund”. During 2022, 50 customers withdrew from the fund.

AcegasApsAmga also took out an insurance policy against hidden water leaks at a cost of 5.20 euro per year for household users and 8.20 euro per year for non-household users. In 2022, 285 claims were settled, 101 in Trieste of which and 184 in Padua.

How much water costs

Italy is the top consumer of bottled water in Europe, with 222 litres of water consumed per-capita per year (Source: Bottled water reporter 2019). As well as benefiting the environment, drinking tap water instead of bottled water also saves money: considering an average daily consumption of 1.5 litres for a household of three people and an average price of 30 cents per litre for certain mineral waters sold, yearly spending on bottled water comes to around 490 euro a year; The cost for the same quantity of water from the water network, meanwhile, would be 3.6 euro a year (calculated as the average of the bills in the ten main cities served by Hera). A family drinking **tap water** rather than bottled water can therefore **save approximately 480 euro per year**.

Waste collection and disposal bills

The January 2014 Stability Law established two tariff regimes for waste management services in municipalities that have implemented systems for measuring the waste delivered to the public service: the Waste Tax (TARI), which is in the form of a tax, and the Spot Fee Tariff (TCP), which is in the form of a fee. These two tax regimes are meant to ensure full coverage of costs for the waste management service, which includes street sweeping and washing, waste collection and transportation, sorted waste collection, waste treatment and disposal, and administrative costs.

In the area served by Hera Spa, 118 municipalities apply the TARI (15 of which have chosen to entrust its collection to Hera), while 18 municipalities apply the TCP (including a provincial capital: Ferrara). In the remaining 52 municipalities served by AcegasApsAmga and Marche Multiservizi, the TARI is applied.

Since its launch in 2017 in a municipality in Emilia Romagna, the new tariff system has thus reached approximately **332 inhabitants in 2022**, 13.5% of the residents of Emilia-Romagna served by the Hera Group through the integrated management of municipal waste.

In the municipalities with the TCP system, the new quantity-based collection services were activated and personal equipment for disposal were distributed to all residents and companies. For an effective and consistent introduction of the new tariff model and the new services, special control rooms have been set up jointly between Hera and the municipal administrations.

The necessary communication initiatives have also been launched to inform and engage users regarding how the new system will be introduced. In fact, it should be noted that any quantity-based changes to the collection service that may affect the calculation of tariffs are communicated to residents by publicising them widely, e.g. through bills, ad-hoc communications and on the website.

Hera manages the application of TCP thanks to an integrated management of systems and processes that have made it possible to apply the system effectively and uniformly in all its aspects and phases, from user management to the measurement of mixed waste disposed of, and up to final invoicing. The TCP is a **fairer and more transparent way to finance waste management services** and can promote virtuous behaviour and participation in sorted waste collection.

In all of the municipalities using the TCP system, sorted collection exceeds 75% with peaks of more than 90% in six municipalities.

WASTE COLLECTION AND DISPOSAL BILLS

euro	2020	2021	2022
Fixed share	106.26	102.92	102.38
Variable share	95.85	102.37	106.02
Fixed and variable share not paid by Hera	32.13	31.10	30.58
Additional provincial charges	9.62	13.00	11.76
Total	243.85	249.39	250.74
<i>of which: share paid by Hera</i>	<i>202.11 (83%)</i>	<i>205.29 (82%)</i>	<i>208.40 (83%)</i>

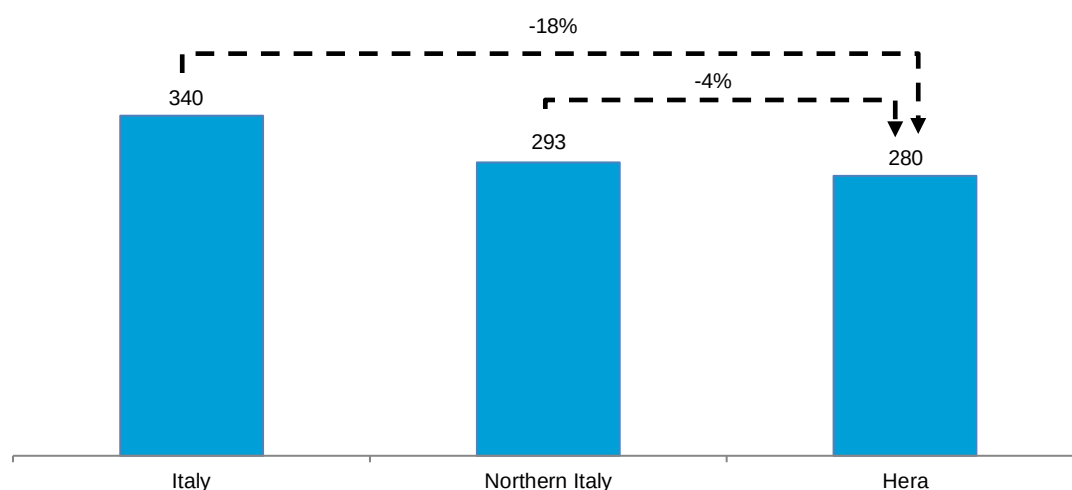
Bill of a residential customer (three-person family in a house measuring 80 m²). Municipalities taken into account: Bologna, Ferrara, Forlì-Cesena, Imola, Modena, Padua, Pesaro, Ravenna, Rimini, and Trieste (weighted average of residents). For Ferrara, where we introduced quantity-based rate calculation on 1 January 2018, compliance with the limit of 52 disposals of mixed waste per year amounting to 30 litres each was also taken into account. The grey areas show tariff components that are paid by Hera.

A three-person family living in an apartment measuring 80 m² paid approximately 251 euro for waste collection and disposal in 2022, roughly in line with the previous year. A 14 euro increase (+6.1%) was seen in the Ravenna area and a 10 euro (+4.3%) increase in Pesaro-Urbano, due to a number of initiatives that have impacted the service (the evolution of sorted collection services and the quality of the material collected, gradual completion of home collection of unsorted waste, and the boosting of checks in the area).

The cost of waste management services for household and non-household customers

In 2022, Hera charged its residential customers waste management service costs, which were 20% below the Italian average and 9% lower than the Northern Italy average: these were the findings of the “Cittadinanzattiva” Price and tariff monitoring survey, which focused on 112 province capitals (municipalities in which the spot tariff is applied were not considered). The study based its findings on a standard customer consisting of a family of three living in a 100 m² apartment.

AVERAGE YEARLY EXPENSE FOR A HOUSEHOLD (EURO)

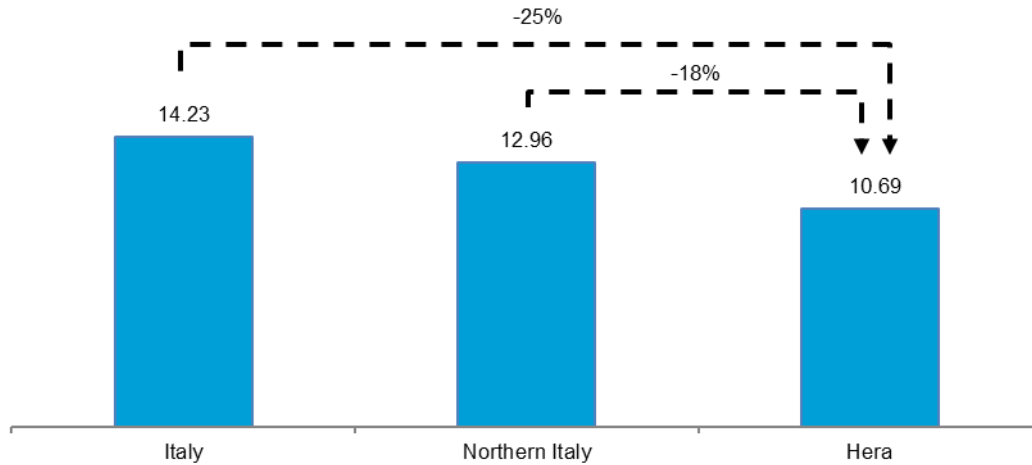


Data, 3 people 100 m², Source: Cittadinanzattiva

Considering TARI for four types of non-household users in 101 provincial capitals served by Hera, hotels spend 18% less than the Italian average, and the saving was 26% for restaurants, 37% for the food industry and 21% for supermarkets. For non-residential users of restaurants, supermarkets, and food industry in Hera's service area, the costs are cheaper by 23%, 22% and 13% respectively compared to

the average for Northern Italy: for hotels, Hera charges more than the average for Northern Italy by 8%. The average of the four types of users considered by the research shows, therefore, that Hera's area is more competitive, with costs 25% below the Italian average and 18% below the average for Northern Italy.

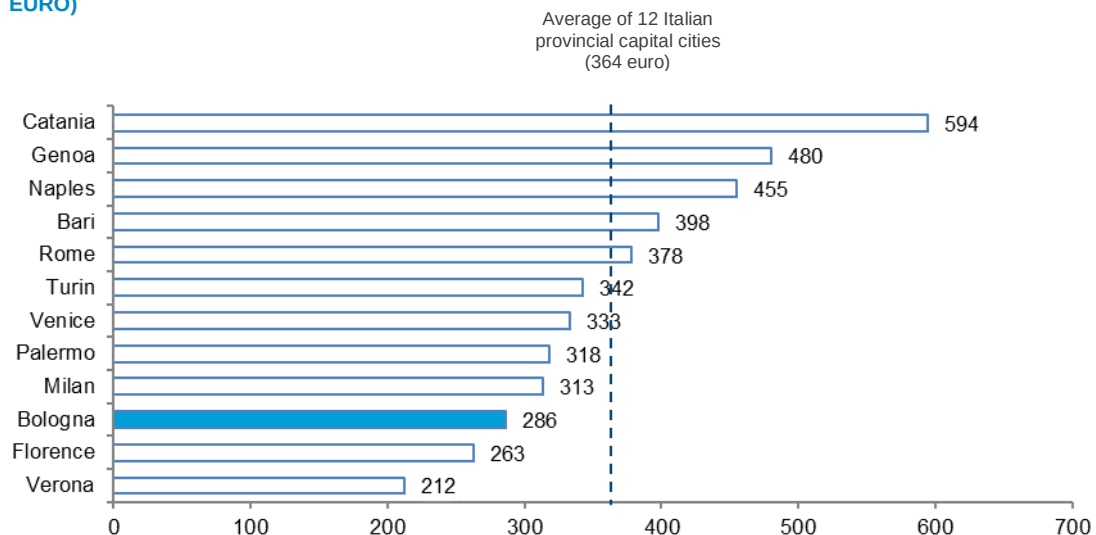
AVERAGE YEARLY EXPENSE FOR FOUR TYPES OF NON-HOUSEHOLD USERS (EURO/ M²)



2022 data processed by Hera on figures from municipality websites

Cittadinanzattiva's 2022 report also compares the cost for the municipal sanitation service in the Italian provincial capital cities. Concerning the 12 large municipalities (over 250 thousand inhabitants), Bologna with a TARI waste tax of 286 euro ranks among the cities with the lowest cost, together with Florence and Verona, and a level 22% below the average of the 12 provincial capital cities.

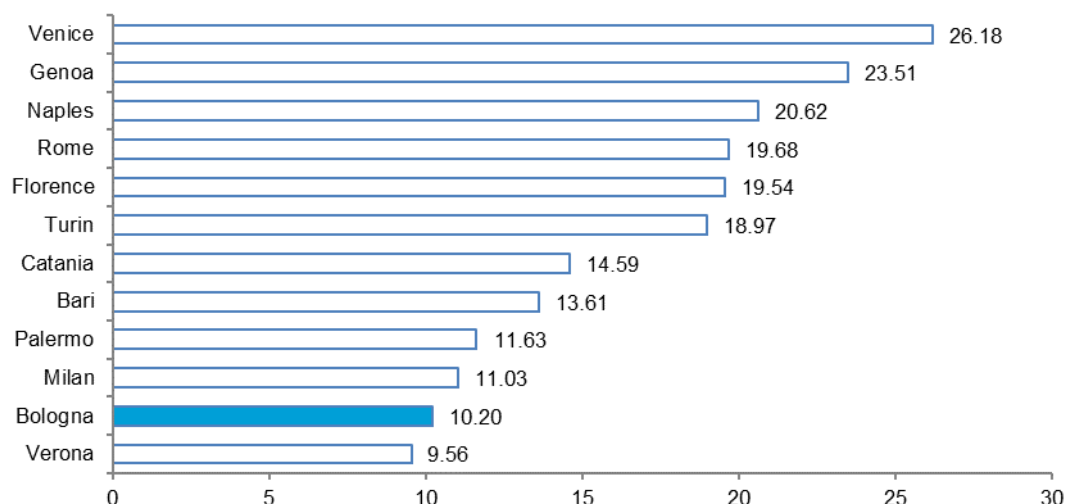
TOTAL COST PER USER IN CITIES WITH MORE THAN 250,000 INHABITANTS (3 OCCUPANTS 100 M², EURO)



2022 Data, 3 people 100 m², Source: Cittadinanzattiva

Comparing the cost of the municipal sanitation service for non-residential customers in Italian provincial capital cities with over 250 thousand inhabitants, Bologna with 10.2 euro per square meter ranks as one of the cities with the lowest average costs for the four types of non-residential users considered by the study (restaurants, hotels, industrial activities, and supermarkets).

COST OF WASTE MANAGEMENT FOR A NON-HOUSEHOLD USER IN CITIES WITH MORE THAN 250,000 INHABITANTS (EURO/M²)



Types of non-household users included in the study: hotels, restaurants, industrial activities and supermarkets. 2022 data. Source: Hera Group analyses

6.04 Service quality

Electricity and gas

The regulation of the **quality of electricity and gas distribution services** classifies the standards to be met into general and specific ones. Failure to comply with the standards for any cause attributable to the distributor leads to automatic compensation payments to the end customer (in most cases through the sales company requesting services from the distributor on behalf of the end customer).

For **electricity**, the basic automatic compensation is variable (from 35 to 140 euro) depending on the supply voltage (low or medium) and the type of end customer (household or non-household) while for **gas** the basic automatic compensation is variable (from 35 to 140 euro) depending on the metering group class. The basic automatic compensation may increase based on the delay in the provision of the service or fulfilment times.

The applicable resolutions of the regulatory authority still in force are resolution 569/2019 and resolution 566/2019.

District heating service

In July 2019, the ARERA commercial quality discipline came into force for the **district heating** market as well (resolution 661/2018 and resolution 526/2021). These resolutions thus also included the services previously monitored by Hera on a voluntary basis, since 2008, and governed by the District Heating Service Quality Charter which also required the payment of automatic compensation to customers in the event of non-compliance with the commitments concerning key services. ARERA's regulatory measures amended the economic values of the automatic indemnities set for the various categories of customers, as well as some of the quality levels covered by the regulations, within an overall framework that, however, confirmed the main quality indicators that Hera had already adopted on a voluntary basis, such

as, for example, the time taken to activate the supply, to terminate the supply, to reactivate it in the event of disconnection due to payment delinquency, or the times for providing quotes.

Water services

In managing the **integrated water service**, the operator undertakes to respect the quality standards of the service set by the Service Charter, i.e. the characteristics of the main services provided by the operator and the timing within which they must be performed. This document is drawn up on the basis of a template prepared by the Regulatory Authorities and attached to the signed agreements, whose content is in line with current national regulations.

ARERA's resolution 655/2015 has governed the contractual quality of the water service since 1 July 2016, defining **minimum service levels** that operators must respect for activities related to the requests of users, emergency services, billing, access to branch offices and to the call centre and the management of complaints. The resolution also introduced the payment of an automatic indemnity of 30 euro to be paid if the operator fails to comply with the specific quality standards; this amount, with the exception of certain specific services, increases in relation to the delay in performing the service, up to a maximum of 90 euro in cases in which the time is more than three times the standard

ARERA's deliberation (attached to Resolution 654/2015) also provided for operators to access **local incentive mechanisms** for their commitment to pursuing quality levels that **improve on the minimum levels** required by Resolution 655/2015. Hera Spa achieved the incentive for the Bologna and Modena areas, applying the improved levels set by Atesir for 32 standards. The most significant standard parameters include: the execution time for contract transfers (improved from five to three days), the time to provide quotes for works involving inspections (improved from 20 to 12 days), and the response time for meter checks (improved from ten to seven days).

For the Ferrara, Ravenna, Forlì-Cesena and Rimini areas, branch offices are now open to customers on Saturday mornings, as an added convenience for users. The requirements of the contractual quality objectives must also be adequately monitored and reported to the Italian regulatory authority, to Atersir and to users by publishing them in the bills. The service charters were published with the update of resolution 655/2015.

ARERA resolution 547/2019 was issued at the end of 2019 (coming into force beginning in 2020) to partly enlarge current regulations governing the regulation of the contractual quality of the integrated water service (Resolution 655/2015) and to replace the previous incentive system defined by Resolution 654/2015, introducing a new national incentive mechanism consisting of incentive and penalty factors to be applied on the basis of the yearly targets achieved by individual managements. Due to the epidemiological emergency in 2020, the regulation granted an exemption by providing for a two-year assessment of contract quality performance for the period 2020-2021 (Resolution 235/2020) and for the two-year period 2022-2023 (Resolution 639/2021). The assessment is carried out considering the objectives achieved related to two macro-indicators, weighted by the number of services delivered: in a nutshell, the calculation involves assessing the services provided in the reference year that meet the respective minimum standard specified by ARERA (compliant services) with respect to all the services provided (compliant and non-compliant services). For 2022, the Hera Group was found to be in compliance with the objectives set by the regulation.

With reference to the standards actually applied, Hera continues to maintain the commitments it has undertaken with the individual local areas, formalised in the service charters, in terms of improved performance times in the Modena and Bologna areas already enjoyed by these areas since 2016.

In addition, at 1 January 2022, following the beginning of the new concession for the water service in the Rimini area, 28 new improved standards came into force for this area as well, replacing the minimum levels established by ARERA that were in place until that date.

The water service charter is also present, published and applied, with its own reference quality standards, in the Group areas served by AcegasApsAmga (falling under the localities of Ato Bacchiglione-Padua and Ato Orientale Triestino) and by Marche Multiservizi.

Waste management services

Since 1 January 2019 the Service Charter for the **municipal and similar-to-municipal waste management service** applies in all municipalities where Hera Spa and AcegasApsAmga provide sanitation services. The Service Charter is a means to protect residents, as it sets the quality standards of the service, i.e., the characteristics of the main services provided by the operator and the timing within which they must be performed.

The Service Charter is currently being updated following the ARERA resolution “Consolidated text for regulating the quality of the municipal waste management service” (Resolution 15/2022), which lays down the contractual and technical quality standards at the national level that operators must meet in managing urban waste from 2023 onwards.

COMPLIANCE WITH QUALITY STANDARDS

	%	2021	2022	No. services provided (2022)
Gas sales		99.6%	95.9%	22,525
Gas distribution (end customers and sales companies)		99.7%	99.7%	4,023,611
Electricity sales		99.4%	96.3%	17,552
Electricity distribution (end customers and sales companies)		97.9%	96.9%	46,828
Integrated water service		99.3%	99.3%	212,074
District heating		96.1%	96.6%	829
Total		99.7%	99.6%	4,323,419

This includes the services for which customers must be automatically compensated if the company does not comply with the standard. The 2022 data also includes Hera Comm Marche, EstEnergy, Amgas Blu, Ascotrade, Ascopiave Energia, Blue Meta, and Etra Energia. The data does not include Eco Gas and Con Energia.

The overall figures are in line with 2021: in 2022, **in 99.6% of cases, the Group provided the service requested by the customer within the timeframe set by ARERA**. Quality standards are close to full compliance for the gas distribution service of Marche Multiservizi (99.9%) and the water service of AcegasApsAmga (99.7%).

The individual gas services show a consolidation of the excellent results in these areas. In particular, this year there was a confirmation of the highly frequent services provided: frequency of collection of meter readings for billing purposes (99.7%), punctuality range for appointments (99.4%) and activation of gas supply (100%).

For the supply of electricity, one of most commonly provided services (activation of the electricity supply) was once again high, standing at 99.0%.

As regards sales quality standards, the decrease in this indicator is due to an increase in the number of business contacts compared to 2021, which led to strong pressure on the handling of files, which in some cases resulted in longer processing times.

For the water service, the high standard of the most commonly provided services was confirmed: compliance with the punctuality range for appointments (99.4%), transferring (99.8%), activation of the supply (98.9%) and deactivation of the supply (99.7%).

Electronic meters

The year 2022 was characterised by strong critical issues in world markets resulting from the difficulty of finding electronic devices, combined with increased transport costs resulting from rising energy commodity costs. Nevertheless, careful planning of activities made it possible to **confirm (and exceed) the targets set** for 2022.

In the **gas** sector, activities were carried out in line with the planning for the period. In the latter part of the year, following the new regulation of the quality of gas readings (Resolution 269/2022), activities were intensified for the register of meters and the replacement of meters that were no longer functioning. The **NexMeter** project is proceeding according to plan (180,000 of these meters have been installed, 10.8% of the total) and in 2022 the NB-IoT (Narrowband Internet of Things) modem version is planned according to the latest communication standards and again in accordance with UNI 11291. The goal for 2026 is to reach 300 thousand installations, 18% of total meters. The installation of **remotely controlled**

electronic meters also increased (+14.9%), now reaching 77.0%. The installation of the first NexMeters in recycled plastic (NexMeter green) was also begun.

In the field of **electricity**, during the first three months of 2022, all operational contracts were formalised and the procurement of equipment was completed. The main activity in 2022 was due to the development and testing of **2G systems** and the replacement of the first booths for the massive replacement plan (about 28,000 installations at the end of 2022, covering 5.8% of the meters). In this case, the goal for 2026 is to install 410 thousand second-generation meters (81% of total meters).

Overall, by 2022 the Hera Group has over 1.4 million electronic gas meters, corresponding to 86.5% of the total (+8.3 % compared to 2021), and over 473 thousand electronic electricity meters, corresponding to 97.8% of the total. Overall, **electronic meters in energy services account for 89.1%** of the total (+6.5%).

In addition, more than 19 thousand meters are made of **recycled plastic** (0.9% of the Group's total): they were installed in the electricity sector, while in the gas sector, technical tests are underway to test resistance to the considerable stresses to which the meters are usually subjected (exposure to the sun, temperature, etc.).

With regard to the **water sector**, in 2022 the project of **upgrading meters and introducing remote reading** continued, with high-water-demand users as its first target. In fact, a remote reading dashboard has been developed that offers value-added services, such as near real-time data (daily or even hourly frequency) on consumption trends, and receiving applicable alerts, including suspected leaks in the internal system, that make it possible to take timely action and reduce wasted volumes.

The installation of the first **electronic meters** started in 2022, totalling 5,358, representing 0.3% of the Group total. At the end of the year, within the scope of Hera Spa, remote reading volume corresponded to about 5% of the volume distributed. The Business plan targets envisage the installation of remote reading devices to approximately 7,500 users by 2026, equal to 25% of the volumes distributed within the scope of Hera Spa.

6.05 Service safety and continuity

Gas distribution service safety and continuity

The Hera Group manages the gas distribution service with the objective of ensuring high safety and service continuity levels.

Resolution 569/2019 further increased safety standards for the current regulatory period (2020-2025). This increase was substantially **in line with the standards already met by Hera** and with the company's mid- and long-term objectives. The changes to the regulations did not therefore have any particular impact on Hera or any significant negative impact on the continuity of its objectives and activities. Specifically, the resolution added more stringent requirements for the inspection of networks, odorising and incentives to upgrade odorising systems.

Since 2010, gas distribution companies have been required to participate in a system of incentives for safety improvements in the service defined by ARERA, which assesses four aspects:

- compliance with **service level requirements**, **no gas-related accidents** falling under the responsibility of the operator, and **no breaches** in this area related to ARERA's checks or inspections;
- the number of measurements of the **gas odorising level** compared to the required minimum;
- the number of conventional **leaks** reported by third parties compared to the objective set by ARERA for the period;
- the number of **upgraded odorising plants** (flow-proportional, remote-controlled injection-type odorising plants).

As a result of ARERA's Resolution 40/2014/R/gas, when a request is made to activate a gas supply, and in some cases to reactivate a gas supply, the safety of the gas system must be checked. The scope of application of the inspection applies only to user systems involving non-technological gas use (e.g. household use, boilers for heating, etc.).

For 2022, **Inrete Distribuzione Energia** is estimated to have a **positive balance of approximately 1 million euro** between premiums and penalties, relating to the recovery of continuity in the gas distribution service for the districts it manages. The company achieved bonuses both for the component relating to leaks reported by third parties (400 thousand euro) and for the component relating to gas odourisation (600 thousand euro).

For **AcegasApsAmga**, awards totalling **589 thousand euro** are expected both from the leak component (394 thousand euro) and the odourisation component (194 thousand euro). The company succeeded in obtaining bonuses for almost all of the distribution systems it operates; the penalties for the systems for which bonuses were not obtained are estimated at approximately 27,000 euro.

To **Marche Multiservizi**, ARERA granted a **bonus of approximately 17 thousand euro** relating to gas distribution service safety recoveries for the year 2019.

ARERA resolution 569/2019, the “Consolidated Law for the regulation of the quality and rates of gas distribution and metering services for the regulatory period 2020 – 2025” establishes that the distribution company must comply with the minimum annual percentage service requirement that for 90% of calls the emergency services arrival time at the call location be no more than 60 minutes.

GAS EMERGENCY SERVICE

	2020	2021	2022
Average arrival time at the call location (min)	35.3	35.7	36.2
Calls with arrival time at the call location within 60 minutes (%) (service requirement 90%)	97.8%	97.8%	97.3%

The monitoring of gas emergency response times confirm full compliance with the regulatory requirements, as 97.3% of all calls arrived on site within 60 minutes (compared to ARERA's service requirement of 90%). For this indicator, Inrete Distribuzione Energia reported 96.9% while AcegasApsAmga reported 99.3%, and Marche Multiservizi reported 97.8%.

INSPECTIONS AND LEAKS IN THE GAS NETWORK

	2020	2021	2022
Percentage of the total high and medium-pressure network inspected (service requirement: 100% in three years)	54.9%	61.7%	63.7%
Percentage of the total low pressure network inspected (service requirement: 100% in four years)	81.9%	78.1%	79.1%
Number of leaks on distribution network located upon inspection, per kilometre of network	98.2	91.9	88.6
Number of leaks on distribution network located upon notification by third parties, per kilometre of network	32.7	36.4	32.0

Even in 2022, the **percentage of the network that was inspected was significantly above the minimum** required by ARERA (100% for the high and medium pressure network in three years and 100% of the low pressure network in four years). In fact, at the Group level, more than 63.7% of the high and medium pressure network and 79.1% of the low pressure network were inspected in 2022 alone.

The network, classified as having a high probability of leakage, is defined as the sum of:

- the high-pressure network;
- the network made of non-compliant materials as defined by the ARERA resolution;
- the network laid in areas subject to hydro-geological instability.

For the networks made of non-compliant materials, 100% of the network must be inspected annually, as required by ARERA. Hera carries out annual inspection of 100% of the network for other types of networks as well. **ARERA resolution 569/19** of December 2019 requires all gas distribution service operators to replace gas network components built with **materials defined as non-compliant** by 2025. At 2019, Inrete Distribuzione Energia managed approximately **160 km** of non-compliant networks, consisting of asbestos cement pipelines, located in the municipalities of Forlì (121 km), Ravenna (21 km), and Codigoro (18 km). The work of dismantling these portions of the network must be completely finished **by 2025**, in accordance with the provisions of the resolution, except for the networks in the Forlì area for which a formal waiver has been requested to extend the deadline to the end of 2029, with various intermediate result targets monitored by the Authority. In particular, with Resolution 624/2022 of November 2022, **ARERA granted the request for a waiver** of the deadline for the Forlì area, aiming to reach 100% by 31 December 2029.

In order to operationally enable the implementation of the currently ongoing **multi-year work plan**, specific multi-year contracts for the **"replacement of gas networks and connections in non-compliant material"** were signed with specialised companies. The rules underlying the work plan, with ongoing updates about the likelihood of breakage calculated for each individual pipeline, as well as the many contextual conditions that must necessarily be taken into consideration when working in densely inhabited settings (road networks, the presence of schools, hospitals and sensitive users, areas subject to constraints, and the feasibility of construction) remain unchanged. In the course of 2022, Inrete **dismantled a further approximately 32 km** of pipelines made of non-compliant material, with the related connections being updated or relocated onto the new pipelines constructed, thereby increasing the dismantled network to **more than 50 km**. A further 20 km of gas network in non-compliant material is scheduled to be dismantled by 2023. Inrete is already planning activities also for 2024 to ensure the fulfilment of ARERA's service obligations.

The agreements with the technicians of the municipalities involved for the streamlining of authorisation procedures, which are necessary for the planning and implementation of work to comply with the obligations imposed by the Authority, are consolidated and constantly evolving and being monitored.

In 2022, Inrete Distribuzione Energia continued the planning and performance of **inspection campaigns for underground and overhead connections**, including the scheduled searches for gas leaks, also applied to above-ground system components, in particular:

- **systematic checks to ensure there are no leaks** on network elements (valves, vents, crossings, etc.) are carried out during scheduled periodic operating/maintenance activities;
- concurrent with routine operations on meters, (e.g., activations, closures, checks on metering assemblies), a **tool-aided check is carried out on the above-ground connection and meter being worked on to ensure that there are no leaks**.

Beginning in 2019, furthermore, Inrete Distribuzione Energia's new system for the programming and management of scheduled **gas network leakage detection** is active. The system involves planning activities through an **artificial intelligence platform with machine-learning algorithms** aimed at optimising the effectiveness of the daily checks (maximising the number of leaks found) and minimising inspection procedures. This aims not only to pursue industrial efficiency aims but also to ensure an ever-increasing level of safety and quality of the distribution service.

The work is carried out entirely by internal staff, while the scheduling is defined by algorithms that dispatch schedules to the teams with mapping support such as optimised road routes to minimise mileage and inspection times and therefore increase effectiveness and reduce the environmental impact of the operations.

The actual figures at the start of the new system used to manage scheduled gas network leakage detection show that these data are in line with the objectives of the scheduling tool: in fact, the number of detected leaks in relation to the inspected network has been **higher than in the years before the new leak detection planning system was adopted**. The increased effectiveness of the new scheduled leak detection system has an impact on the ratio of leakages reported by third parties to total detected leakages (both reported by third parties and detected as a result of inspections). Leaks reported by third parties in Emilia-Romagna in 2022 fall further and account for 32.2% of the total number of leaks (both

reported by third parties and detected during inspections); this share remains in fact lower than in 2021 and 2020 (36.0% and 32.7% respectively).

In addition to pursuing industrial efficiency objectives, this performance aims at constantly improving the company's safety standards, which are already in themselves better than the reference values stated in the sector's technical regulations.

An update of the machine learning algorithm is underway to take a step forward in improving process performance.

In 2022, in the Group's entire gas distribution network, **32.0 leaks were reported by third parties** per thousand kilometres of network, compared to 36.4 in 2021. On the other hand, **88.6** leaks were identified by means of inspections on the Group's distribution network per thousand kilometres of network, compared to 91.9 in 2021.

Leaks in the gas distribution network can be estimated using a calculation method based on the quantification of the gas flow rates leaked by the breakage found during leak detection activities and an estimate of the time between the time of breakage and the time the leak is fixed. In 2022, the percentage of leaks in the gas distribution network calculated using this method was 0.034% of the total volume of gas injected into the network across the Group.

How does this initiative contribute to responsible digital transformation? The benefits achieved in terms of Corporate digital responsibility (see the dedicated section "Corporate digital responsibility")

Social		The activity is aimed at pursuing increasingly advanced levels of safety and quality of service as well as increased safety for residents and workers.
Environmental		Preserving air quality thanks to more efficient leak detection and the resulting less travel required by operators. The decrease in fugitive emissions from the grid translates into a lower concentration of greenhouse gas emissions into the atmosphere.
Economic		The efficiency of leak detection operations, supported by the use of artificial intelligence algorithms, reduces operating costs and accordingly increases the effectiveness of the work done.

Electricity distribution service safety and continuity

[416-1]

In 2022, the distribution networks operated by Inrete Distribuzione Energia distributed approximately 2,177 GWh of electricity to 263 thousand users in 24 municipalities of the provinces of Bologna, Modena, and Ravenna in Emilia-Romagna. Also, about 768 GWh of electricity were distributed to more than 164 thousand users served by AcegasApsAmga in the municipalities of Gorizia and Trieste.

The electricity grids operated by **Inrete** at 2022 are 10,570 kilometres long; 73.3% of them carry low voltage, 26.3% medium voltage, and the rest high voltage. Of these, 42.2% of the lines are underground. In the **Triveneto** region, AcegasApsAmga operated 2,313 kilometres of network, 65.9% of them carry low voltage, 34.0% medium voltage, and the remaining share high voltage. A total of 71.8% of the lines are underground.

In total, the approximately 12.9 thousand km of electricity distribution network managed by the Group distributed 2,945 GWh to 426 thousand users.

ARERA's provisions regarding the service quality of distribution, metering and sales of electricity (resolution ARG/elt 566/19) govern **the continuity of the electricity distribution service** for the 2016-2023 regulatory period. The resolution also identifies the indicators to use to measure power cuts, the monitoring systems, and the reference standards.

The indicators related to power cuts originating in the medium and low voltage grid express:

- the total annual duration of long power cuts without advance notice, for low voltage customers;
- the total annual number of long and short power cuts without advance notice, for low voltage customers.

For the 2016-2023 regulatory period and the respective geographical areas, Inrete Distribuzione Energia and AcegasApsAmga participated in the reduction of power cuts originating from the medium and low voltage grids attributable to external causes. The above indicators, therefore, are calculated inclusive of

external causes. For these indicators, ARERA set the target levels and trend levels for the districts managed.

For 2021, **Inrete Distribuzione Energia** was awarded approximately 750 thousand euro overall as incentives for electricity distribution service continuity recoveries following the investigation conducted as part of the proceedings carried out by ARERA to formulate the service continuity measure. **AcegasApsAmga** also takes part in the incentive/penalty system for continuity recoveries for the electricity distribution service, set out in resolution A566/2019: based on the quantity and duration of outages without advance notice in 2021 as a reference, it was entitled to two incentives for the two areas totalling approximately 235 thousand euro.

CONTINUITY OF THE ELECTRICITY SERVICE

	2021	2022	2021-2022 average	2022 trend
Average number of power cuts per customer in high concentration areas	0.64	0.84	0.74	1.21
Power cut minutes per customer in high concentration areas	8.44	12.51	10.48	12.51
Average number of power cuts per customer in medium concentration areas	1.97	2.19	2.08	2.38
Power cut minutes per customer in medium concentration areas	20.93	24.87	22.90	24.87
Average number of power cuts per customer in low concentration areas	3.58	3.71	3.65	4.45
Power cut minutes per customer in low concentration areas	48.65	37.67	43.16	37.67

The average figure applies to power cuts of the low voltage service, without advance notice and due to causes for which the operator is responsible. The power-cut duration minutes apply to power cuts that last more than three minutes.

In the 2022 figure confirms the high level of continuity of the electricity distribution service, which for all the reference indicators stand below the trend and/or target levels set by ARERA.

The **System average interruption duration index (SAIDI)**, calculated as the sum of all customer interruption durations divided by the total number of customers served is 0.31 hours in 2022 (vs 0.35 in 2021 and 0.30 in 2020).

The technical call centre

Receiving and diagnosing the telephone calls made to the toll-free emergency services numbers is of key importance, since the calls can be used as actual reports of disruptions to the service being provided.

The **technical call centre service**, always active 24 hours a day, has a 15 dedicated toll-free numbers for each service (gas, integrated water service, district heating, environmental services, street and traffic light, electric mobility), and district (Emilia-Romagna, Triveneto and Marche) in addition to a joint toll-free number for the entire Group for public bodies (fire brigade, municipalities, provincial administrations, prefectures, police stations, AUSL local health authorities, ARPA environmental protection agency, law enforcement agencies, port authorities, etc.). Since 2021 Hera Luce has become part of the centralised technical call centre in Forlì for the management of emergency intervention, for both public lighting and traffic light services, in all municipalities served by the company.

A total of 524,146 calls were received in 2022 (505,216 in 2021).

Beginning in 2020, the technical call centre was **completely reorganised** with various measures (logistical decentralisation, new customer relationship management infrastructure, etc.) characterised by the priority aim of ensuring service continuity while guaranteeing the safety of operators and complying with regulatory provisions. A fundamental element for safe organization was the upgrading of the system to create a more open and flexible architecture allowing for remote working by adapting the operations of the technical call centre to a remote location (mobile or fixed). All processes are managed with the aid

of information technology support so that, in an "on demand" and real-time mode, they enable continuous support of operators in the articulated and extensive perimeter managed.

TEACHNICAL CALL CENTER: PERCENTAGE OF CALLS ANSWERED WITHIN 120 SECONDS

%	2020	2021	2022
Gas emergency services (minimum percentage required by ARERA is 90%)	96.2%	96.4%	96.2%
Water emergency services (general level 90%)	92.6%	92.8%	93.8%

The percentage of calls for emergency services for gas and water for single companies was calculated according to criteria defined by ARERA, considering received, answered or and abandoned calls within 120 seconds in the numerator, and all received calls in the denominator.

AVERAGE TECHNICAL CALL CENTRE WAIT TIME

Seconds	2020	2021	2022
Average technical wait time: call center Gas	48.4	51.8	50.0
Average technical wait time: call center Water service	61.2	63.6	54.9
Number of calls gas emergency service	113,204	97,508	101,506
Number of calls water emergency services	258,074	285,828	293,088

In 2022, the technical call centre in Forlì received about 395 thousand calls for the water and gas services. Despite the increase in phone calls compared to the previous year, the percentage of calls answered by the technical call centre within 120 seconds was increased for the water service (from 92.8% to 93.8%) and substantially unchanged for the gas service (96.2%). Average wait times improved for both services.

In 2022, the customer satisfaction survey, carried out at the end of the conversations with operators by means of an automatic post-call system, showed 7.5% participation and an **overall satisfaction level of "very satisfied" or for 84% of respondents.**

Development of the technical call centre further continued in 2022, aimed at improving the performance and quality of the services it provides. As the main tool for presiding over the quality level, the "Technical Wiki System for management/sharing knowledge" tool was created, which contains all the information necessary for the proper management of services, as well as ensures a process of continuous learning and sedimentation of knowledge. This tool allows for comprehensive, effective and dynamic training that is always up-to-date thanks to the community model created that allows for continuous knowledge exchange.

These projects include the organisational integration of the emergency response service in Hera Luce, implementation of Speech API and Text Mining voice analysis tools (aimed at monitoring operator behaviour and call quality), the development of a dynamic workflow tool for listing safety requirements to gas service customers, the creation of an online support tool named CCT_News for detailed call procedures and, lastly, the production roll-out of the "Uomo a terra" and "Black Box Mezzi" apps. The Man on the ground app automatically notifies the Forlì remote control centre if a worker is facing an emergency or is feeling ill. The "Uomo a terra" (Man on the ground) app automatically alerts the Forlì telecontrol center in case a worker is in an emergency condition or has an illness: by monitoring cell phone sensors (accelerometer, gps, and gyroscope), an automatic alarm is sent to the telecontrol center in case of a fall, excessive inclination, and absence of movement for a given time. Black Box Means, on the other hand, are electronic devices placed inside the passenger compartments of cars to remotely monitor an asset: when an accident occurs or the driver activates an SOS button placed on the windshield, an alarm is automatically transmitted to the telecontrol room operator.

Water service continuity

The **water network control activity** index is expressed as a percentage of the network inspected for leaks.

In **Emilia-Romagna**, leakage research involves the application of traditional technologies alongside new experimental technologies. The path to containing leakage volumes will be consolidated with this strategic vision, identifying the most effective technologies and giving space to new innovative applications that prove to be worth using.

In the **areas of Padua and Trieste**, on the other hand, the inspection of the water network during 2022 was carried out both with systematic research, through the use of geophones, and with state-of-the-art instruments such as flow and pressure meters with time of transit of the districts and remote control; in particular, for the Trieste area, a technology was used that provides for the localisation of water leaks through the application of an aerial vector.

In the **Marche**, the localisation of leaks was performed with various instruments. Dedicated in-house personnel are employed to analyse the network from identified points, e.g. by means of geophones, or “noise loggers”, which are specific devices for assessing the water network under pressure.

THE CONTINUITY OF THE WATER SERVICE

%	2020	2021	2022
Network subject to active leak detection	34.1%	42.1%	39.7%

In 2022 a total of 13,956 kilometres of network were inspected by the Group, corresponding to **39.7% of the total** (37.1% in Emilia-Romagna, 100% in Triveneto, and 17.9% in Marche).

6.06 Customer relations

The call centres

In 2022, **Hera Comm** expanded the range of automated services for its customers by activating a **VoiceBot** system, which allows customers to request bill copies and payment instalments autonomously and without waiting. In 2023, the aim is to expand the range of automated operations offered.

There was also an initial implementation of the **new system** that is more advanced in its processes and system and has the important goal of simplifying operations and making customer contact management more efficient.

Hera Comm Marche is the first company to fully switch over to the new Customer Relationship Management tool with the aim of acting as the driving force behind the deployment of all other company services.

In 2022, three sales companies entered into **EstEnergy**, and therefore into the Hera Comm scope, consolidating the largest business integration operation carried out to date by the Company and generating an increase of 700 thousand customers. Switchover activities to Hera Comm’s information systems were successfully completed, leading to a physiological initial increase in call centre contact volumes.

As for **AcegasApsAmga**, a new knowledge base tool will be introduced in 2023 that will give operators faster and more targeted help in handling requests with a view to improving the customer experience. The objective is to reduce both the average customer call time and resulting operational errors. In addition, periodic meetings will continue to be held to analyse the data from satisfaction surveys in order to resolve any critical issues.

QUALITY OF THE CALL CENTRE FOR RESIDENTIAL CUSTOMERS

	2020	2021	2022
Average waiting time at the call centre for residential customers (s)	33	32	93
Calls with satisfactory outcomes for residential customers (%)	94.7%	95.1%	91.1%
Number of residential customer contacts at the call centre (thousands)	6,026	7,013	8,741

The average waiting time, based on a telephone call by a customer that wishes to speak to an operator, is the time between the moment a request is made to talk with an operator and the beginning of the conversation. It does not take into account the initial information provided by the automatic answering system. This data does not include Eco Gas, Con Energia and AresGas.

In 2022, the number of contacts to the call centre of Group companies increased across the board (+24.6%, over 1.7 million more calls), which had an impact on waiting times and the percentage of successful calls (i.e., those for which an answer was provided by an operator).

This was mainly due to the turbulence in the **energy markets** in the recent period and the resulting impact on bills, so customers were urged to contact the services for clarification and support. Therefore, the “Contracts” and “Bills and Payments” clusters increased, as did the average conversation time required to provide **adequate advice to customers**, e.g. regarding the possibility of paying bills in instalments under more favourable terms, social bonuses, and energy-saving recommendations.

In Emilia-Romagna, calls concerning **waste management issues** also increased following the reorganisation of collection methods in the Modena and Bologna areas and the implementation of the new waste collection services concessions awarded to Hera.

In addition to the sharp increase in call volumes, performance figures were affected by other factors that contributed to a period of hardship in managing the service: above all the entry of **new service providers** on all lots, which resulted in an initial running-in period.

Despite heavy pressure on the channel, with regard to Hera Comm Spa, **customer satisfaction** in the residential market remained high at **88/100**, as well as for EstEnergy, at **87/100**.

QUALITY OF THE BUSINESS CALL CENTRE

	2020	2021	2022
Average waiting time at the call centre for business customers (seconds)	25	34	112
Calls with satisfactory outcomes for business customers (%)	95.6%	95.6%	91.4%
Number of business customer contacts at the call centre (thousands)	370	432	579

The average wait time, based on a telephone call from a customer wishing to speak to an operator, is the time between the moment a request is made to talk with an operator and the beginning of the conversation. It does not take into account the initial information provided by the automatic answering system. The data refers to the Hera Comm call centre.

For the **corporate segment**, in 2022 the number of calls increased once again (+33.9%). This aspect, combined with those mentioned above, had an effect on the service level, which dropped to 91.4%, and the average wait time, which increased to 112 seconds

Despite heavy pressure on the channel, **customer satisfaction** in the business market remained high at **83/100**.

As regards Hera Group's call centres, calls are handled by both Hera Group employees and the staff of specialised companies that are both **registered and operating in Italy**. Our sales promotion activities are carried out by outsourced companies: these are Italian-based and Italian-owned sales agencies that

make use of operating units located in Italy. Their staff is employed directly by these sales organisations, who have signed a standard agency mandate with Hera Comm.

Helpdesks

Helpdesks, along with other contact channels, were also central to the company's strategy during 2022. The easing of the health emergency, even without completely letting down the guard, enabled the hoped-for return to normality, particularly in the physical channels. This made it possible to cope with the considerable increase in contacts and inflow of disoriented customers exposed to the effects of the energy crisis, which became more and more pressing during the year.

Given the complexity of the moment, the Group continued to **invest heavily in personnel** with new hires and innovative training courses. A total of approximately 200 people were involved and over 4,500 hours of training provided. In this complicated scenario, particular attention was in fact given to the training on how to manage critical helpdesk contacts, which targeted all contact personnel, with a focus on the right approach to adopt in order to **favour listening and conscious dialogue** with customers.

In fact, **customers and residents were assisted** by providing in-depth information about the possibility of requesting instalment payment plans, subsidies for more vulnerable users, social bonuses, the best tariff offers of the moment, and tools for monitoring and containing their consumption.

Also implemented in this contact channel is the **new Customer relationship management** tool, more evolved in its processes and system with a view to ensuring greater operational simplicity and by launching the project of revamping the layout in the direct help desks as well, making it more consistent with our customers' real needs and more innovative.

The strategy of investing in a **new, more functional and welcoming layout** continues: thanks to the work carried out this year, various Hera Comm and EstEnergy helpdesks now have completely renovated locations. These investments made it possible to renovate dozens of helpdesk offices with larger waiting room areas, new soundproofing technologies to protect privacy, a new reception desk to receive and give faster and more targeted answers to customer needs, and exhibition spaces to share our commitment to efficiency and energy saving with customers.

Consumption-saving services are also offered through the helpdesks: paperless technologies are used for contracts and payments and efficient behaviour such as electronic billing is promoted, also to ensure a more efficient bill delivery system.

Following the awarding of tenders in the Bologna and Modena areas for operating the Hera Group's waste management services, Hera Comm's physical channels became increasingly prominent both in terms of the services offered on the new collection methods, and the layout in terms of organisation and usability of spaces. The diffusion of the network of Hera Comm helpdesks becomes functional for storing and distributing **equipment for sorted waste collection** (bags, bins, etc.) for households and businesses.

Following the merger of Amgas Blu into Hera Comm and of Ascotrade, Ascopiave Energie and Blue Meta into EstEnergy, helpdesks in Puglia, Veneto, Lombardy and Liguria were added to the usual network of helpdesks.

AVERAGE WAITING TIMES AT HELP DESKS

Min	2020	2021	2022
Hera	4.8	5.6	8.9
AcegasApsAmga	4.6	2.3	6.5
Marche Multiservizi	14.0	11.0	13.0
Weighted average on contacts	5.4	5.7	8.9
Number of contacts (thousands)	632	773	903

The data applies to help desks equipped with a queue detection system. The data does not include Eco Gas, Etra Energia, Con Energia and AresGas.

In 2022, Hera Group helpdesks handled inflows that increased by 16.8%, due to both the reasons described above and the fact that people resorted to face-to-face contacts more than in previous years. As a result, average waiting times increase (from just under 6 minutes to approximately 10 minutes). However, satisfaction surveys show that customers acknowledged the professionalism of the operators, albeit in a considerably more critical context.

Overall, there are **160 helpdesks throughout Italy**, 67 of which equipped with a queue detection system.

Complaint management

The new energy scenario had an impact on the number of complaints, which increased by 58.2% of the files handled. The increase in the ratio of complaints to contracts was nevertheless contained at 1.1% (0.9% in 2021), as was the increase in answering times and the decrease in the number of complaints answered within the timeframe set by the regulation.

Complaints related to energy services increased (+145.6% for gas, +70.6% for electricity and +35.2% for district heating), understandably linked to the turbulent environment in the energy markets and the increase in prices of the raw material components of energy bills. In contrast, complaints in the waste management (-20.8%) and water services (-28.0%) decreased.

COMPLAINTS RECEIVED

	2020	2021	2022
Average complaint response time (days)	11.2	9.8	13.5
Complaints that were dealt with within the standard timeframe (%)	99.9%	99.7%	96.6%
<i>of which electricity and gas complaints relating to sales</i>	99.8%	99.8%	96.0%
Number of complaints received	33,166	31,478	49,790

The complaint response time is specified in calendar days, with a reference standard of 40 days. The data refers to Hera Comm and, beginning in 2022, to Amgas Blu as well.

In relation to **EstEnergy**, the average time required to respond to complaints was 18.7 calendar days and 91.9% of complaints were answered within the standard time.

AcegasApsAmga ensured an average wait time in responding to complaints of 12.5 calendar days, up slightly from 11.1 days last year; the percentage of complaints responded to within the standard timeframe was 100%, the same as in 2021 and 2020.

In **Marche Multiservizi's** area, the average time required to respond to complaints was 2.5 calendar days (8.5 in 2021) and 99.8% of complaints were answered within the standard time.

Dispute resolution

Alternative dispute resolution (ADR) arbitration is increasingly used to solve problems without resorting to ordinary courts. This method is not costly for clients, who can participate in the resolution of disputes either in person or by delegating a representative. Most of the meetings take place by computer on IT platforms, thus avoiding the need to travel. The high percentage of positive outcomes proves the success of this procedure, which is increasing more and more every year and proves to be a tool that satisfies the vast majority of those who have experienced it.

Since January 2017, the sector's regulations make it compulsory for the gas and electricity sectors to turn to arbitration in an attempt to resolve disputes. The attempt is a prerequisite for the admissibility of any subsequent legal action. The arbitration bodies must have the requisites set out in the Code of Commerce and be registered in the Register kept by ARERA. Since July 2018, arbitration has been extended to the integrated water service, and the participation of the operator became mandatory on 1

July 2019. Unlike for the gas and electricity services, dispute resolutions for the integrated water service is not considered to be a condition required for prosecution.

In 2022 ADR arbitration was used **even more frequently** as a tool for out-of-court dispute resolution, with more and more customers putting their trust in this option in order to solve problems that were not resolved at the complaint stage.

In fact, there has been a marked increase in **ADR arbitration requests** over the past year. From 709 requests in 2021, in 2022 they increased to 1,028 (+45.0%). The increase was entirely limited to the energy sector (92.8% of requests), while the water service experienced a significant decrease (-44.8%). This is attributable to the increasing popularity of this method for resolving disputes (which, moreover, indicates a maturing and growing awareness of Italian consumers), the effects of soaring energy prices, and the difficulty that customers face in interpreting the regulations introduced by the government, which often disoriented consumers. As a result, the number of critical situations that entered the conciliatory area increased.

Of the 866 arbitration requests concluded during the year, 573 concluded with a settlement, 268 without a settlement, 14 were terminated for a waiver of the request and 11 due to inadmissibility.

The success rate in the free market (i.e. cases of conclusion with an agreement report for gas and electricity) was around **76.3%**, lower than in 2021 (80.7%) and yet **higher than the national Italian average** published by ARERA. The trend towards longer completion times, from 62 days in 2021 to 65 in 2022, continued.

In addition to ADR arbitration, there is also **joint arbitration**, an instrument based on an agreement signed with the main consumer associations, which also aims to resolve disputes out of court. The number of requests for joint arbitration by consumer associations is **decreasing year after year**, largely due the more extensive use of ADR dispute resolution, which is now consolidated as the tool of preference for resolving disputes over gas, electricity, district heating and water services. The need for face-to-face meetings, and the required assistance of a Consumers' Association certainly discouraged recourse to this method; the small number of requests, which in 2022 is not very significant (approximately 30 requests), bear witness to this.

The entire matter, the terms of the agreement and therefore its development were the subject of several meetings with the associations that signed the memorandum of understanding; some updates of this memorandum are being discussed, even though the subject has been overshadowed by the managing of the numerous emergency measures put in place by the government to deal with the economic situation in the market. It is precisely the development of the energy market in 2022 that effectively put the discussion on updating this instrument on hold; however, the commitment to resume the discussion once contextual conditions allow it remains.

Litigation with customers

[2-27]

At the close of 2021, there were 724 disputes pending with customers (325 of which initiated during the year) mainly on the application of the Tariffs applied to the services we provide, and on the recovery of payments. Of these 629 disputes concerned the gas, electricity, and district heating service, 53 the water service, and 35 the waste management service.

Litigation with customers concern the energy sector, and in particular objections to the protective system which customers are assigned to by the competent distributor, cases arising from the opposition to injunctions served as part of the compulsory collection of receivables, further disputes concerning billing, and complaints requesting the reactivation of electricity or gas supplies that had been suspended due to the customer paying late. Moreover, following the case law of the Court of Cassation, electricity utility customers initiated litigation for the restitution of provincial surcharges on excise taxes paid in 2010 and 2011.

In the water sector, instead, disputes mainly concern customers objecting to injunctions.

Information security and protection of personal data privacy

Information security management is a well-established asset within the Hera Group right from the design stages, in a security by design perspective, enabling increasingly effective protection of all business-relevant data and, in particular, the personal data of data subjects, while also pursuing privacy by design in a synergistic manner.

The governance of this topic has been consolidated by means of a complex, **constantly updated document management system** consisting of the "Information Security Policy Guideline" and a "Policy for the protection of personal data" and a set of information security policies that establish the guiding principles for all information security activities, including the attribution of responsibilities, both general and specific, to clearly defined organisational roles. The standardisation of privacy strategies is also pursued through a **single data protection officer for the Group** and the publication on the website of the Company's overall commitment to data protection and the most relevant disclosures for customers and other stakeholders.

The Top Management is involved in the definition of an acceptable level of risk, through meetings of the Risk Committee focused on the results of annual information security risk assessment processes, which identify the most effective mitigation and security improvement initiatives, in the face of an increasing level of external threats, the implementation of which is **constantly monitored**. Compliance with policies and the level of maturity of countermeasures is ensured by annual technology assessment programmes and periodic audits of the security vulnerabilities of systems and networks.

Group companies carry out **periodic audits** (including on **external parties** handling personal data on its behalf) to check that their operations comply with the organisational, technical and security measures concerning the processing of personal data provided for by the provisions in force. The outcomes of periodic review activities are formally documented.

Finally, in the awareness that the current landscape is characterised by increasingly frequent cyber attacks also at supply chain level, the guarantee of personal data protection is also pursued through **better supervision of the Group's IT service providers** in the selection, contractualisation and control stages.

PROCEEDINGS INITIATED BY THE GUARANTOR OF PRIVACY

number	2021	2022
Proceedings initiated by the Guarantor of privacy	5	2

With reference to the Group companies that are obliged to appoint a data protection officer, the five proceedings initiated by the Guarantor in 2021 were closed without the application of sanctions, as was the case for one of the two initiated in 2022; the second one is still at the preliminary investigation stage.

VIOLATION OF CUSTOMERS' PRIVACY: COMPLAINTS

number	2021	2022
Grounded complaints received from outside	44	12

These figures do not include AresGas, Eco Gas, Con Energia and Etra Energia.

The secondary use of customers' personal information is also monitored within the Group companies. By 2022, the percentage of customers who granted **privacy consent for marketing and commercial purposes** was 53%. Data refer only to households with at least one active contract on the free market energy services of Hera Comm, Hera Comm Marche and EstEnergy (customers on the safeguarded and last resort markets are excluded).

7. People

7.01 Objectives, performance and targets

What we said we would do	What we did	SDGs	Progress*
Managing skills and training			
Strengthen the new online training platform MyAcademy, a single digital environment with continuously updated content and the option to customise the learning experience according to roles and training needs. Continue with the initiative, launched in 2020, that allows all workers to devote a working day (full or two half days) to their professional development with remote learning courses. 25 hours per capita of training in 2022.	Expansion of the MyAcademy online training platform. We continued the initiative, launched in 2020, which allows all workers to devote a working day (full or two half days) to their professional development with remote learning courses. 30.8 hours per capita of training in 2022 (see p. 269).	4, 8, 9	
Welfare			
Continue developing a corporate culture aimed at further reinforcing the concept of individual well-being (physical, mental and financial) as an element in which to invest so that everyone can realise their full potential and consequently contribute to their professional growth as well as that of the company. Expand the range of wellness services offered.	Free on-demand initiatives were offered, linked to the concept of all-around individual well-being: mental, physical and financial. Free sessions with psychologists, nutritionists, weekly online yoga and Pilates classes offered, availability of a 24/7 platform to work out from home with a wellness professional or discounts for gym sessions with a trainer (see p. 276).	4	
Continue promoting the fourth edition of HeraSolidale in 2020 to achieve the goals of the 7 partner organisations through donations from employees, customers and the company. Plan the fifth edition (2023-2025).	The fourth edition of HeraSolidale was held and the main goals (and some secondary goals) for each of the 7 organisations were achieved. A special edition was organised for the ongoing conflict in Ukraine. The fifth edition (2023-2025) has been planned (see p. 381).	17	
Health and safety			
Further reduction in the lost time injury frequency rate (10.2 by 2025). Continue with 'Culture of Safety' training and awareness-raising initiatives. Gradually extend the use of the Man Down app in business units with lone worker hazards.	The accident frequency rate in 2022 was 10.5 (vs 10.3 in 2021). The Culture of Safety initiative was continued and expanded with the Safety Leadership project for managers. Adopted the use of the Man Down app at HeraTech laboratories, currently studying the extension at the Water Department for those with lone worker hazards (see p. 277).	8	
*  Result achieved or in line with planning;  Result with slight variance compared to planning;  Result with significant variance compared to planning.			

What we will do	SDGs
Managing skills and training	
Continue the initiative, launched in 2020, which allows all workers to devote a working day (one full or two half days) to their professional development with distance learning courses. 25 hours per capita of training in 2023.	4, 8, 9

What we will do

SDGs

Professional development

Continue covering at least 50% of requirements through internal mobility.	8

Welfare

Continue developing a corporate culture aimed at further strengthening the concept of individual wellbeing (physical, psychological and financial) as an element in which to invest in order to allow all people to express their full potential across the board and consequently contribute to their professional growth as well as that of the company. Broaden the range of services offered in the field of wellbeing.	4

Launch the fifth edition of HeraSolidale (2023-2025), involving employees in identifying non-profit organisations and supporting the implementation of solidarity projects.	-

Health and safety

Further reduce the accident frequency rate (10.5 by 2026 and <10 by 2030); (10.5 by 2022) Continue with training and awareness-raising initiatives on "Culture of Safety" and "Safety Leadership" for managers. Installation of the "Variable Message Panel" on 400 vehicles of the Central Network Department to improve safety on the road during the initial fault detection and settlement phases. Gradually extend the use of the "Man on the ground" app in business units with lone worker risk.	8

7.02 Strategic planning of desired and future skills and roles

The strategic levers set out in the Business plan guide the action taken by the Central Personnel and Organisation Department towards building a corporate environment that supports the business strategy.

Rapid changes in the competitive context, in technology and in the regulatory framework require organisations to adapt and respond in an ever-faster way. The diffusion of **agility** is a goal shared by several areas of intervention and also extends to our relationship with the ecosystem.

The current and constantly evolving market context, therefore, is also leading the Hera Group to adopt systemic intervention models that support the implementation of the individual business strategies and to identify supply and demand for both current and future roles and abilities.

In this context, as part of the 2022 business planning cycle, **the approach to the workforce planning process** was continued. Drawing on greater integration between the business strategy and that regarding roles and skills, our approach examines HR numbers and costs, and steers the development of the personnel management strategy in the long term, supporting Group strategy implementation. This is achieved by analysing workforce dynamics both from an internal and external viewpoint. The goal of strategic workforce planning is to identify and bridge the gap between the current and future situation by finding the best solutions in terms of quality, quantity, timing and location of the workforce, through an integrated action plan.

As part of this approach, reflection and analysis involve five main aspects:

- **Quantity:** is the workload rising or falling? Will there be roles that will no longer be necessary or will be able to be replaced by automation? Are there emerging roles that will be included in the organisation?
- **Cost:** will the cost change in line with the increase in results?
- **Geographical location:** are the various professional families located where they are really needed? How does the external context influence the current geographical location of resources?
- **Skills:** do we have the right skills to implement key processes in the future? Are there any obsolete skills? Do we need to develop new skills?
- **Configuration:** is distribution by seniority and position consistent with the organisation's needs? Will the demographic structure be appropriate? Is the balance between operational and management positions consistent with future challenges?

The Hera Group's workforce

[2-7]

At **31 December 2022**, the total number of workers with **open-ended contracts** in Group companies was 9,191, while there were 224 workers with **fixed-term contracts**.

STAFF FIGURES AT YEAR END

Number	2020	2021	2022
Managers	155	153	151
Middle managers	570	583	592
White-collar workers	5,005	5,074	5,129
Blue-collar workers	3,281	3,312	3,319
Open-ended contract employees	9,011	9,122	9,191
Fixed-term contract employees	141	162	172
Employment Agency Contracts	39	51	52
Total workers at year-end	9,191	9,335	9,415

Data at 31 December

The decrease in two managers is due to 5 promotions from the role of middle manager to manager, and the exit of 8 managers, and 1 external hire during 2022. The number of middle managers increased by 9, which is the result of 6 new entries, 23 promotions from white-collar worker to middle manager, and 20 exits (5 of which were promotions from middle manager to manager). The increase in white-collar workers is due to the entry of 370 new workers (34 of which were promoted from blue-collar to white-

collar worker) and 315 exits (23 of which were promotions from white-collar worker to middle manager, and 1 from white-collar to blue-collar worker). The number of blue-collar workers increased by 7 compared to 2021 due to the entry of 346 blue-collar workers and the exit of 339 blue-collar workers (34 of which were promotions from blue-collar to white-collar worker). The entries also include workers from Con Energia, Macero Maceratese and Alibardi Fiorenzo, who entered as part of the scope of consolidation, totalling 49 employees.

The 181 workers posted abroad refer to Aresgas, which distributes and sells natural gas in Bulgaria, and three Aliplast Group companies that run plastic selection and recycling plants in France, Poland and Spain (Aliplast France Recyclage, Aliplast Polska and Aliplast Iberia).

WORKFORCE BY WORKPLACE

Number	2020	2021	2022	2022 (%)
Emilia-Romagna	5,818	5,774	5,798	61%
Triveneto	2,195	2,110	2,062	22%
Marche	625	604	612	7%
Other Italian regions	383	666	759	8%
Abroad	170	181	184	2%
Total	9,191	9,335	9,415	100%

Data at 31 December and total open-ended and fixed-term contract employees.

WORKERS

Number	2021	2022
Men	6,789	6,812
Women	2,546	2,603
Total	9,335	9,415
Open-ended - Men	6,652	6,654
Open-ended - Women	2,470	2,537
Open-ended - Total	9,122	9,191
Fixed-term and other - Men	137	158
Fixed-term and other - Women	76	66
Fixed-term and other - Total	213	224
Full time - Men	6,737	6,769
Full time - Women	2,197	2,256
Full time - Total	8,934	9,025
Part time - Men	52	43
Part time Women	349	347
Part time - Total	401	390

Data at 31 December

The average age of our employees is 46.7 years old (lower than 2021 when average age was 47.0). Average seniority is 15.8 years.

HOURS OF LEAVE AND HOURS WORKED PER CAPITA FOR EMPLOYEES WITH OPEN-ENDED CONTRACTS (BY TYPE)

Hours	2020	2021	2022

Sick days	61.9	60.8	79.8
Maternity/paternity and parental leave	16.5	16.1	11.7
Work accident	4.9	3.7	3.5
Strikes	0.0	2.0	0.3
Labour union assembly	0.1	0.2	0.4
Labour union leave	4.3	4.6	5.1
Other	40.1	31.2	37.2
Total hours of leave	127.8	118.7	137.9
Ordinary working hours	1,545.2	1,581.3	1,534.4
Overtime hours	27.3	29.9	31.3
Total hours worked	1,572.5	1,611.2	1,565.7

The figures do not include Vallortigara, Recycla, Eco Gas, Etra Energia, Wolmann, Con Energia, Macero Maceratese, or Biorg. 3% of the Hera Group's employees work in the aforementioned companies. The hours worked are calculated net of overtime hours for recovery.

Leave hours per capita increased by 16% over 2021, impacted by a peak in sick leave in early 2022. The taking of holidays was positive and the trend of fewer residual holiday hours left over at the end of the year continues. **Parental leave** decreased compared to the previous year, due to the end of specific emergency regulations in previous years. There has been a decrease in the days of **leave due to accidents**. **Strike hours** were fewer compared to the previous year.

Overtime hours were up slightly compared to the previous year, but lower than the average of previous years (34.9 hours per capita in the three-year period 2017-2019), in part as a result of more widespread ability to work remotely.

The 'other' category shown in the table includes leave requested to provide assistance to family members with disabilities or illnesses, personal leave for medical appointments and treatments, and study leave.

The selection and onboarding process

Recruiting, selecting and effectively onboarding the best talent out there is a challenge which is tackled by Hera with a **data-driven strategy** that is fully **integrated with its business**.

The analysis of market trends and of main process indicators is now common practice which, well-established for years in the process of **strategic workforce planning** process, guides employer branding and process actions, including the choice of recruitment tools.

The overall recovery of the labour market, socio-demographic changes combined with a context in which people are seeking an **alignment between individual and collective purpose**, the widening gap between the number of vacancies and the professionals qualified to fill those roles, and the new challenges related to the energy and environmental transition are the main elements that characterised 2022.

In response, several actions have been introduced:

- **digitisation to facilitate the selection process:** in addition to the digitisation of interviews and assessments, a tool was implemented to support screening activities, which allows for faster identification of candidates most in-line with open positions, thus improving the effectiveness and efficiency of the process;
- **employer branding:** the Ambassador Project continued in 2022, involving a pilot group of 14 employees from different Hera Group departments and companies, to talk about the company and share brand-related content. Part of the goal of this project is to show our employees' point of view and promote positive word-of-mouth, with benefits in terms of recruiting. In 2022, a campaign was launched to encourage more employees to become Group Ambassadors through various activities (such as posting on social media, participating in video interviews, and taking photos that portray and present Group events);
- **partnerships to find and select talent:** a nationwide talent acquisition campaign was launched in 2022, aimed in particular at technical and operational professionals, in cooperation with Manpower. The project envisages the recruitment of new human resources after a distinctive training path that will allow them to strengthen their skills, in part thanks to the Group's Corporate University and the use of advanced facilities such as the training centre in Ferrara.

The employees involved will then be placed within the Hera Group and in the supplier companies that support the Group in the management of its services.

With regard to the **onboarding process**, continuing that which was started in 2021, specific engagement and new-hire events were held to accompany recent recruits during their first year at the company: **A coffee with ...** specifically for new recruits, an event organised one month before the employees actually begin working with the aim of facilitating individual networking within the company and allowing for positive dialogue so that they may quickly learn more about the Group. In 2022, **25 meetings** and **6 events** were held with a specific focus on the Budget Unit.

The onboarding process also includes the training course "Alphabetical - the ABC of the Code of Ethics" addressed to all newly hired permanent Group employees continued with the aim of familiarizing them with the Group's Code of Ethics and raising awareness of behaviors in accordance with it.

This initiative resulted in **closing 712 open positions**. With regard to recruitment areas, Operations made up the biggest selection segment (50%), particularly in waste management services, followed by the water sector. Needs in the AcegasApsAmga area were also significant (16%). Staff areas account for about 11% of total needs, and the Market area for 10%.

Selections contributed to a significant generational change in terms of the company workforce (the average age for new hires is 34), an increase in the number of women (44% of new hires, excluding blue-collar workers, were women), and the percentage of graduates (66%, excluding Operations).

Remote working

After the launch of the first pilot programme in 2017, which involved 370 workers, more and more people have been given remote working capabilities, reaching over 1,500 **people in 2019**.

The experience we gained since the launch of this programme made it possible to be resilient when faced with the healthcare emergency caused by the pandemic, further strengthening the tools available to make sure that people would feel supported and connected.

Since mid-2020, around **4,000** employees have been permanently involved in the project, bringing the percentage of workers involved in the project **to 77% of all permanent employees**, excluding blue-collar workers. The number of remote working days were increased as of June 2020: from one day/week to **two days per week of potential teleworking**. At the same time, employees were asked to plan their remote working days for the following week, by entering the request in the system by Thursday of the previous week; this allowed managers to have an overview and better manage the team's activities. During the healthcare emergency, these two days were further extended in cases provided for by law (e.g. at-risk people, need for distancing within the company).

Remote working, according to the Hera Group model, means working on four different aspects: **company culture, time and performance**, and space and **technologies**, representing from the outset a process for completely reshaping new ways of working.

During the healthcare emergency, in addition to the traditional training platform, a specific section was created in the **dedicated sharepoint**, with training clips and useful information to better support all employees, including new hires who were working remotely.

One of the key focuses was **listening** to remote workers: during lockdown, relevant surveys were carried out to find out how workers perceived their forced remote-work experience and to better shape actions and efforts to support them. The various opportunities to listen to what employees have to say during recent years confirmed complete satisfaction both in terms of improved productivity (for the workers involved and for their managers) and in terms of greater satisfaction, both by the workers who were already in the project and those who joined during the emergency period.

We will continue to invest in **training on the skills** that are crucial for making remote working even more effective and optimising increasingly hybrid ways of working.

The aim will be to **continue measuring collective and individual benefits**, promoting new opportunities and creating conditions to jointly increase productivity and well-being. As part of this process, company management is required to further develop resource management skills in a context where performance (and therefore the achievement of goals) grows in importance compared to the time and physical place of work. The Hera Group leadership model plays a leading and decisive role in ensuring its effective implementation.

7.03 Management of skills and training

The Group's value proposition relating to learning is applied using a process that starts by understanding the relevant context and trends (global macro-trends, business plan, personnel management strategy) and takes shape by reviewing the main features resulting from company management's listening activities and by subsequently achieving strategic training goals for the current year.

Training initiatives

[403-5] Throughout 2022, there was a resurgence of in-person initiatives, with an increasing use of blended mode training (i.e., with a classroom component and at least one digital component) and a stable level of digital training: 41% of all training hours (compared to 60% in 2021).

In terms of the various types of training initiatives offered during 2022 for the **institutional and managerial training** axis, of particular note are the programmes linked to the **leadership model**, the **Elective Programme** training track (now in its 10th edition, aimed at developing an integrated vision of corporate phenomena and awareness of one's own contribution to obtaining business objectives), and the creation of the **Management track**, with the aim of facilitating the transition to the new qualification and recruitment of new managers within the Hera Group (the 2022 edition involved managers hired or recruited externally outside in the 2020-2021 period). Also worth mentioning are the training sessions related to the **Evolution@work** pilot project that involved several of the organisation's structures in the evolution of the development process through the OKR methodology.

In terms of **computer systems**, we continued on with the **Digital Workplace** change management plan for the effective use of Office 365 tools and the launch of the training course on Corporate **Digital Responsibility**.

With reference to **technical-professional training**, we continued the training and knowledge management initiatives implemented within the framework of the Professional Academies, including the launch of a new academy for marketing, sales and customer management.

It is also worth mentioning: the continuation of the **HER@futura** programme of widespread initiatives, aimed at further strengthening digital proficiency at the company and the Digital Lab training programme launched in Q1; the meeting held to **discuss the 2022-2025 Business plan** and the 2022 Budget, held especially for the members of the Controller community and aimed at sharing the salient features of the Business plan and the Group Budget; in the Utility Networks area, the launch of **change management programmes** concerning the organisational evolution of the Water Department, the Large-scale Works project and the wide-ranging Gas Operator Networks and Plants.

In 2022, the **ecoHERA** energy transition/environmental **assessment** was delivered to the entire company. It is aimed at taking a Group-wide snapshot of internal knowledge and skills related to these issues.

In the **market and customer management** area, we report the resumption of widespread training activities connected to the change management plan within the Salesforce project (a new CRM application) and the distribution of an e-learning training module to the entire company, developed with Hera Comm, on how to correctly read bills, why prices have increased, and the actions implemented by Hera to support customers.

In the **quality, safety and environment** area, recurring training activities on occupational health and safety issues continued and the Community Safety Leadership was launched, with the active involvement of all Safety Managers in the Group.

In the ethical values and corporate culture area, the **Alfabetico - the ABCs of the Code of Ethics** training project continues, addressed at all permanent Hera Group new hires. Its aim is to help them become familiar with the Group's Code of Ethics and promote behaviour in line with it. A training course on Corporate Social Responsibility and the Code of Ethics in Day-to-day Management was also planned and launched, with a specific focus on the supplier monitoring process.

"RSI e codice etico" con focus su monitoraggio fornitori, e-learning su anticorruzione (ISO 37001), iniziative formative sul modello 231 e percorsi formativi sui temi anticorruzione e antifrode.

[205-2] In 2022, **1,324 resources** were involved in **anti-corruption** training, amounting to a total of **2,647 course hours** delivered through the following initiatives: AlfabEtico, which includes concepts about corruption, "CSR and Code of Ethics", with a focus on supplier monitoring, e-learning on anti-corruption (ISO 37001), training on the 231 Organisational Model and training courses on corruption fraud prevention topics.

TOTAL TRAINING HOURS PER AREA OF INTERVENTION

Hours	2020	2021	2022
Sales and markets	4,463	9,924	17,559
Managerial	25,271	31,101	30,572
Quality, safety and the environment	82,959	96,206	80,457
Information systems	41,420	26,582	33,794
Technical-operational	76,746	103,709	108,657
Ethical values and corporate culture	4,995	5,753	6,885
Total	235,854	273,274	277,924

The figures do not include Aresgas, a company where 3% of the Group's employees work.

With the exception of the Managerial and the Quality, Safety and Environment areas, all areas of focus show an increase in the number of training hours provided in 2022 compared to 2021. The increase in hours of training provided is due to the use of educational content linked to the Nuove Competenze Fund, as well as the implementation of change management plans connected to relevant projects spread across the Group.

AVERAGE TRAINING HOURS PER CAPITA BY CATEGORY

Hours	2020	2021	2022
Managers	41.7	29.2	36.3
Middle managers	34.8	42.8	39.4
White-collar workers	23.1	26.7	27.8
Blue-collar workers	27.7	33.8	33.8
Average	25.8	30.3	30.8

The figures do not include Aresgas, a company where 3% of the Group's employees work.

AVERAGE TRAINING/EDUCATION HOURS BY ROLE AND GENDER

Hours	2020	2021	2022
Men	25.7	32.3	32.2
Women	26.2	25.2	27.1
Average	25.8	30.3	30.8

The figures do not include Aresgas, a company where 3% of the Group's employees work.

In spite of the ongoing constraints caused by the healthcare emergency for part of the year, and due to the provision of e-training activities, the total training hours per capita for 2022 is the highest in recent years and far above the target of 25.2 hours. Training hours per capita amounted to 30.8 (32.2 for men and 27.1 for women).

The Sustainability Report 2022 drafted by the Utilitatis Foundation on behalf of **Utilitalia**, the Federation of Water, Waste and Energy Companies, measures the sustainability of 87 utility companies. Considering training hours per capita in 2021, Hera's data was 5% lower for executives and 14% higher for middle managers, 21% higher for white-collar workers and more than double the average for blue-collar workers, compared to the companies evaluated; overall, Hera's data was almost double the average of the companies evaluated, coming to 15.2 hours per capita.

ASSESSMENT OF TRAINING

	2020	2021	2022
Participant satisfaction (quality perceived on a scale from 1 to 5)	4.30	4.32	4.30
Outcomes (correspondence with needs) (% of replies with an assessment score of 4 or 5)	73%	76%	79%

The figures do not include Aresgas, a company where 3% of the Group's employees work.

Training, including hands-on training, is planned based upon a needs analysis in accordance with the Group's roles and competences model. This analysis is followed by detailed planning which includes related cost forecasts. The activities are monitored and assessed during the year and after the training has been provided.

Hera uses a training assessment system that considers the degree of satisfaction expressed by the workforce attending the courses, alongside the assessments coming from department managers with respect to the impact of training actions on the skill profile development of co-workers and their application when carrying out work activities.

The degree of satisfaction is generated by assessments conducted by trainees once the course is over, on a scale of 1 to 5. The above table shows the overall average assessment measured: the degree of satisfaction is in line with 2021. The outcomes are the result of the assessments carried out by managers in terms of collective impact of the training provided for each role. The reported percentage values indicate assessment scores of 4 or 5 (on a scale of 1 to 5).

Scuola dei Mestieri and the knowledge management system

[404-2]

The **Scuola dei Mestieri** is a well-established system that, for over ten years, has developed, strengthened and enhanced the technical and operational skills of the Hera Group, also with a view to knowledge management. Its purpose is to raise awareness about professional conduct and know-how transfer within the company.

Since its creation, the Hera Group has felt the need to arrange the distinctive skills of the various operational trades which are common at the company (for example workers dealing with network services and workers dealing with remote control and management) in **trade handbooks**. Eighteen handbooks have been created to share and preserve the Group's distinctive know-how over time: in 2015, they became available in digital format and are updated continually. Relevant to this report, the Operator 4.0 guidebook was created in 2022.

In addition, the new professional Academy for 'Marketing, Sales and Customer Management' was created in 2022, while those covering 'Water', 'Purchasing and Procurement', 'Environment', 'Administration, Finance and Monitoring', 'Compliance & Auditing', 'Energy Distribution', 'ICT - Information and Communication Technology' and 'Engineering' were strengthened.

HerAcademy: the corporate university of the Hera Group

[404-2]

In 2020, we continued the process of strengthening **HerAcademy** as a **Stakeholder University**, capable of interacting with all partners in the national education system in order to set up public-private partnership projects and to create projects that support innovation within the ecosystem of reference.

In particular, on 5 December 2022, the HerAcademy **workshop** entitled 'Supplying Minds: Rethinking Value Chains to Face Global Crises' was held as a hybrid event (in person in Bologna and live streamed) with the aim of offering a multidisciplinary reflection on how to make supply chain processes more sustainable and resilient in the face of an increasingly complex relative global context. Moreover, **university orientation** and job orientation were held, designed specifically for the children of our employees, to support them as they enrol at university and join the workforce.

Finally, in 2022 we launched the new **HerAcademy Training Centre at the Ferrara headquarters**, an innovative space that will be used in particular for on-the-job training activities in the Utility Networks area.

Agreements with universities, business schools and research centres

Through its Corporate University (HerAcademy), for several years the Hera Group has had **framework agreements with the main universities in the regions in which it operates**, such as the University of Bologna, the University of Modena and Reggio Emilia, the University of Ferrara, the University of Padua, the University of Florence, the University of Milan Bicocca, the University of Pisa, the University of Trieste, the University of Udine and the Polytechnic University of Marche.

With regard to the University of Bologna, in 2022, activities carried out under the Framework Agreement (renewed in 2019) continued. The Agreement further addresses the need to give continuity to a broad partnership aimed at fostering multidisciplinary activities and projects in the following areas: research, development and innovation; education, advanced training and lifelong learning; job orientation and placement; internationalisation; technology transfer; development cooperation, sustainability and social innovation.

Furthermore, scientific cooperation with the University of Milan - Bicocca and CRISP (Inter-university Research Centre for Public Utility Services) continued, with the general goal of supporting the development and implementation of activities within HerAcademy.

June 2022 saw the successful completion of the 'Full Immersion Experience', the second and final test run of the international Erasmus+ project titled 'GrEnFin - Greening Energy Market and Finance', financed by the European Commission and implemented by a broad international partnership of universities and companies coordinated by the University of Bologna. The project, which ended in October 2022, was designed to develop knowledge and skills to support the transition to renewable energy sources and the decarbonisation of the European economy by fostering the emergence of a new professional, that of the 'Sustainable Energy Expert', by adopting an innovative and interdisciplinary approach.

In 2022, the Hera Group also participated in the field testing of the new **TRED Secondary School**, which, coordinated by ELIS, offers a four-year training course focused on the themes of the ecological and digital transitions.

The Group actively collaborates with a number of business schools and innovation hubs such as: the Bologna Business School (BBS), LUISS Business School, MIB Trieste School of Management, POLIMI Graduate School of Management in Milan, the SAFE Study and Research Centre, SDA Bocconi, and The European House - Ambrosetti. The Group also participated in the academic committee of Assoknowledge-Confindustria Servizi Innovativi e Tecnologici.

7.04 Professional development

The development process

People are the true asset to achieve differentiation and a competitive advantage; the quality and efficiency of both internal processes and results depend on people. Effective personnel management and human capital enhancement is therefore of strategic importance for the Group.

[404-3]

The development process is based on the evaluation of performance and managerial skills. It is applied consistently throughout the company: it involves over **5,000 people** including employees, management employees, middle managers and managers. One distinguishing aspect is the **dialogue about performance**: a 'two-way' exchange between manager and employee, where the duty to provide clarity and effectiveness by managers is accompanied by the commitment of each individual to use the feedback as an ongoing learning tool. This experience has strengthened the ability to assess oneself and others, while also showing the desire for reciprocal listening and the request for feedback for individual and professional growth.

In 2022, over **5,400 Group workers** were assessed. The assessment is carried out on all workers qualified as managers, middle managers or white-collar workers who during the were involved in the assessment process. A pilot project was also carried out in some areas of the company, aimed at evolving the development process through a specific focus on individual performance. The aim is to raise awareness about objectives and to strengthen moments of dialogue with one's manager, topics that will also be the focus of in-depth study in the coming year.

WORKERS WHO HAVE RECEIVED A PERIODIC EVALUATION OF THEIR PERFORMANCE AND PROFESSIONAL GROWTH BY ROLE AND GENDER (2022).

Number	Men	Women	Total
Managers	119	33	152
Middle managers	348	177	525
Management employees	883	468	1,351
White-collar workers	1,862	1,544	3,406
Total	3,212	2,222	5,434

Data at 31 December and total open-ended and fixed-term contract employees.

Career progress

CAREER PROGRESS DURING THE YEAR (BREAKDOWN BY POSITION FOR WORKERS WITH AN OPEN-ENDED CONTRACT)

Number	2020	2021	2022
Managers	8	6	5
Middle managers	32	28	36
White-collar workers	361	335	505
Blue-collar workers	197	206	308
Total	598	575	854

In 2022 there were 854 promotions. **Career advancement involved 235 female staff members**, totalling 28% of all cases. Excluding blue-collar workers, where women are around 2.4%, career progress involving female personnel represented 43% of the total.

Internal mobility

The speed of change, combined with the digital transformation, is deeply altering the way people work. Many roles will change and it will become increasingly important for organisations to encourage people to **update their skills** and, for workers, to step up their game and take charge of their professional growth.

Hera's multi-business nature is the ideal for accessing a wide range of professional opportunities; the broad spectrum of activities allows us to enhance our professional expertise in different sectors and areas.

To that end, 238 job changes took place in 2022 (down from 273 in 2021), covering 41% of the company needs, and 170 job announcements were published (up 13%). The goal is to continue covering at least 50% of requirements through internal mobility.

Leadership model

Since 2011, the Group has had a **leadership model**: a compass that steers our behaviour and describes the skills we need to develop the company culture and values and to achieve strategic results.

In 2016, through a shared and participatory process involving over **700 employees**, the model was reviewed and updated in order to address new challenges. The current model is composed of two lines, a temporal today/tomorrow line and another line involving I/us, thus defining four areas of objectives, each containing two skills.

In 2022, the programme to widely distribute and deepen the content within the leadership model, which involves around 700 managers and middle managers each year, was planned and drafted in person, after two years of remote sessions due to the Covid-19 pandemic.

The path to get here has made it possible to tap into the energy necessary to begin a journey of personal and professional growth through the evolutionary intelligence of the body, heart, mind and spirit. The centrality of the person, wellbeing of the individual, and authenticity were the keywords of the formative track.

Moreover, multimedia and interactive content on special e-learning platforms was made available to the entire workforce, over **5,000 employees, including white-collar workers, middle managers and managers.**

Remuneration and incentives

[2-20] The Hera Group defines and applies a compensation policy aimed at attracting, motivating and retaining resources having the professional qualities required to achieve the Group's objectives.

The policy is defined so as to consider the interest of various stakeholders and to achieve the priority objective of creating value in the long term for its stakeholders through the creation of shared value and, in relation to its compensation policy, through the strengthening of ties between pay and performance, both individual and that of the Group.

[2-30] All Group employees are hired through national collective labour agreements.

[2-21] In 2022, the ratio within the Hera Group between the gross annual salary of the person with the highest salary (paid out in 2022) and the median value for workers was equal to 21:1.

For 2022, the performance bonus for middle management, white-collar and blue-collar employees was determined by the three-year supplementary Group contract signed on 20 September 2022. It is based on profitability, productivity and a few specific quality and efficiency indicators.

Starting from 2018, as required by current legislation, employees have the opportunity, on a voluntary basis, to convert their performance bonus paid in cash into corporate benefits and services up to a maximum value of 50% of the yearly bonus, with significant tax advantages for workers.

Bonus system related to the short-term compensation variable

Starting from 2006, the bonus system of the Hera Group has been linked to the balanced scorecard system: according to this system, the variable annual remuneration component of each manager and middle manager is calculated as a percentage value of gross annual salaries and is defined on the basis of results obtained relative to the objectives defined at the start of the year. The balanced individual scorecard is structured in three parts:

- the first consists of specific target **projects** deriving from translation in operating terms of the objectives contained in the Group's strategic map
- the second contains the **economic objectives** outlined in the annual budget
- the third involves an assessment of the **behaviours** set forth in the Group **leadership model**.

The structure of the balanced individual scorecard, or the weights assigned to the three areas, varies according to the seniority of the employee and the department he/she belongs to.

The assignment of the objectives to employees and the assessment of their achievement take place through a clearly defined process. This process is based on the decision of top management for the individual balanced scorecards of directors and managers, and the decision-making role of the directors for the individual balanced scorecards of middle managers. The activity takes place with the coordination of the Balanced Scorecard System Management unit of the Shared Value and Sustainability Department.

In 2022, 50% of the variable compensation for Hera Group managers was linked to the completion of the target projects planned in the balanced scorecard system: 33% was linked to the achievement of the economic and financial budget objectives and the remaining 17% to compliance with the behaviours set forth in the leadership model. The balanced scorecard system involves 98.8% of the Group's middle managers and managers.

For **middle managers**, 70% of variable compensation was linked to the completion of the target projects planned in the balanced scorecard system and/or achievement of the economic and financial budget objectives, while the remaining 30% was linked to compliance with the behaviours set forth in the leadership model.

In 2022, application of **the bonus policy for the Hera Group sales staff** continued, to enhance the effectiveness of the offer for customers. The purpose of these dedicated tools is to ensure competitive commercial incentives and to steer sales staff towards goal-oriented work.

Incentives also depend on sustainability

[2-19]

The bonus system is connected to the balanced scorecard and, ever since 2006, it has established that a part of the incentive be connected to the achievement of sustainability targets.

In 2022, 37% of the variable compensation of Group managers and middle managers was linked to sustainability target projects (improvement of quality, environmental impact, image, personnel involvement, professional development and involvement of stakeholders), with target projects aimed at creating shared value accounting for 24%.

BALANCED SCORECARD 2022: BREAKDOWN OF VARIABLE COMPENSATION IN THE AREAS OF SUSTAINABILITY AND CSV (CREATION OF SHARED VALUE)

Area	% variable remuneration	No. of target projects	No. of managers/middle managers involved
Pursuing carbon neutrality	7%	14	160
Regenerating resources and closing the loop	9%	53	175
Enabling resilience and innovating	8%	23	204
Total CSV areas	24%	90	389
Other sustainability areas	13%	64	297
Total CSV and sustainability	37%	154	528

As the table shows, the managers and middle managers involved in CSV and sustainability target projects in 2022 amounted to 528, that is, 74% of the total. Restricting our analysis to CSV areas only, there were 389 managers and middle managers involved in target projects aimed at creating shared value, making up 55% of the total. This confirms the Group's widespread CSV approach in its strategy and short-term bonus system (balanced scorecard), which involved 698 workers in 2022, including managers and middle managers.

The final payment of the bonus for all managers and middle managers depends on the achievement of the objectives stated in the individual balanced scorecards, but it is also weighted according to the results achieved on certain Group parameters: the company's economic-financial results (Ebitda, net profit and net debt), the customer satisfaction rate for residential customers and, starting in 2021, the **Shared-value Ebitda** as determined by the Management Compensation Committee at its meeting of 27 January 2021, confirming the increasing relevance of the UN 2030 Agenda objectives in the Group's strategy.

Sustainability has also become part of the **deferred incentive plan** for management retention. The Plan is reserved to a small number of managers selected by considering the weight of the role within the organisation, the evaluation of the results achieved in the development process and the 'market risk'. Shared-value Ebitda was in fact one of the three indicators used to quantify the bonus to be paid in 2022. The target to be achieved is set out in the 2018-22 Business plan for 2021. Shared-value Ebitda was also confirmed for the three-year period 2022-24 as established by the Board of Directors at its meeting on 27 January 2022, again based on the proposal presented by the Compensation Committee. The target to reach is set out in the 2021-25 business plan.

Pension funds

The number of employees contributing to pension funds at December 2022 is 4,555, or 48% of all Group employees. The main contractual pension funds are: Pegaso for employees under the gas-water and electricity national collective labour agreements; Previambiente for employees under the Federambiente national collective labour agreement; and Previndai for managers.

YIELD OF THE MAIN PENSION FUNDS (BALANCED SUB-FUND)

%	2020	2021	2022
Pegaso	2.5%	11.1%	-18.1%
Previambiente	1.6%	16.0%	-29.6%
Previndai	6.4%	12.9%	-22.6%

7.05 Employee welfare

In 2022, HEXTRA, the Hera Group employee welfare system created to accelerate the organisation's growth by investing in employee well-being and productivity, continued. It is an experience that has proven to be of great economic and social value, especially in these challenging years of the COVID-19 pandemic. Each employee was given a flexible benefits allotment of 450 euro to spend on the entire HEXTRA proposal, as well as the option to **convert part of their performance bonus** into an additional benefits amount. This option is convenient also from a tax viewpoint and in terms of increased purchasing power for each employee.

In 2022, HEXTRA had over **9,000 participants**, equal to **99%** of the potential company population, with over **6.6 million euro** used by employees. This important achievement was made possible by the clear information about and presentation of the services, the usefulness recognised for each of them and the positive impact for work-life balance, thanks also to the responsiveness with which it was possible to adopt all the regulatory changes resulting from Funding Decree-Laws issued by the Italian government in 2022 pertaining to fringe benefits and related aid packages, such as the household utility reimbursement service.

Increased purchasing power, customisation, and quick, easy-to-use service: a winning combination for a fully comprehensive benefits that's accessed in a **fully digital** manner to minimize environmental impact.

In 2022, the **HEXTRA welfare** process continued with a range of free, flexible options offered, linked to the concept of all-around individual well-being: mental, physical and financial. Free sessions with psychologists, nutritionists, weekly online yoga and Pilates classes, availability of a 24/7 platform to work out from home with a fitness professional or discounts for gym sessions with a trainer. There were also webinars, four in 2022, with an average of more than 100 participants each, to encourage colleagues to think about the importance of taking care of oneself and being happy and healthy. In this regard, therefore, mental well-being plays a key role. Promoting mental well-being leads to the dispelling of misconceptions, enabling people to seize the opportunity and to seek balance.

In 2020, moreover, we reinforced the services and the unique and traditional initiatives of HEXTRA, including: the sixth edition of **university scholarships**, offering 53 scholarships worth 750 euro each; the sixth edition of language study courses abroad **with Intercultura**, with eight scholarships worth 3,000 euro each for summer programmes; two scholarships worth 4,500 euro each for one term; and three scholarships worth 9,000 euro each for an entire academic year abroad. The continuation of the **summer programme**: an additional contribution of 175 euro per child to be used for the reimbursement of summer daycare/camps or, alternatively, for the reimbursement of babysitters or homework tutoring services with over 1,500 requests.

Furthermore, the allocation of an education sum for employees who have school-age children came to over 840,000 euro. In detail, among all the projects set up to support the education of our employees' children, 3,000 applications were received. Of these, 254 shares were used by employees for **crèche** services. Sixteen applications for attending crèches with which the Group has agreements (in Bologna, Cesena and Imola) must be added, totalling 270 children.

In terms of health and prevention, the **autumn prevention** project is back on track, demonstrating our constant attention to good health. In cooperation with LILT (Lega Italiana Lotta Tumori), two free melanoma and pink ribbon screenings were carried out with over 1,400 bookings.

As part of the activities managed by mobility management, it was once again possible this year for the reimbursement of the expenses incurred by all employees or their family members who travel using the regional or interregional public transport service to be included in HEXTRA. In addition, the supplementary mobility sum was confirmed with the aim of further promoting and supporting sustainable transportation related to home-work journeys, for all Group employees using public transport, with 189 applications for a contribution of 38,500 euro.

Once again in 2022, with **in Hera l'energia vale di più** (At Hera, Energy is Worth More), users ad access to promotions for free-market **power and natural gas, water heater, air conditioning and solar panels** to benefit directly from the value that all employees, through their daily work, help create, for benefits that are increasingly shared and used. Furthermore, we continued the **Una connessione straordinaria** (An extra-ordinary connection) promotion for internet connections and calls, in collaboration with Acantho.

A call to action aimed at all employees, which is reflected again this year in the use of **vouchers**, catalogues, but also spontaneous referral services, to identify the contracted partner at which to use their benefits, choosing from those available: sports, wellness, culture and leisure and medical check-ups are always just a click away. For example, the booking of concerts, exhibitions and shows thanks to partners such as Ticketone. But even personalised trips and holidays; in fact, travel agencies, water parks and theme parks are available too.

This all-embracing and continuous path of combined, shared and highly felt development of the benefit plan makes us a national leader in the field of corporate welfare and well-being. As demonstrated by winning Conciliamo financing, which will give the Group the opportunity to continue investing in HEXTRA's unique initiatives, and also by having been given **Top Employers** Italia certification for 2023, which the Group achieved for the fourteenth consecutive year and which sees us once again on the podium. The Group confirms its place among leading companies in terms of working conditions and best practices focused on the development and well-being of its people. Its commitment and constant focus on the ongoing improvement of its strategies in the field of human resources is also recognised.

[403-6]

In addition to the HEXTRA corporate welfare, the Hera Group offers several forms of supplementary healthcare for workers in compliance with the applicable collective bargaining agreement. In particular:

- employees to whom the Gas/Water National Collective Labour Agreement applies: with effect from 1 January 2012, supplementary healthcare has been provided by the FASIE fund;
- employees to whom the Electricity National Collective Labour Agreement applies: with effect from 9 July 1996, supplementary healthcare has been provided by funds managed by corporate CRAEMs;
- employees to whom the Waste Management Services National Collective Labour Agreement applies: with effect from 1 October 2014, supplementary healthcare has been provided by the FASDA fund;
- employees to whom the Chemical industry National Collective Labour Agreement applies: by National Agreement dated 29 July 2003, between Federchimica and the National Industry Trade Unions, supplementary healthcare has been provided by FASCHIM;
- employees to whom the National Collective Labour Agreement for Managers of Public Utility Services Companies applies: supplementary healthcare has been provided through registration with FASI and Poste Assicura. The FASI Fund and FASI Supplementary Policy may be extended to the family members of managers.

In 2017, upon renewal of the National Collective Labour Agreements, insurance policies were also set up in case of premature death (Electricity National Collective Labour Agreement) and of premature death and permanent disability (Gas/Water National Collective Labour Agreement).

7.06 Health and safety

Ever since its establishment, prevention and safety at work have been among Hera's founding principles; improving conduct and strengthening corporate awareness at all organisational levels towards health and safety is an ongoing target for the Group, as stated in the Code of Ethics. **Preventing and minimising health and safety risks** is one of the commitments of the Hera Group's Quality and sustainability Policy, which is inspired by the values for sustainable development expressed in the UN 2030 Agenda.

Working to make the workplace safer and healthier is essential to **improve quality and working conditions**, but also to promote the Group's sustainability and competitiveness.

Investing in health and safety contributes to the well-being of workers and is cost-effective. According to recent estimates, this type of investment can generate returns that are on average 2.2 times the value invested (source: International Social Security Association- ISSA, 2011).

In these years, various occupational health and safety projects have been implemented, especially with regard to the promotion of a culture of safety and risk awareness on all levels of the organisation. These initiatives - together with ongoing of training and coaching of staff, specific actions for the improvement of vehicles, plants, automobiles and equipment, and timely analysis and investigation of lost time injuries and near misses - have allowed us to achieve important results.

The specific indicators, reported below and illustrated, are a tangible sign of the improvements attained in this important field.

[403-2]

The process for identifying hazards and assessing health and safety risks is carried out in accordance with the requirements of articles 17 (non-delegable obligations of the employer), 18 (employer's and managers' obligations), 28 (risk assessment purpose) and 29 (procedures for carrying out risk assessment) of Italian Legislative Decree no. 81/2008 **Consolidated Law on Occupational Safety**. More specifically, according to art. 17 of Italian Legislative Decree no. 81/2008, the employer has the non-delegable obligation to assess all occupational health and safety risks. To carry out this process, the employers of various companies or organisational units rely on the help of the **prevention and protection service** and the **company physician**, providing them with all necessary information about the nature of the risks, work organisation, and the description of the production processes.

The prevention and protection service is used by the employer to develop the process for identifying hazards, assessing risks and identifying prevention and protection measures to mitigate risks and improve health and safety conditions in the workplace over time.

In the Hera Group, specific occupational health and safety management system procedures are adopted to define the roles and responsibilities of the hazard identification and risk assessment process. The risk assessment goals are the following:

- to identify all potential hazards and assess the possible impact on workers in order to remove said hazards or at least reduce them as much as possible;
- if the hazard cannot be removed, adopt appropriate **prevention and protection measures**, giving preference, where possible, to collective measures over individual ones;
- **schedule and implement** the necessary information and training courses on risks.

In order to effectively carry out the risk assessment process, the **likeliness** of occurrence of the event and the **seriousness** of its consequences need to be estimated. Criteria for estimating likeliness and severity indices were identified to limit any uncertainties when assigning the values and are shown below in the table.

Prevention measures aim at lowering the **likeliness of an unfavourable event occurring**, while **protection measures** lower the severity of the consequences of the event.

The company is deeply committed to reinforcing workers' **awareness of the risks** associated with their workplace duties. For this reason, it identifies ever more **training courses** that encourage people to develop **greater self-awareness** by changing their own behaviour in the way they perceive risk and by setting a good example for their colleagues. The 'Safety in the Field' project, aimed at achieving this objective, was essential to the correct application of the management procedure for accidents, near misses and occupational diseases, which states: 'any employee who becomes aware of a near miss in the case of serious and immediate danger and in the impossibility of contacting the relevant hierarchical superior, must take measures to avoid the consequences of such danger'. Everyone at the company, no matter their role, is responsible for spreading and enforcing this rule.

Lost time injuries and **near misses** are recorded via user ID and personal password in the digital database. The aim of the **IT system** used by the main companies in the Hera Group is to manage relations with INAIL in a timely, fair and complete manner. After an accident, the prevention and protection service is quickly provided with the information included in the first medical certificate and with an exhaustive description of the event, which is automatically notified via the digital database software. A first analysis of the event is carried out just as quickly and leads to identifying the cause of the event; if necessary, a second level analysis is carried out to establish the corrective actions to take. The system ensures that information is fully shared, tracks the entire process and stores its history. To gradually promote the active reporting of hazards, Hera is seeking to develop **a culture of reporting**: an integral part of a full-fledged system that excludes, due to its intrinsic value, the punishability of whoever may have made a mistake and whoever has reported errors committed by third parties. The system instead makes sure that replies are given, adopts effective prevention and protection measures, provides information, and enhances the process.

The **persons to whom staff members report** are responsible for recording accidents. A manual on the use of the system, which is published on the company Intranet, is also available for all those involved. System updates are followed by revisions of the manual and training meetings. In order to ensure better tracking of safety issues, starting in 2023 it will be possible to enter simple 'security notifications'. In addition, the analysis of accidents with a 'behavioural factor' cause will be expanded upon, thanks to an analysis method that considers the additional causes of misbehaviour (e.g., being in a hurry, overestimation or underestimation of one's capabilities) and thus be able to identify more effective improvement actions.

[403-9]

ACCIDENT RATES (ALL ACCIDENTS)

	2020	2021	2022
Occupational accident rate (frequency rate)	14.2	12.3	12.8
Number of accidents at work	206	185	189
Severity rate	1.5	0.3	1.3
Rate of occupational accidents with severe consequences (absence of more than six months)	-	0	0.07
Number of occupational accidents with severe consequences (absence of more than six months)	-	0	1
Rate of deaths as a result of occupational accidents	0.14	0	0.14
Number of deaths as a result of occupational accidents	2	0	2
Number of hours worked	14,504,703	15,085,277	14,749,649

The frequency rate is the number of lost-time injuries per million hours worked. The severity rate is the number of days of absence due to injury divided by the thousands of hours worked. The incidence rate is obtained by dividing the number of lost-time injuries by the number of workers, multiplied by 100. The death rate is the number of deaths per million hours worked. For data on suppliers, see the section "Monitoring of suppliers' occupational injuries."

The trend in the Group's accident frequency rate, after a steady improvement in recent years and in 2021 especially, increased slightly in 2022. Note that, on a national level, INAIL, for the Industry and Services sector, recorded an increase in the number of accidents in 2022 compared to 2021, a figure that is well above that recorded by the Hera Group.

The severity rate, after 2021 with the best number ever for the Hera Group, also increased, largely due to two fatal events occurring during the commute to work. Looking at occupational accidents alone, this increase is much smaller and 2022 is definitely an improvement over 2020 and previous years.

The Sustainability Report 2022 drafted by the Utilitatis Foundation on behalf of **Utilitalia**, the Federation of Water, Waste and Energy Companies, measures the sustainability of 87 utility companies. Considering the frequency rate of accidents lasting more than one day, Hera's value (12.3) is 48% lower than the average of the companies analysed (23.5).

INJURY RATES (ONLY INJURIES WITH AN ABSENCE EXCEEDING OR EQUAL TO THREE DAYS)

	2020	2021	2022
Occupational accident rate (frequency rate)	12.6	10.3	10.5
<i>of which commuting accidents</i>	1.6	2.2	2.9
Number of accidents at work	183	155	155
<i>of which commuting accidents</i>	23	33	43
Severity rate	1.5	0.2	1.3
<i>of which commuting accidents</i>	0.1	0.1	1.1
Number of hours worked	14,540,703	15,085,277	14,749,649

The frequency rate is the number of lost-time injuries per million hours worked. The severity rate is the number of days of absence due to injury divided by the thousands of hours worked. The incidence rate is obtained by dividing the number of lost-time injuries by the number of workers, multiplied by 100.

An analysis of only major accidents (those that resulted in a period of absence of more than three days) also confirms the above considerations.

The behavioural factor was once again the leading reason for lost time injuries and accounts for around 60% of days spent on leave.

The healthcare emergency and resulting lockdown led to the introduction of significant organisational changes (extension of remote working and departure from home for operational staff), which had a positive impact on commuter road accidents. On a Group level, commuter road accidents fell from 42 in 2019 to 23 in 2020 (which of course was characterised by long lockdowns). They then rose again (33 in 2021) to 43 in 2022. There were 15 road traffic accidents during working hours in 2022, up from 10 last

year but still far fewer than the 45 in 2019 and 31 in 2020. A collaboration with the Rubes Triva Foundation, INAIL and the University of Siena is planned in the course of 2022 in the design of a digital educational lab dedicated to road safety with the aim of reducing these accidents.

The main goal remains not seeing increases to the occupational accident frequency rate (10.5 goal by 2026).

LOST TIME INJURY FREQUENCY RATE (BY BLUE-COLLAR WORKERS)

	2020	2021	2022
Total	30.5	22.9	21.8
<i>of which network services</i>	<i>23.4</i>	<i>18.9</i>	<i>12.0</i>
<i>of which waste services</i>	<i>35.9</i>	<i>25.9</i>	<i>30.5</i>

The 2020 and 2021 data refers to Hera Spa, AcegasApsAmga and Marche Multiservizi. Accidents resulting in injuries that caused a period of absence from work of more than three days were taken into account.

Lost time injury indices are higher for blue-collar workers, since they are more at risk of lost time injuries given the nature of the activities they perform. The overall rate and the rate related to utility network services decreased, while the rate related to waste management services increased, though it remained lower than in 2020. With regard to blue-collar workers, waste management services have a higher frequency compared to other services (30.5), as they feature a higher operational rate.

LOST TIME INJURY RATES OF SOME SUBSIDIARIES (2022)

	AcegasApsAmga Group	Herambiente Group	Gruppo Marche Multiservizi	Gruppo Hera Comm	Uniflotte
Frequency rate	9.4	12.9	16.8	4.2	16.1
Severity rate	0.5	3.2	0.3	0.1	0.2
Workers for rate calculation	1,753	1,665	599	998	166

With regard to accidents in some companies within the Hera Group, significant improvements in the frequency rate were recorded for AcegasApsAmga (from 10.9 to 9.4), Marche Multiservizi (from 20.8 to 16.8) and Hera Comm (from 8.6 to 4.2). Herambiente's rate increased slightly (from 10.8 to 12.9) while Uniflotte's rate went from 24.0 in 2020 to 7.3 in 2021 and 16.1 in 2022.

All the events that occurred (lost time injuries and near misses) were analysed by the company lines together with the Prevention and Protection Service. The most complex cases were analysed using the in-depth Systematic Cause Analysis Technique.

In the Group's core companies, 176 corrective actions were identified in 2022, compared to 1,155 investigations into accidents and near misses.

Despite a slight rebound compared to the excellent results of 2021, the data from 2022 confirm the long-term positive trend in relation to accident statistics at the Hera Group, and demonstrate that the many actions taken by the Group in recent years are proving to be effective in terms of health and safety. The interventions described above were chosen and implemented with a long-term vision, in order to further reduce the recurrence of accidents, injuries and near misses.

With regard to the accident that occurred in Padua on 14 October 2020, involving two AcegasApsAmga employees (one of whom died) while they were working on a water pipeline, the Padua Public Prosecutor's Office served a notice of investigation regarding three senior managers and three employees of the company (as well as in relation to external parties). Non-repeatable technical investigations are underway.

As for the accident that occurred in Bologna on 24 July 2020 involving two Hera S.p.A. employees (one of whom died) on board a bulky waste collection vehicle that collided with an underpass, note that the Bologna Public Prosecutor's Office served a notice of investigation relative to four company employees. In November 2022, all four were notified of the conclusion of the preliminary investigation.

With regard to the fatal accident in 2009 that occurred at the waste-to-energy plant of Forlì, following the commitment to trial of three Hera Spa employees and one Herambiente employee, the preliminary hearing was held on 3 April 2014. At the hearings on 13 May and 30 May 2016, the witnesses and experts were examined. On 31 March 2017, the judge ordered the conviction of the defendants granting suspension of the sentence. On 28 June 2017, the convicted employees filed an appeal against the first instance ruling. The next hearing before the Bologna Appeal Court is scheduled for 12 April 2023.

It should furthermore be noted that, in November 2022, the non-involvement of a Herambiente employee who was initially part of a proceeding related to the death of a contractor's employee (in an accident that occurred in 2021, having been run over by a loading shovel at the Cervia (RA) landfill during operations conducted outside working hours and neither communicated to nor authorised by the company), was definitively ascertained.

[403-3] **The occupational health service** is provided within the Hera Group in accordance with the requirements of Section V (Health Monitoring) of Italian Legislative Decree no. 81/2008. In particular, several **company physicians** working in the various geographical areas have been selected and appointed. They have drawn up a health protocol, on the basis of the information set out in the health and safety risk assessment document. This document establishes, for each organisational role, which health checks are necessary for monitoring workers' health status and for expressing an opinion on their fitness to carry out the specific task assigned to them.

Medical check-ups for the entire workforce are carried out periodically during working hours. The employer is responsible for the planning and for the costs of the check-ups and for any clinical examinations and biological tests considered necessary by the company physician. When provided for by applicable legislation, medical exams are also conducted to make sure that there is no alcohol dependence and that psychotropic substances and narcotic drugs are not used.

The Group's **health monitoring service**, with the exception of the company doctor in a coordinating role (selected through fiduciary assignment), is entrusted to a provider by public tender. The selection is made using the criterion of the most economically advantageous offer, i.e., a technical-economic evaluation of the proposals received from the market, assigning a weight of at least 70% to the technical aspect.

The Hera Group periodically assesses the quality of the service provided by the supplier via specific checklists and periodically organises special technical coordination meetings with the company physicians and with the coordinating physician specifically selected for this purpose. In 2022, all employees for whom a medical check-up had been scheduled were subject to regular health monitoring in accordance with the health protocol.

The **development of electronic health files** for employees was completed in 2021. This makes it easier to manage the term health surveillance process and to abandon paper-based document management, streamlining the work of both employees and physicians. In 2022, the new computer system went live and old hard-copy paper health documents for the current workforce were digitised.

During the 2020 healthcare emergency, the Group's prevention and protection service, together with the company physicians, coordinated the selection and implementation of the measures for preventing contagion and for assisting and supporting at-risk workers. A Group protocol to prevent infection was thus developed and drafted, and then shared with the workers' representatives. The prevention protocol is based on an Enterprise Risk Management approach and was constantly updated as the healthcare emergency evolved.

The '**Hera cardioprotetta**' project (Hera cardio protection project) continues with the extension of the number of semi-automatic defibrillators installed and operated at the Group's main offices: 5 more were added in 2022, bringing their total number to 34.

Development of the "Man on the ground" App, a project launched in 2020 with the aim of developing an IT tool (a mobile app that can be installed on employees' mobile phones) to alert the remote control centre in Forlì, in the event that employees working alone find themselves in an emergency situation and/or they suddenly become ill and fall to the ground.

After an initial trial run at AcegasApsAmga to test the app's functionality and calibrate the settings of the telephone's gyroscope, the app was further tested in 2021 among the staff of Heratech laboratories, which adopted it in 2022. It is now being studied for extension to the Water Management business unit of Hera Spa.

Another important IT project of the Group developed to help improve health and safety conditions for workers is **EHS DPI**. Introduced in May 2020 for Hera and Herambiente, the app with the EHS PPE information system aims to digitise and make more transparent the management of personal protective equipment (PPE) and work clothing in the company. It is available on PCs, tablets, smartphones or free-standing panels at fixed points on company sites. So far, more than 470,000 items of clothing and PPEs have been distributed thanks to the app and more than 11,000 checklists have been completed. Nearly 4,000 colleagues were also involved in training and awareness-raising events. In 2022, the app was also

extended to AcegasApsAmga, with an additional 1,200 users having received specific training. It is expected to be rolled out to Marche Multiservizi in the coming years.

[403-4]

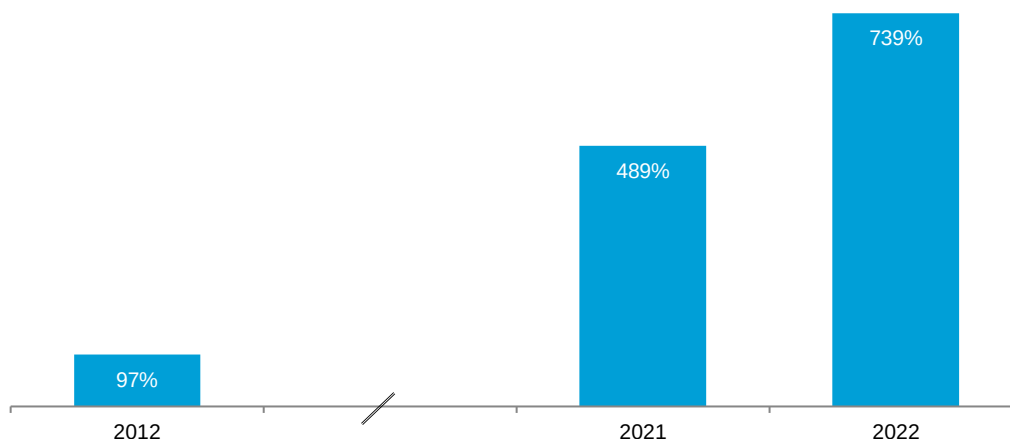
A safety management system is effective when it can count on the **support** and **commitment** of all participants in the company's activities. Employees often have detailed knowledge of their work and of how to make it safer. Worker health and safety representatives get staff involved, so that employees can constructively contribute to the implementation of effective safety management policies and to their continuous improvement, by providing suggestions and feedback. Such consultation is seen as an opportunity as set forth in Italian Legislative Decree 81/2008 for safety managers and officers to obtain feedback from workers and their safety representatives about their occupational health and safety decisions.

Workers in the Hera Group are involved in the hazard identification and risk assessment process through **advance consultation** with their representatives (worker health and safety representatives). The representatives are convened periodically when occupational health and safety information is shared (e.g., issues such as lost time injury trends, safety improvement projects, and health monitoring).

A key topic for the purpose of preventing lost time injuries and improving workplace health and safety conditions is the ability to report, collect and analyse not only lost time injuries **but also near misses**. Near misses are accidental events that could have potentially generated a lost time injury. Their correct analysis and examination prevent the occurrence of lost time injuries. The Hera Group places great emphasis on correctly reporting, analysing and examining near misses.

The trend of near misses is monitored on a monthly basis to check compliance with the specific objectives assigned to the various departments and business units.

CHANGES TO THE NEAR MISSES-LOST TIME INJURIES RATIO



In 2022, the ratio between near misses reported and lost time injuries that occurred for Hera Group's scope of reporting was 739%. The indicator shows a steadily growing trend, a sign that the topic of prevention is increasingly present in everyday working life. Of note in the Group's overall result are the results achieved by Hera Spa (729%), AcegasApsAmga (605%) and by the companies of the Herambiente Group (1,267%). The level of lost time injuries reported in Marche Multiservizi reached 206%.

The main types of near misses analysed by the prevention and protection service concerned: behavioural factors (such as distraction), defects in vehicles or equipment, and the workplace itself.

[403-5]

A structured process within the Hera Group ensures that all workers receive adequate **health and safety training**. Safety training particularly focuses on:

- general concepts of risk, damage, and prevention;
- rights and duties of various corporate individuals and supervisory bodies;
- specific risks related to the various tasks and to possible damages;
- resulting prevention and protection measures.

Training is specifically provided to new hires, after job changes or following technical and organisational changes. It is also periodically repeated when the risks present change, or when there are organisational changes that impact safety requirements.

Training content and duration for workers, safety officers and managers are based on the timescales and methods set out in the State-Regions agreement of 21 December 2011. Training is planned and delivered with the cooperation of the company's Personnel Department and the Prevention and Protection Service, and also with the help of experienced external professionals. The Prevention and Protection Service has started to develop a new format for safety courses for all workers. In order to be able to conduct said courses, we are waiting for the regulatory updates that are to be introduced as part of the new government-region agreement, foreseen by Legislative Decree. 2015/2021 but not yet officially issued.

The workers who receive periodic and repeated training are:

- workers in charge of fire prevention and fighting, first aid and emergency management;
- worker safety representatives.
- workers, supervisors and managers.

The lost-time injury analysis clearly shows that 60% of accidents are caused by behavioural factors. After having worked extensively on technique and organisation, today the human aspect is key to the prevention of lost-time injuries, and it is exactly on this belief that **The Culture of Safety** project is founded in the Hera Group.

The project began in 2016 with the creation of an innovative training module for safety officers (intermediate-level managers) in the operations area. During this development process - where the focus was on individuals - participants were provided with elements to deal with behaviour, based on real working experience. This allowed all participants to acquire greater knowledge of how to deal with different situations and to understand the importance of being an example to others.

To increasingly encourage a corporate culture of safety, **the Group designed a new training course** that involved more than 2,500 workers in the three-year period from 2019 to 2021, which was completed in 2022. This training method has been designed to stimulate the active participation of individuals and to create emotional involvement and interaction among participants also through the use of videos (one made internally in the Group). The aim is to **develop risk awareness and real leadership in health and safety** on all levels of the organisation. Over the next few years, the project will evolve again with the development of new training formats in accordance with the regulatory updates foreseen in the forthcoming Government-Regions agreement. New health and safety training materials are being created, which can be used in e-learning formats on the MyAcademy corporate platform.

In 2022, taking advantage of the regulatory discontinuity brought about by Law 215/2021 (updating of the Safety Consolidation Act relating to the role of the supervisor), an additional project was carried out to recognise and raise awareness about the role played by the person in charge. In fact, supervisors and those in charge were quickly and specifically identified and targeted training courses were launched to strengthen their awareness of their role and responsibilities.

Thanks to these new tools, our goal is to **foster change in the company culture** and to question deeply held beliefs and habits in order to attain a new way of experiencing health and safety.

Another important building block in the construction of a culture of safety within the Group is the **safety leadership development project designed specifically for managers**, launched in 2021 and continued in 2022. The aim of this initiative is to develop awareness about the role of security managers, including aspects relating to supervision of the behaviour of the people the supervisor is responsible for.

The activities programmed as part of this project can be grouped into three lines of action:

- **quick individual surveys** on factors which enable safe behaviours, with the aim of sparking employee interest, holding initial conversations and creating openness to dialogue;
- **20 interactive webinars** with all company management held in April-May 2021, during which the status of safety culture at the company was brought into focus and managers were made more aware of the fact they are safety leaders with new habits;
- **safety mentoring phase** for a selected group of 30 managers, including three individual meetings with the prevention and protection service.

The project evolved further in 2022, with a webinar open to all Group managers, followed by the publication of a Yammer channel for sharing materials and experiences. During the year, in addition to assessing the progress of the mentoring activities carried out so far, new safety mentoring meetings were initiated for the adoption of increasingly safe practices by those who organise the work done by people in the Group.

7.07 Industrial relations

The renewals of the main collective labour agreements in the Hera Group and the renewal of the Group's supplementary contract have had an important influence on the planning of industrial relations activities for all of 2022. The healthcare emergency also required considerable effort, albeit in a context that is slowly going back to normal.

The company protocol regulating measures to combat and limit the spread of the COVID-19 virus in the workplace established on 15 May 2020 was updated three times during 2022, leading to three revisions of the technical document attached to the protocol. These changes became necessary as a result of the ever-evolving legislative framework on the matter, culminating in the end of the state of emergency in Italy on 31 March 2022. In 2022, the three Territorial Committees (Emilia-Romagna, Marche and Veneto-Friuli-Venezia Giulia) met 27 times, with the goal of implementing and verifying the rules of the protocol.

On 16 February 2022, meeting minutes were signed in order to implement a partial change in working hours at the Hera Spa Water Management Unit for the Forlì Cesena area. Through similar meeting minutes signed on 1 March 2022, the working hours at the Hera Spa Water Management Unit in the Ferrara area were changed also.

On 7 April 2022, the 2022 Training Plan was presented to the labour unions, as included in the Group's Industrial Relations Protocol, and agreements on the 2022 Funded Training Plan were signed. Moreover, also on 7 April 2022, the agreement for Hera Group staff was signed, regarding the finalisation of the performance bonus indicators for 2021.

On 19 May 2022, the national labour unions presented their platform for the start of negotiations regarding the **renewal of the supplementary contract** for the Hera Group. In the months preceding the start of negotiations, the industrial relations section encouraged and supported a series of meetings with the top management of the Group's main companies and departments, in order to share both the reference scenarios and the consequent objectives in terms of the organisational models to be pursued, consistent with the business plan objectives. Negotiations continued over the summer months, with a five more meetings being held. On 20 September 2022, the parties reached an agreement, signing the supplementary contract for Hera Group personnel, valid for the three-year period from 2022 to 2024.

In 2022, cooperation with employers' associations continued, ramping up in intensity compared to previous years. The Hera Group was particularly involved in the negotiations that led to the renewal of all the main collective labour agreements applied to the Group's personnel:

- CCNL (National Collective Labour Agreement), waste management services sector, signed on 18 May 2022;
- CCNL (National Collective Labour Agreement), electricity sector, signed on 18 July 2022;
- CCNL (National Collective Labour Agreement), Gas-water sector, signed on 30 September 2022.

In 2022, two business branch transfers were made to Hera Spa. The objective of the transfers was to centralise the planning and control activities, which were previously carried out at Inrete Distribuzione Energia and Heratech, under the Central Networks Department. Therefore, on 29 November 2022, in order to carry out the joint verification procedure required by Law 428/1990, two memorandums were signed.

On 16 December 2022, an agreement was signed which allows various training courses to be financed, in this case taking advantage of the opportunities provided by Italian Law 77/2020 (New Skills Fund). The law in question makes it possible for the company to recoup some of the costs sustained for personnel who use part of their working hours to participate in skill development courses, through the relative rescheduling of working hours to meet the organisational and production needs of the company. The agreement covered training courses for the staff of Hera Spa, Herambiente and Hera Trading.

In 2022, seven agreements were signed for updates to seven facilities/plants or new installations of video surveillance systems at the Group's various sites (Ferrara, Modena, Faenza, Ferrara Pontelagoscuro, Via del Frullo in Bologna, Cordenons, Sant'Agata Bolognese).

Some important agreements were signed in the waste management sector:

- on 24 February 2022, an agreement was signed to harmonise the compensation of Herambiente personnel with the CCNL (National Collective Labour Agreement) for the chemical industry;
- on 26 February 2022, an agreement was signed to revise both the organisational and the economic parts of the availability of waste management service technicians;
- on 23 March 2022, an agreement was signed to change the working hours of the technicians of the Waste Management Services of the Bologna district;

- on 22 June 2022, an agreement was signed regarding the availability of landfill workers after the landfill has been closed.

In 2022, as a result of the 15-year assignments for the contracts for the management of environmental services relating to the Modena and Bologna territorial areas, the implementation phase of the expected transitional period was carried out through the Temporary Grouping of Enterprises formed by Hera Spa, Consorzio Stabile ECOBI and Brodolini, activating various labour union discussions as envisaged by the CCNL and the signed protocols.

On 13 July 2022, with reference to the merger through acquisition of Ascotrade, Ascopiave Energie and Blue Meta into EstEnergy, special meeting minutes were signed (joint review of Law 428/1990). Similar meeting minutes were signed on 19 July 2022, with reference to the merger through acquisition of Amgas into Hera Comm.

Within AcegasApsAmga and its subsidiaries, with a view to further synergies between the various Group companies, meeting minutes were signed on 21 September 2022 regarding the new single shift for the electricity sector technical call centre at AcegasApsAmga (also involving Inrete Distribuzione Energia personnel). The meeting minutes also cover the new organisation of working hours of the same shift workers.

On 21 November 2022, the meeting minutes for the completed procedure meeting relative to the merger through acquisition of Hera Servizi Energia into AcegasApsAmga Servizi Energetici were signed. The purpose of this merger is to create a unified entity for energy services within the Hera Group, capable of implementing the energy transition strategy in continuity with what the two companies have achieved so far. Following this merger by acquisition, the parties started a process of harmonising the existing economic and regulatory conditions according to the system in force at the Hera Group.

In the Marche Multiservizi area, the following agreements were signed in 2022:

- 07 February 2022 Agreement for the installation of new video surveillance/anti-intrusion and access control systems at the Pesaro site;
- 17 November 2022 Agreement on company closures 2022.

With regard to Acantho, an agreement was signed on 15 April 2022 for the finalisation of the performance bonus indicators for 2021, and, in line with the agreements reached at a Group level, a supplementary company agreement was signed on 28 September 2022, valid for the three-year period from 2022 to 2024.

The harmonisation of the Group's economic and regulatory conditions at Aliplast will continue in 2022. Two agreement documents were signed on 19 September 2022 and 29 September 2022 for the 2022 performance bonus and 2023 corporate welfare. Also at Aliplast, the working hours of the washing department were revised in 2022 with a specific labour union agreement of 2 March 2022.

Networking activities between the industrial relations structure and third-party companies, associations and professional firms were strengthened during the year, ensuring that the company is constantly up to date and keeps an eye on events external to the Group. Similarly, internal awareness-raising and training on issues of common interest to the human resources professional family also continued, as well as consultancy and cooperation activities with other management offices to identify the correct behaviour to adopt on labour law issues.

OPEN-ENDED CONTRACT WORKERS THAT ARE MEMBERS OF UNIONS (BREAKDOWN BY LABOUR ORGANISATION)

Number	2020	2021	2022
CGIL	2,134	2,008	1,895
CISL	672	665	648
UIL	573	547	555
FIADL	159	158	144
CISAL Federenergia	25	27	30
FISI	0	0	13
ADL	8	8	11
USB	12	12	11
UGL	8	8	9

FEDERMANAGER	12	8	7
Base union	9	7	4
Base confederation	2	4	3
SNALV	4	3	3
CONFIAL	1	1	2
FESICA CONFISAL	1	0	0
Total	3,620	3,456	3,335
Percentage of workers at 31/12	40%	38%	36%

The figures do not include Aresgas, a company where 3% of the Group's employees work.

36% of the Group's workers with an open-ended contract are members of a union: the percentage is around two p.p. less than in 2021.

OPEN-ENDED CONTRACT WORKERS THAT ARE MEMBERS OF UNIONS (BREAKDOWN BY POSITION)

%	2020	2021	2022
Middle managers	17%	14%	14%
White-collar workers	37%	34%	32%
Blue-collar workers	51%	49%	48%
Total	40%	38%	36%

The figures do not include Aresgas, a company where 3% of the Group's employees work.

With reference to the position held, the union membership rate decreased for all three categories with the exception of middle management.

STRIKE HOURS

Hours	2020	2021	2022
Total strike hours	61	16,356	2,221
Strike hours, per capita	0.0	2.0	0.3

The figures do not include Vallortigara, Recycla, Eco Gas, Etra Energia, Wolmann, Con Energia, Macero Maceratese, or Biorg. 3% of the Hera Group's employees work in the aforementioned companies.

Below is a summary of the main strike initiatives for 2022:

- a provincial strike (Trieste), called by the USB (Basic Labour Union), for the whole day of 28 January 2022, protesting the Budget Law of 2022. The strike affected workers in the electricity, gas, water and waste management sectors;
- a national strike of all public and private categories, called by FISL, for the whole day of Tuesday, 15 February and the whole day of Wednesday, 16 February 2022, proclaimed against the provisions in the Law Decree of 5 January 2021 (urgent provisions to limit and manage the COVID-19 pandemic emergency);
- a provincial strike (Ravenna) called by the confederal trade unions (CGIL, CISL and UIL) for workers in all public and private categories, for one hour on 28 February 2022. The strike in question was proclaimed as a 'mobilisation for peace in Ukraine';
- a national general strike called by USB, CUB and COBAS for all public and private categories, for the whole day on Tuesday, 8 March 2022. The strike in question was proclaimed as a stand against femicide and violence against women, against job insecurity and other grievances;
- a national strike proclaimed by USB Lavoro Privato, for certain private sectors (industry, freight/transport, logistics, telecommunications, trade, etc.), for the whole day on Friday, 22 April 2022. The strike was called for increased wages and pensions, the return of state intervention in the economy, the introduction of the crime of wrongful death at work and other grievances;
- a national general strike, called by CUB, SGB, FISL, FLAICa and USB for the private and public sectors, for the whole day on Friday, 20 May 2022. The strike was called to demand an

immediate ceasefire in Ukraine, a freeze on the prices of goods and services, the issuing of new contracts and wage increases, and other grievances;

- a national general strike in the private and public sectors, called by COBAS, SGB, USB, and CUB for the whole day on Friday, 2 December 2022. The strike in question was called for the renewal of collective labour agreements with inflation-linked pay raises, the freezing of military spending, the establishment of a minimum wage and other grievances;
- a strike proclaimed by CGIL and UIL in various regions of Italy, concerning the private and public sectors, which took place region by region, on different days and in different ways (from 14 to 16 December). In particular, for the Emilia-Romagna region, the strike was proclaimed for the entire day of Friday, 16 December, and involved workers in all public and private sectors, excluding waste management services. The strike in question was held to protest the Italian Budget Law for 2023.

[2-27]

LITIGATION WITH WORKERS

Number	2020	2021	2022
Litigation cases at the close of the year	16	18	22

There were 22 **cases pending** against workers in the Group at 31 December 2022, four more than in 2021.

The **disciplinary measures** taken against Group employees amounted to 245 in 2022, in compliance with applicable national labour agreements: they involved **oral or written reprimands** (51 cases), **withholdings on salary** and **temporary suspensions from work** (172 cases, 107 of which were disciplinary measures for fines without a penalty for more than four hours' work compensation) and 22 **terminations**, two of which with notice and 20 without notice

8. Suppliers

8.01 Objectives, performance and targets

What we said we would do	What we did	SDGs	Progress*
Qualification, selection and assessment of suppliers			
Monitor supply companies' social responsibility towards their workers: carry out more than 30 audits of suppliers (locations and construction sites) in 2022.	Monitor supply companies' social responsibility towards their workers: more than 90 evaluation questionnaires were collected and 47 audits carried out at suppliers' locations and construction sites in 2022. (see p. 384)	8	
Continue to assign a significant score for aspects of environmental and social sustainability in tenders using the most economically advantageous bid criterion.	39/100 Average score for aspects of sustainability in tenders carried out in 2022 with the most economically advantageous bid criterion. (see p. 295)	8, 12	
Continue to give value to quality, safety, environmental and social responsibility management systems when selecting suppliers.	Value given to certified management systems continued in 2022: the value of suppliers with ISO 9001 came to 86.3%; 67.7% with ISO 14001 / Emas; 60.7% with ISO 45001; 32.9% with SA 8000. (see p. 291)	8, 12	
10% of the value of tenders awarded in 2022 related to circularity criteria through the application of the new Circular Procurement Guidelines and the related Operational Instruction defined in 2020.	The value of tenders with 'circularity' criteria reached 10.4% of the total value of new tenders assigned in 2022. (see p.384)	12	
Contract management			
Analyse all accidents reported by companies providing services and works to the Hera Group and reporting their rates.	All accidents reported by companies providing services and works to the Hera Group were analysed: 284 accidents reported (as against 313 in 2021) and the frequency rate was 22.8 (as against 22.4 in 2021). (see p. 299)	8	
* Result achieved or in line with planning; Result with slight variance compared to planning; Result with significant variance compared to planning.			
What we will do		SDGs	
Qualification, selection and assessment of suppliers			
Supplier monitoring with multifunctional teams (corporate social responsibility and safety): in 2023, carry out more than 30 audits at suppliers' facilities (offices and construction sites); (47 in 2022)		12	
Continue to assign a significant score to environmental and social sustainability factors in tenders using the economically most advantageous bid.		8, 12	
Begin monitoring suppliers' "EGS maturity" index, launching a new eProcurement portal, through a dedicated questionnaire at the supplier qualification stage		8, 12	
More than 10.5% of the value of procurements in 2023 with circularity criteria (10.4% in 2022), through the application of the circular procurement Guidelines and the related Operational instruction defined in 2020		8, 12	
Contract management			
Analyse all accident events communicated by the Hera Group's suppliers of services and works and record the related rates.		8	

8.02 Suppliers

[2-6]

At the end of 2022, the number of companies supplying the Hera Group with **goods, services, professional services and works** included in the record stood at **6,396**. The existence of a single record of qualified suppliers for the entire Group provides an **opportunity in terms of growth** for the suppliers themselves, since they are guaranteed the possibility of expanding their business relations across all the product groups for which they have requested and obtained qualification.

Unless otherwise indicated, the data reported in this chapter refers to the companies Hera Spa, AcegasApsAmga Spa, AcegasApsAmga Servizi Energetici Spa, Hera Luce Srl, Herambiente Spa, Frullo Energia Ambiente Srl, Herambiente Servizi Industriali Srl, Hestambiente Srl, Hera Comm Spa, Estenergy Spa, Inrete Distribuzione Energia Spa, HeraTech Srl, Marche Multiservizi Spa and Uniflotte Srl; this data excludes intercompany purchases.

The table below shows suppliers by product category who received orders or active contracts with consumption during each year. Of these suppliers, 56% were qualified to supply services.

SUPPLIERS ACTIVE DURING THE YEAR BY PRODUCT CATEGORY

Number	2020	2021	2022
Goods	1,626	1,522	1,478
Services	2,640	2,615	2,579
Works	392	435	471
Total	4,123	4,043	4,034

Some suppliers may belong to more than one class and, as a result, the sum of the individual items does not correspond to the total number of Suppliers. This data does not include the companies Acantho, Hera Trading, Aresgas, Aliplast, ASA, Biorg, Feronia, Recycla, Vallortigara, Amgas Blu, Eco Gas, Con Energia, Macero Maceratese, Hera Comm Marche, Wolmann, Marche Multiservizi Falconara, Green Factory.

The **main activities outsourced** by the Hera Group in the area of waste management services include mechanised waste collection, door-to-door waste collection, street sweeping and washing (manual or mechanised), street bin washing, and the management of sorted waste collection centres. As far as network services are concerned, Group companies mainly use external suppliers to perform highly specialised maintenance and plant engineering activities and metering service activities (readings, closing and opening, etc.). In addition, facility management (global service), commercial call centre and delivery activities are outsourced.

In terms of economic value, in 2022 the Hera Group commissioned purchases coming to **over 1.3 billion euro**, of which more than 28 million euro went towards purchases from other European countries and 3 million euro from non-European countries (Switzerland, Great Britain, San Marino, USA, Canada).

The **impacts caused by the Hera Group's supply chain** mainly concern compliance with occupational health and safety standards, aspects of social sustainability and the environmental impact of outsourced activities.

Raw materials procurement

In 2022, roughly 22% of the **natural gas sold by** the Group's sales companies was purchased from Eni Gas & Power, roughly 5% from Axpo Italia, roughly 2% from Edison Energia, roughly 1% from Enel Trade, roughly 2% from Engie Italia, while 68% was purchased through Hera Trading (which in turn purchased spot gas on the main European hubs and at the virtual trading point).

As far as the electricity market is concerned, 31% of sales to end customers on the free and protected markets were covered by bilateral purchases from other operators, and 69% by purchases on the exchange. The way in which electricity is traded, both in the case of exchange purchases and in particular in bilateral trading, does not allow the physical origin of the energy to be traced. For a breakdown of the **energy mix** used to generate the electricity sold by the Hera Comm group in 2022, see the paragraph "Energy transition and renewables" in the chapter "Pursuing carbon neutrality".

8.03 Qualification, selection and assessment of suppliers

The **supplier qualification and evaluation system** allows for a verification of technical, economic and organisational quality requirements, as well as compliance with environmental, safety and corporate social responsibility standards, and the application of the Group's Code of Ethics.

The vendor management system

Since 2012, the **vendor management system** has provided a model for supplier self-registration and qualification. It is intended for all companies interested in freely applying to be included in the Hera Group's supplier list, for any product category. The "**e-Procurement**" vendor management portal allows suppliers to use a **transparent, equal and traceable** tool to qualify for and participate in tenders called by the Hera Group.

Within the qualification area of the supplier portal, companies can access purchasing categories and take advantage of the following services:

- independently update the profiles in question and apply for new product groups within the accredited supplier system, if necessary;
- autonomously update their own register, as well as the schedule for qualification documents;
- check their qualification status and periodic evaluation;
- gain the opportunity to be contacted to submit economic offers;
- gain the opportunity to receive information on the assignment of a contract;
- be kept up-to-date on initiatives of economic interest to the Group.

In 2022, the Hera Group negotiated **99% of its total volumes** on the **e-procurement platform**. Suppliers are supported in the use of this platform by a dedicated help desk service, to which 8,203 requests for information were received in 2022, all of which were resolved within the timeframe established by company procedures.

During 2023, the process of replacing the current e-Procurement portal will begin, with a view to continuously improving and streamlining relations with the supplier base.

The **new portal** will provide a tool that includes, alongside the current Vendor Management and tender management forms, a "contract management" form, with the aim of further **digitising** interfaces with suppliers and **simplifying the management of** information flows from the qualification phase to the executive phase of contract management.

In addition, a project to overhaul the Vendor Management and Vendor Rating System was launched in 2022. With the new portal, and following an in-depth risk assessment, the new model will give more value on the one hand to product categories having a greater impact on business and quality, safety and environmental aspects and, on the other, to a vendor qualification system that also takes into account the **assessment of operating and financial aspects and ESG maturity**.

An automatic and traceable system based on **rotation in inviting suppliers** to negotiated tenders has been in place since 2017. Based on a series of parameters, including the number of invitations received, their distribution over time and their vendor rating, this system provides further guarantees during the process of selecting and rotating suppliers, with the **utmost transparency** and in line with Hera Group guidelines. Note that in 2022, the Hera Group invited an average of over **21 suppliers for each tender negotiated**, confirming the Group's approach, based on open and transparent competition among suppliers, in line with the guidelines set out by current legislation.

The supplier qualification procedure

[308-1]
[414-1]

Qualification and assessment of all suppliers is regulated by a verification of technical, economic and organisational quality requirements, compliance with environmental, safety and corporate social responsibility standards, and also by their **acceptance of the Group's Code of Ethics**. Moreover, supply contracts prepared by Group companies contain termination clauses in the event of non-compliance with the Code of Ethics shown by suppliers.

The Hera Group's supplier qualification process has been formalised as part of a specific procedure thanks to the establishment of a **single list of trusted economic operators**, managed by the Purchasing and Procurement Department of Hera Spa. Suppliers invited to carry out negotiated procedures are periodically selected from this list. These suppliers are, therefore, selected for all Group companies on the basis of qualification requirements, divided into:

- standard requirements: the same for all product categories;
- specific requirements: linked to a specific product category.

Among the numerous **criteria** identified by the Group for the qualification and selection of new Suppliers, those having an **environmental and social** nature are particularly important. For example:

- declaration of acknowledgement and acceptance of: **Code of Ethics; Model for the prevention of corruption; General Regulations for Quality-Safety-Environment-Energy and Social Responsibility** for contractors and/or self-employed workers operating within the Hera Group; **Quality and sustainability policy; Policy for personal data protection;**
- respect of the **occupational safety obligations** defined by Italian law;
- compliance with current legislation with regard to the **right to work of the disabled;**
- presence of **disadvantaged employees** in the company workforce, out of total workers;
- registration in the regional register of **social cooperatives;**
- declaration of broad knowledge of the principles and **regulations concerning Corporate Social Responsibility**, and commitment to comply with the principles and requirements included therein and to participate in monitoring and verification activities carried out by the Hera Group, and to assess any corrective measures required;
- possession of the following **system certifications**: ISO 9001; ISO 14001 (or, alternatively, Emas registration); ISO 45001; SA 8000; ISO 50001; ISO 37001 (as of 2021);
- possession of a certificate of registration in the **national register of environmental managers**, related to the activity involved in the product group;
- possession of valid registration with the appropriate Prefecture for the sectors of interest identified by the Prime Ministerial Decree of 18 April 2013 and subsequently extended by Law 40/2020 (law converting with amendments Law Decree 23/2020, so-called Liquidity), in the **list of Suppliers not subject to mafia infiltration attempts** (so-called **white list**); otherwise, presentation of a formal commitment to apply for this registration.

Also in 2022, the automated system for verifying the **regularity of Inps/Inail contributions** at the appropriate Single Social Security Office became fully operational. This facilitates monitoring and management of suppliers, as does the Cassa Edile for all active suppliers found in the Hera Group's registry, including bodies grouped together in temporary business associations (mandatory and mandating companies), consortia and specific contractors, subcontractors and sub-subcontractors relating to the individual document for the purchase of services (order and/or contract).

Furthermore, after a contract is awarded, note that the staff of the Purchasing and Procurement Department is in charge of **verifying**, with the appropriate bodies, the **possession of the requirements declared in the tender** pursuant to Article 80 of the Procurement Code. More specifically, judicial records, compliance with Law no. 68/1999 on the disabled, tax regularity, the Anti-Mafia Database, and the Anac Register are checked, involving a total of over 6,000 verifications per year.

In order to guarantee business operations, and **only in exceptional cases**, the Group provides for the possibility of making **exemptions**:

- **occasional** supplier: in the event of requirements involving trial circumstances, it is possible to issue a single purchase document to a qualified supplier with a simplified procedure. This "occasional" supplier, in order to receive further purchase orders, must obtain full qualification in compliance with the Hera Group's rules;
- **exclusive** supplier: in the event of unavoidable requirements, purchase documents can be issued to a qualified supplier with a simplified procedure, as an exclusivist;
- procedure for **purchases with order vouchers**: purchase of spot goods having low economic value, by issuing order vouchers to suppliers based on special agreements or without special agreements;
- procedure for **other purchases** which, by way of their very nature (e.g. legal fees, notary fees, couriers, translations), **do not require the prior qualification of suppliers**.

Otherwise, the purchase must be properly registered in accordance with the rules established by the Group.

Suppliers by type of certification

The amount of purchases from ISO 45001-certified suppliers rose compared to 2021 (+1.3 p.p.), while the amount of purchases from ISO 9001 and ISO 14001 or Emas-certified suppliers remained stable and the amount of purchases from SA 8000-certified suppliers dropped compared to 2021 (-5.3 p.p.).

These results are a consequence of the **direct actions** taken by Group companies, which systematically include in their tenders, or in the supplier qualification phase, an indication of the **possession of certifications as a requisite** for participation and/or a highly beneficial requisite for the tender. They

also reflect the increased sensitivity shown by companies in considering certifications as an element providing greater competitiveness.

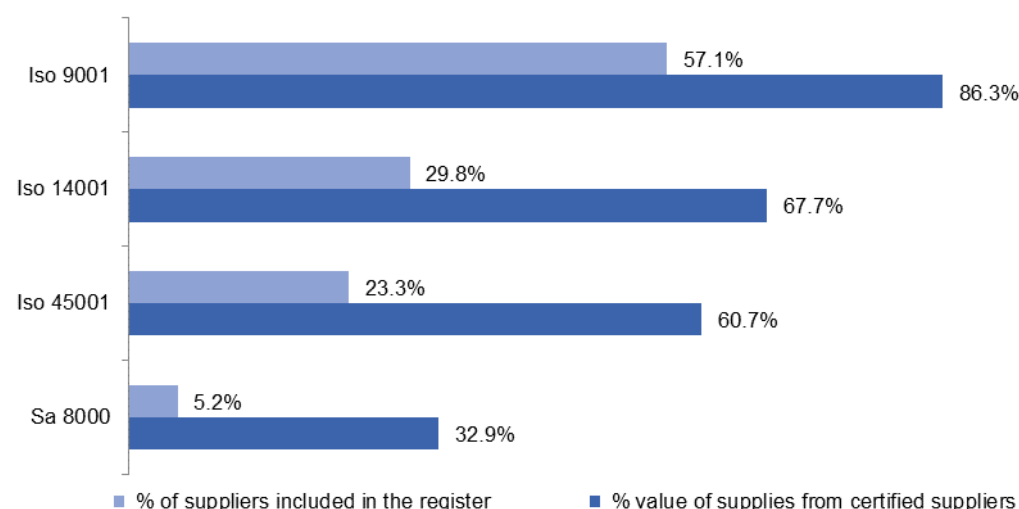
PROCUREMENT FROM CERTIFIED SUPPLIERS - VALUE BREAKDOWN BY TYPE OF CERTIFICATION (% OF TOTAL SUPPLIES)

%	2020	2021	2022
Quality certification (ISO 9001)	87.6%	86.8%	86.3%
Environmental certifications (ISO 14001 - Emas)	65.7%	67.2%	67.7%
Occupational safety (ISO 45001)	56.8%	59.4%	60.7%
Social certification (SA 8000)	39.4%	38.2%	32.9%
Total supplies (mn€)	1,136.2	1,199.7	1,365.6

This data does not include the companies Acantho, Hera Trading, Aresgas, Aliplast, ASA, Biorg, Feronia, Recycla, Vallortigara, Amgas Blu, Eco Gas, Con Energia, Macero Maceratese, Hera Comm Marche, Wolmann, Marche Multiservizi Falconara, Green Factory; intercompany purchases are excluded.

The percentage in terms of the value of contracts awarded to certified suppliers is always higher than the percentage of qualified suppliers having certifications. This point of view also clarifies the effects of systematically requiring possession of certifications in the qualification and selection of suppliers.

PORTION OF SUPPLIES WITH RESPECT TO THE NUMBER OF POOL SUPPLIERS (2022)



Supplier monitoring and evaluation

[403-7]
[308-2]
[414-2] Monitoring suppliers, giving particular attention to respect for the environment, energy efficiency, and quality, safety and corporate social responsibility requirements by all parties involved, is carried out over the **entire supply chain**, including the main companies in Temporary business groupings (TBG), consortia companies, subcontractors and sub-suppliers (if any).

The system, aimed at ensuring greater consistency and fairness in the evaluations carried out Group-wide, is guaranteed by a verification of the qualification requirements carried out by the vendor management system, **specific checks** by the company contact persons of the contract (who are in turn subjected to **internal audits** on compliance with procedures), **inspections at the companies' premises** by a third-party certified person, supported by the Vendor rating and assurance function, and **internal audits**.

By overseeing the various **monitoring activities and a detailed analysis of the reports generated**, it is possible to improve procurement governance, as well as to extend to all companies involved in the execution of the contract the control mechanisms provided for by the Group's procedures, overseeing the entire chain of economic actors involved in the performance.

Detailed audits by contractual contact persons and/or construction managers, carried out directly or through their assistants, make it possible to monitor the contractual performance of suppliers in the key areas of quality, safety and the environment, energy saving and corporate social responsibility, thus ensuring a proper **periodic evaluation** of qualified suppliers with active contracts.

These audits take place for the **supply of goods** at the time when they are received, for **services and works** during the progressive performance of the services, by filling out and signing specific **monitoring check-lists**, which are also related to the controls carried out on all subjects involved (including principals, executing companies, subcontractors and sub-suppliers, if any). The **number of inspections** for services and works is defined on the basis of the contractual amount, the duration of the contract and the criticality in terms of quality, safety and the environment and corporate social responsibility of the services monitored.

Any "non-conformities" detected, always preceded by the rapidly sent check-list to the supplier, to record any applicable counter-findings, are classified on the basis of the major certifications present in the Hera Group: ISO 9001 (quality of performance), ISO 14001 (respect for the environment), ISO 45001 (respect for safety), ISO (respect for energy regulations), ISO 37001 (anti-corruption), in addition to guaranteeing corporate social responsibility, and thus make it possible to ensure a rapid and correct periodic assessment of qualified companies.

NON-CONFORMITIES IDENTIFIED BY TYPE

Number	2020	2021	2022
Observation	74	100	117
Relatively insignificant non-compliance	58	91	69
Serious non-compliance	236	271	238
Extremely serious non-compliance	204	269	195
Total	572	731	619

This data does not include the companies Acantho, Hera Trading, Aresgas, Aliplast, ASA, Biorg, Feronia, Recycla, Vallortigara, Amgas Blu, Eco Gas, Con Energia, Macero Maceratese, Hera Comm Marche, Wolmann, Marche Multiservizi Falconara, Green Factory; intercompany purchases are excluded.

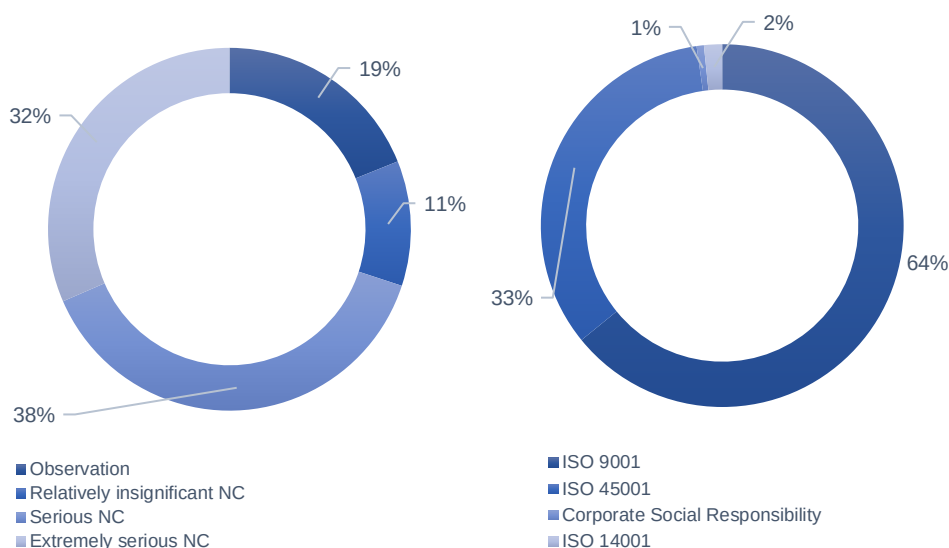
NON-CONFORMITIES IDENTIFIED BY CERTIFICATION

Number	2020	2021	2022
ISO 9001	359	443	397
ISO 45001	187	254	208
Corporate Social Responsibility	8	6	4
ISO 14001 or Emas	18	28	10
Total	572	731	619

This data does not include the companies Acantho, Hera Trading, Aresgas, Aliplast, ASA, Biorg, Feronia, Recycla, Vallortigara, Amgas Blu, Eco Gas, Con Energia, Macero Maceratese, Hera Comm Marche, Wolmann, Marche Multiservizi Falconara, Green Factory; intercompany purchases are excluded.

Across the Group, **619 non-conformities** were detected in 2022, down 15% from the previous year, partially due to the internalisation of some services. Out of the total, 512 non-compliances (roughly 83%) were concluded within 31 December 2022. Seventy per cent of the non-conformities turned out to be serious or extremely serious, down slightly from the previous year (74% in 2021). Each non-conformity recorded and concluded corresponds to a decrease in the supplier's score, in relation to the severity of the non-conformities detected.

NON-CONFORMITIES IDENTIFIED (2022)



Following the audits jointly carried out, as described in the case study “Supplier monitoring plan with a focus on social responsibility” in the Suppliers chapter, and based on the critical elements detected, a new **training campaign** was developed and the **on-the-job training** sessions started the previous year were continued. In addition, in 2022, inspections on Corporate social responsibility continued to be carried out at suppliers’ premises, as described in the above-mentioned case study. In some cases, partially non-compliant behaviour was found, which was quickly noted, after which **corrective actions** were rapidly introduced.

On a quarterly basis, suppliers with active contracts receive an **update of their** score in the vendor rating system, with an increase reflecting the absence or presence of anomalies during the period.

This updated evaluation can always be consulted and assessed independently by the supplier in its reserved area of the supplier portal. The scores are divided into **three categories** that contribute to the rotation, selection and invitation, by individual buyers, of suppliers qualified for a specific class of merchandise concerned by the tenders under private negotiation carried out by the Hera Group. Suppliers in the critical category are excluded from invitations unless they subsequently fall, thanks to corrective actions and/or rapid improvement plans, into the qualified categories.

Category	Scoring range	Reliability
Green area	75 - 100 points	medium reliable - very reliable
Yellow area	60 - 74 points	sufficiently reliable - moderately reliable
Red area	< 60 points	critical

The supplier assessment **monitoring and management model** ensures that **bonuses** are granted a quarterly basis in the absence of anomalies, and that decreases are calculated and allocated when the analysis of **anomalies** (nonconformities) is concluded and specific corrective actions are defined. Thanks to an ongoing revision and standardisation of the monitoring checklists (published on the company’s intranet, always available to compilers), an increasing consistency of the content of the controls carried out and the fairness of the assessments made at Group level is guaranteed. This assigns, in a standardised way, a decrease in the score given to specific suppliers (including principals, contractors, subcontractors/sub-subcontractors) responsible for non-compliant behaviour, which can be detected by the field monitoring documentation (check-list) compiled by the contractual contact or their delegate. Suppliers incurring **serious or very serious non-compliances** may be subject to temporary suspension from new invitations to tender for a period ranging from three to six months. **No suspensions** were carried out in 2022.

Selecting suppliers: tenders awarded adopting the most economically advantageous bid method

Since 2008, the Hera Group's **Procurement Guideline** have favoured the most economically advantageous bid method as a criterion for evaluating bids using sustainability criteria consistent with the principles of the Code of Ethics and in compliance with current legislation on public contracts.

Within the areas identified by the Guidelines and, more specifically, **respect for the environment, social commitment, performance quality and economic value**, sustainability criteria have been defined based on the experience gained in managing contracts tendered using the most economically advantageous bid method and the applicable regulations, in line with the Group's objectives. For each business area, a **minimum number of sustainability criteria** to be considered when choosing a supplier have been established, based on the contract's economic value and criticality (evaluating the contract's impact on the environment, workplace safety, the quality of the service provided to customers, the duration of the contract or the amount). The choice of **sustainability criteria** falls under the responsibility of the Purchasing and Procurement Department of Hera Spa and the Purchasing and Procurement Departments of AcegasApsAmga and Marche Multiservizi, which, in agreement with the company contact persons concerned, choose the criteria to be adopted for the type of tender, the weight given to the sustainability criterion in relation to the tender in question, and the assessments with respect to previous tenders and their results. The Purchasing and Procurement Department of Hera Spa may make use of technical support provided by the Shared Value and Sustainability Department and the Quality, Safety and Environment Department in the choice of criteria.

The main criteria adopted include: management of atmospheric emissions and noise; preventing, reusing and recycling waste; energy efficiency; reducing the hazardous substances used; reducing water consumption; adopting a company's own Code of Ethics; inclusion of disabled and disadvantaged workers; accident prevention and safety training (social commitment); the quality of materials, tools and equipment; professional qualifications and skills and technical performance and output. In 2019, additional criteria related to the **circular economy** were introduced, as described below in this chapter and in the case study dedicated to the application of circular economy principles along the supply chain.

Note that as part of Hera Spa's **ISO 50001** certification process, it has been stated in corporate procedures that any business unit which so requires, if it is found that the outsourced activity or asset has a significant impact on the Group's energy consumption, must proceed with an assessment of the energy efficiency requirements on the basis of an Energy Management document used for the assessment of the energy impact.

The **main innovations in the Procurement Code** (published with Italian Legislative Decree 50/2016 and implementing the EU directives issued on the matter and establishing the new law to apply to tenders and public contracts, as subsequently amended by Italian Legislative Decree 56/2017, by the so-called "Sblocca cantieri" Decree (Decree on unblocking construction sites - Italian Legislative Decree 32/2019), subsequently converted into Italian Law 55/2019) include the **definition of the awarding method based on the economically most advantageous bid as mandatory and the sole method to be used in certain cases** (Art. 95) such as, for example, labour-intensive services (including cleaning or school services), engineering, architecture services or those having a different technical or intellectual nature for amounts higher than 40 thousand euro.

The Hera Group's Procurement Guidelines actually **anticipated** these virtuous practices in supplier selection by **about ten years**.

PUBLIC TENDERS USING MOST ECONOMICALLY ADVANTAGEOUS BID METHOD

	2020	2021	2022
Number of public calls for tenders published	72	72	68
Number of public calls for tenders published with the most economically advantageous bid method	44	38	44
Value of public tenders published (mn€)	688.4	426.5	575.1
Value of public tenders published with the most economically advantageous bid method (mn€)	590.8	336.1	546.1
Value of tenders with most economically advantageous bid method (% of total value of tenders)	85.8%	78.8%	95.0%
Average score assigned to aspects of sustainability in public tenders assigned during the year	41.7	38.4	40.6

This data does not include the companies Acantho, Hera Trading, Hera Luce, AcegasApsAmga Servizi Energetici, Aresgas, Aliplast, ASA, Biorg, Feronia, Recycla, Vallortigara, Amgas Blu, Eco Gas, Con Energia, Maceratese Macero,

Hera Comm Marche, Wolmann, Marche Multiservizi Falconara, Green Factory; intercompany purchases are excluded.

In 2022, 68 public tenders were published, with a total auction base coming to approximately 575 million euro: of these, 44 tenders were carried out following the most **economically advantageous bid method**, amounting to a total of 546 million or 95% of the overall value of the tenders issued (as against 79% in 2021).

The **average score assigned for aspects of sustainability** in public tenders was **40.6** (+5.7% compared to 2021).

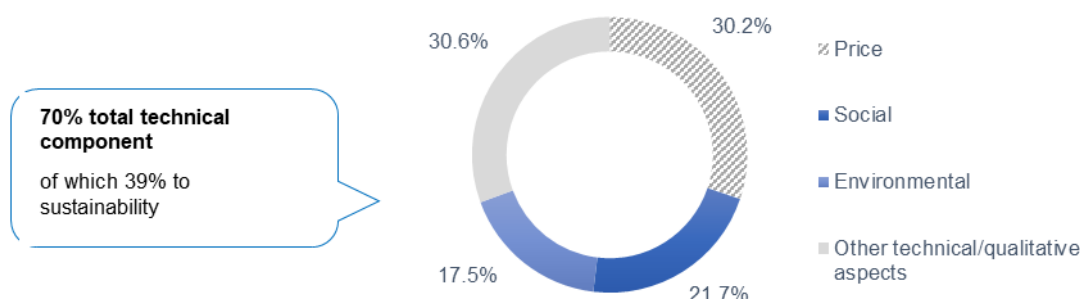
TOTAL TENDERS WITH MOST ECONOMICALLY ADVANTAGEOUS BID METHOD

	2020	2021	2022
Value of total tenders to which the most economically advantageous bid method is applicable (mn€)	1,043.0	681.0	831.4
Value of tenders with most economically advantageous bid method (%)	63.9%	65.1%	67.7%
Value of the most economically advantageous bid method with sustainability criteria (%)	96.3%	98.6%	97.9%
Value of tenders with most economically advantageous bid method related to circularity criteria (%)	12.5%	12.5%	13.8%
Average score assigned to aspects of sustainability in tenders with most economically advantageous bid method	40.6	37.8	39.2
<i>of which average score assigned to aspects of circularity in the most economically advantageous bid method</i>	8.5	8.3	13.2

This data does not include the companies Acantho, Hera Trading, Hera Luce, AcegasApsAmga Servizi Energetici, Aresgas, Aliplast, ASA, Biorg, Feronia, Recycla, Vallortigara, Amgas Blu, Eco Gas, Con Energia, Maceratese Macero, Hera Comm Marche, Wolmann, Marche Multiservizi Falconara, Green Factory; intercompany purchases are excluded.

Extending the analysis to all tenders and not only to public tenders, across the Group in 2022 **68% of tenders were awarded using the most economically advantageous bid method**: in terms of value, **98%** of these were awarded including sustainability criteria among the technical criteria. The average score assigned to the technical component was 70 points out of 100, of which **39 points were related to sustainability criteria: 18 related to environmental aspects** (of which more than 13 to circularity aspects) **and 22 to social aspects**.

TOTAL TENDERS WITH THE MOST ECONOMICALLY ADVANTAGEOUS BID METHOD: SCORES AWARDED TO THE VARIOUS COMPONENTS (WEIGHTED AVERAGE OUT OF THE AMOUNT) (2022)



The Group intends to continue to assign a **significant score for aspects of environmental and social sustainability** in tenders issued under the most economically advantageous bid method.

In terms of the importance and relevance assigned to sustainability criteria in the evaluating offers, the tenders having a value of more than 10 million euro awarded in 2022 are listed below:

Type	Description	Local area	Amount (mn€)	Duration (years)	Technical component	Sustainability score
Open procedure tender	Integrated and coordinated real estate maintenance and management service	ER - TR	78	5	75	Environmental (45, of which 45 on circularity): ISO50001, global service efficiency, self-monitoring/self-control systems, gardening management with electrical equipment, use of environmentally friendly products (European ecolabel), ESCO 11352 Social (19): SA 8000, ISO 45001, legality rating, documented experience of "employees" limited to the tasks required in C.S.S., ISO 37001 Other technical aspects (11)
Restricted procedure tender	Managing information and device requests from Hera Group customers and for the sale of products and services, through contacts	ER	42	3	70	Environmental (2, of which 2 on circularity): commitment to dispose of obsolete (end-of-life) IT equipment. Social (21): existence of a trade union agreement on telephone recording of calls, existence of an incentive plan on commercial results, existence of a trade union agreement on flexible working hours, existence of social welfare projects, OHSAS18001, use of remote working for operators, workstations available at the operating sites from which the client's service is provided. Other technical aspects (47)
Open procedure tender	Execution of emergency services for the gas network and scheduled maintenance, network extension, connections and access	ER	36	2	70	Environmental (15, of which 11 on circularity): registration in the National Register of Environmental Managers under category "2BIS", environmental impact of equipped vans, equipped vans with exclusive electric power supply, commitment to deliver to recovery plants a percentage of excavated soil and rocks otherwise destined for landfills, commitment to use a percentage of plastic material made from secondary raw materials in the context of worksite equipment, adoption of a system of sorted collection of waste from worksite activities, ISO14001. Social (24): legality rating, SA8000 certification, number of staff with asbestos qualification, number of staff with pollution-suspect environment requirements, number of training sessions for 'supervisor' qualification, number of training sessions on road signs, ISO45001, accident rate trend. Other technical aspects (31)
Open procedure tender	Collection and transportation of municipal and assimilated waste	ER	33	4	70	Environmental (30, of which 8 on circularity): Average age of the vehicles, environmental impact of the vehicles offered, vehicle power supply offered by the competitor (electric/methane/LPG) Social (6): SA8000, ISO45001 Other technical aspects (34)
Open procedure tender	Scheduled maintenance and network extension	ER	32	2	70	Environmental (16, of which 13 on circularity): environmental impact of equipped vans, equipped vans with exclusive electric power supply, use of long-term leasing/rental vehicles by the economic operator, commitment to deliver to recovery plants a percentage of the excavated soil and rock otherwise destined for landfills, commitment to use construction site equipment and material in the construction of underground ducts certified for recycled and/or recovered and/or by-product content for the performance of the work in question, ISO14001

Type	Description	Local area	Amount (mn€)	Duration (years)	Technical component	Sustainability score
						Social (17): Number of personnel in possession of the requirements concerning pollution suspected and/or confined environments, Accident rate trend, ISO 45001, SA8000, Employee personnel made available, possessing the qualification of 'supervisor', Employee personnel made available, in possession of the qualification of 'street sign supervisor' Other technical aspects (37)
Open procedure tender	Auxiliary activities on gas, water, electricity and heat (district heating) metering units, related to services provided in the areas managed by Hera Group companies	ER	13	2	 70	Environmental (10 of which 6 on circularity): environmental impact of vehicles, exclusively electrically powered vehicles, ISO14001. Social (39): SA8000, accident rate trend, ISO45001, number of PEI-qualified employees, number of employees made available with training in gas measurement units, number of fire training interventions, number of first aid training interventions. Other technical aspects (21)
Open procedure tender	Specialised mechanical maintenance work to be carried out on water cycle, gas and district heating systems	ER	11	1	 70	Environmental (22, of which 18 on circularity): ISO 14001 certification, average age of vehicles, Use of leasing/long-term rental vehicles by the economic operator, Commitment to use EU ecolabel-certified paint products for the performance of the work in question, Commitment to use EU ecolabel-certified lubricants for the performance of the work in question, Commitment to use carbon steel carpentry certified for recycled and/or recovered and/or by-product content, Commitment to use stainless steel carpentry certified for recycled and/or recovered and/or by-product content Social (40): training interventions in the areas of first aid, fire-fighting, supervisor; legality rating, ISO45001, SA8000, accident rate trend, number of staff meeting the requirements for pollution-suspected and/or confined environments, number of PES-certified staff (PES license certification) Other technical aspects (8)

In the pie charts, the points assigned for the price are barred, those assigned for environmental sustainability are in light blue (with circularity-related criteria underlined), those for social sustainability are in blue and those for other technical aspects forming part of the technical components are in grey.

8.04 Contract management

The **Procurement Guidelines**, consistently with the Group's Code of Ethics and its organisational model, pursuant to Legislative Decree 231/2001 and the related "**Procurement Protocol**", define the basic principles of the Hera Group's procurement activities when acquiring goods, services and works required to operate, both on the free market and when subject to public procurement regulations (Public Contracts Code, Legislative Decree 50/2016).

Note that Hera Spa has been ISO 37001:2016 certified since 2019. This certification consists in adopting a management system aimed at **preventing and addressing possible cases of corruption** and **promoting an ethical corporate culture**. This certification required some changes to be made to the general terms and conditions for contracts adopted in tender procedures, aimed at making this

management system operational from the point of view of procurement. More specifically, during the meeting held on 25 September 2019, Hera Spa's Board of Directors adopted the Corruption prevention model, integrated into the Organisation and management model, pursuant to Legislative Decree 231/2001, whose foundation lies in the principles and values expressed in the Code of Ethics and the Quality and sustainability policy adopted by the Hera Group.

Use of subcontracts

With regard to subcontracts, the **procedure** introduced was **used** in 2021, with full compliance also shown by AcegasApsAmga, but not yet by Marche Multiservizi.

The **authorisation to subcontract** makes the works directors and company contract representatives responsible for document checking activities, while Hera Spa's Vendor rating and assurance department is responsible for validating the process, verifying the regularity of social security contributions, checking the list of qualified suppliers and their score, searching the Anac electronic records and, if necessary, requesting anti-mafia information from the Prefecture, with direct access to the National anti-mafia data bank as well as requesting a Criminal records certificate. All documentation concerning the request, verification and authorisation has been **standardised across the Group** and is kept up to date with the reference legislation by the Group's Tenders and regulations department. All the documentation is available to companies in the reserved document area of the supplier portal and to all employees via the Company's intranet.

The obligations necessary in **monitoring the activities of subcontractors at worksites** (supplier monitoring check-list) have been consolidated, along with obligations allowing for simple, correct and accurate monthly administrative reporting, including a precise verification of payments and wage recognition to employees.

The Group's **standard specifications**, in accordance with the reference legislation, require the contractor to pay its subcontractors and to provide the works manager, upon request, with adequate proof of payment with regard to the various Works progress reports (WPR) and/or Performance certification forms (PCF) issued. In the absence of such proof, the Works manager/Company contract manager notifies the appropriate administrative department of the suspension of payments only concerning the non-proven amount in the subsequent WPR/PCF until such time as the payment has been made. This method is an alternative to direct payment of subcontractors and can be activated directly at the beginning of the contractual relationship in the case of micro/small enterprises, as provided for by law, or during the course of work in other cases.

In 2022, **81 million euro were subcontracted** (as against 64 million in 2021 and 46 million in 2020), equivalent to 7% of the amount of works and services outsourced by the Group, while the amount disclosed for the subcontracts managed came to 20 million euro (as against 28 in 2021 and 15 in 2020), equivalent to 2% of the total works and services outsourced by the Group. These figures were up compared to 2020 and 2021 due to significant changes in the regulatory framework, which gradually increased the percentage of contractual amounts to be subcontracted.

Timing for payment as per contract

Average contractual payment times for supplies gradually decreased, settling at 55 days in late 2022 (confirming the 2021 data; this figure came to 59 in 2020 and 65 in 2019), consistent with the contractual standard that sets average payment times at 60 days for the Hera Group.

Monitoring accidents on suppliers' workplaces

In line with the principles and objectives of the Hera Group and in order to have a complete picture of the impact of accidents as regards the activities carried out, directly and indirectly, the **Hera Group monitors the accident rates of its suppliers of works and services**. The specifications and contracts involved require suppliers to notify Hera as follows:

- accident events, near misses and environmental incidents must be reported within the first working day following the event itself, recording them on the Hera Group's E-procurement platform;
- at the end of the contract, or within mid-February for multi-year contracts, suppliers must draw up an "Annual accident summary", once again recording it on the Hera Group's E-procurement platform.

This phase of data collection and analysis has been computerised, using the Sap Srm platform.

[403-9]

NUMBER OF AND RATE OF ACCIDENTS AND INJURIES AT SUPPLIERS OF SERVICES AND WORKS

	2020	2021	2022
Number of injuries on the workplace	288	313	284
Rate of injuries on the workplace (frequency)	22,3	22,4	22,8
Number of deaths as a result of accidents at work	0	1	0
Death rate due to injuries on the workplace	0	0,07	0
Hours of work	12.928.044	13.944.492	12.446.283

The frequency rate is the number of accidents per million hours of work. The death rate is the number of deaths per million hours of work. This data does not include the companies Acantho, Hera Trading, Aresgas, Aliplast, ASA, Biorg, Feronia, Recycla, Vallortigara, Amgas Blu, Eco Gas, Con Energia, Macero Maceratese, Hera Comm Marche, Wolmann, Marche Multiservizi Falconara, Green Factory; intercompany purchases are excluded.

In 2022, **1,601 suppliers** (1,633 in 2021) reported **data on accidents**, for a contract value totalling 795 million euro (728 million in 2021), representing 83% of the value of services and works supplied (professional services and consultancy excluded, since they are not considered significant from the point of view of occupational safety).

On the whole, **284 accidents were reported**; data processing showed an average frequency rate coming to 22.8 (as against 22.4 in 2021) and a severity rate of 0.55 (unchanged with respect to 2021). Both rates were essentially in line with the previous year, with a slight increase in the frequency rate.

Analysing this data for the **most significant product categories from the point of view of accidents**, the following rates emerge:

- for the works category ("general works"), the frequency rate was 14.1 and the severity rate was 0.44 (in 2021, these rates came to 20.1 and 0.60, respectively);
- for the waste management services category, the frequency rate was 38.5 and the severity rate 0.75 (in 2020 they came to 31.6 and 0.78, respectively).

8.05 Supplier relations

In order to support companies along its supply chain in their search for and selection of a qualified workforce, in 2022 the Hera Group made it possible for its contracted suppliers to access a **subsidised agreement** with the Manpower group.

In an increasingly complex and challenging employment context, this initiative intends to respond to the growing **need for recruitment** to take place through a specific project, which relies on an extensive marketing campaign, the most appropriate candidate assessment methodologies and an outstanding training programme, geared towards developing technical skills and content in the field of safety.

This agreement provides an opportunity for supply chain companies to tap into a pool of **qualified and appropriately trained operators, who** can then be employed on construction sites and/or in current service contracts with the Hera group.

Furthermore, in order to face the exceptional market situation that has seen a crisis in raw materials procurement markets since the second half of 2021, the Hera Group has introduced a series of **concrete measures to support suppliers**, in order to guarantee operations in worksites and essential services. More specifically, starting in March 2022, almost 500 critical contracts were revised, introducing special **price adjustment mechanisms** (so-called "addendum") and anticipating the measures foreseen by legislation only at a later date – and only partially – with the publication of the so-called "Help LD". For these contracts, prices were updated on a monthly basis thanks to the application of specific adjustment formulas linked to trends in the main price lists (e.g. fuel, metal, etc.). The application of this tool in 2022 resulted in **remuneration coming to roughly 28 million euro** for additional costs, benefitting over 300 Suppliers.

In addition to the economic adjustment schemes described above, the Hera Group also ensured the utmost **logistical support for its contractors** by making construction materials available from Hera's stored stock when necessary.

Thanks to a rapid renegotiation of contracts and an integrated strategy offering logistical support along the supply chain, the Hera Group was able to guarantee **continuity of services** in 2022, avoiding major impacts on operations and blockage in construction sites.

During 2022, **systematic discussions** continued with suppliers who play a strategic role with the Group, both in terms of volume and in terms of the criticality of the services/products provided.

Finally, as is customary, **meetings** were held at the end of the year **with representatives of social cooperatives** operating in the areas served by the Hera Group, to discuss the results achieved in 2022. These meetings also focused on the ways in which employment integration projects, illustrated in the section “Economic growth and social inclusion”, could be promoted.

Litigation with Suppliers

[2-27] The number of litigations decreased: 21 disputes with suppliers were pending at the end of 2022, compared to 25 at the end of 2021. There were 7 disputes activated in 2022, which mainly concerned procurement issues.

Focus on shared value, area by area

Bologna

CREATING SHARED VALUE...

Pursuing carbon neutrality	Regenerating resources and closing the circle	Enabling resilience and innovating
Energy efficiency for households and businesses 32% of customers use energy efficiency services. They are 188 thousand.	Recycling 66% separate waste collection, of which 87% was recycled*. 3% of municipal waste in landfills	Digitalisation 89% of the gas meters are already electronic 461 thousand meters, of which 25 thousand are NexMeter
Green energy 37% of customers use electricity from renewable sources and gas with CO ₂ emissions offsetting	Reuse 310 thousand euro of pharmaceuticals that have not yet expired and 172 tonnes of bulky waste collected and reused	Employment 2,691 employees in the Bologna area and 167 hires in 2022
Energy production 26 energy production plants (273.0 MW of power) of which 12 from renewable sources (52.6 MW of power)	Wastewater purification 100% of urban areas with >2,000 PE became compliant, 83% of urban areas with 200-2,000 PE became compliant	Social inclusion 86 million euro value of bills paid in instalments; 50 thousand households are involved (+81% from 2021)

* Excluding green waste, figures for 2021

CSV Investments	CSV Case Study	CSV Case Study
A resilient water system for 13 municipalities A new purification plant in Bubano (district of Mordano) with quadruple potential compared to the current one and a new pipeline that will connect the plant to the Castel Bolognese water network. These are the starting points of a broader project to optimise and upgrade the local water system, which will involve 13 municipalities in the Imola and Ravenna areas, thanks to an investment of 42 million euro, of which around 11 financed by Hera.	In Bologna, an initial example of collective self-consumption of electricity Hera Comm followed the installation of the photovoltaic system on the roof of a building with 18 apartments and the management of all phases of the initiative. The electricity produced feeds common utilities and part of the energy needs of families, with greater independence from the grid (self-consumption between 55% and 60% of what is produced).	300 thousand bees monitor the quality of the environment The "Capiamo" biomonitoring project, to study the behaviour of bees as effective indicators for assessing the quality of the environment, is active in the area surrounding the plant for the production of biomethane and compost in S. Agata Bolognese. Three hives are installed, each containing approx. 100,000 bees. The results show a state of environmental quality from which no criticalities emerge.

... ALONGSIDE THE PROTAGONISTS OF CHANGE

Economic value distributed to the Bologna area	A high-quality service... at a lower price
371 million euro, of which: 172 million workers 37 million shareholders 15 million PA 147 million suppliers 1,140 jobs created (lead-on employment of suppliers)	Customer satisfaction index in the Bologna area [†] : 72/100 Average yearly expense for the waste service for a household [‡] (Source: Cittadinanzattiva): -16% compared to Italian average (286 euro in Bologna, Italian average was 340) Annual waste collection service expense for non-residential users ^{***} : -28% compared to Italian average (10.20 euro/m ² for Bologna, 14.23 euro/m ² for Italy)

[†]Does not include the Imola-Faenza area where the customer satisfaction index was 70/100

[‡]3 people in 100 m². Source: Cittadinanzattiva ^{***}Hotel of 1.000 m², restaurant of 180 m², supermarket of 200 m² and industry of 3.000 m². Source: Data from municipality websites processed by Hera

Ferrara

CREATING SHARED VALUE...

Pursuing carbon neutrality	Regenerating resources and closing the circle	Enabling resilience and innovating
Energy efficiency for households and businesses 30% of customers use energy efficiency services. They are 48 thousand	Recycling 87% separate waste collection (second administrative centre in Italy), of which 80% was recycled* 0% of municipal waste in landfills	Digitalisation 80% of the gas meters installed are electronic 138 thousand meters, of which 53 thousand are NexMeter
Green energy 39% customers with electricity from renewable sources and gas with CO ₂ emissions offsetting	Reuse 31 thousand euro pharmaceuticals that have not yet expired and 24 tonnes of bulky waste collected and reused	Employment 451 employees in the Ferrara area and 17 hires in 2022
Energy production 4 energy production plants (55.2 MW of power) of which 3 from renewable sources (33.9 MW of power)	Wastewater purification 100% of urban areas with >2,000 PE became compliant 81% of urban areas with 200-2,000 PE became compliant	Social inclusion 24 million euro value of bills paid in instalments; 21 thousand households are involved (+81% from 2021)

* Excluding green waste, figures for 2021

CSV Investments	CSV Case Study	CSV Case Study
Pontelagoscuro: water even during the peak of drought 85% of the Ferrara aqueduct is fed by the Pontelagoscuro purification plant on the Po. It was exactly from here that, in the summer of 2022, Hera continued to guarantee service continuity. For this reason, three floating pumps were launched which would have made it possible to continue drawing water even if the level of the Po had dropped below - 7.60 metres.	Air Break: a contribution to air quality With the European Air Break project, carried out together with the Municipality of Ferrara and other partners, Hera has equipped the trucks dedicated to waste collection with a device which nebulizes onto the asphalt a special natural and harmless enzymatic treatment, capable of capturing and binding atmospheric particulate matter to the ground. This improves air quality and makes street cleaning more effective.	A new, environmentally friendly light enhances Castello Estense By night, the Castle of Ferrara shines with a new light, thanks to Hera Luce which has equipped the city's symbolic monument and Unesco heritage with a new system of projectors and LED light points, designed to enhance the most important architectural elements of the structure. The system also allows to apply suggestive scenarios to the castle with an interplay of light and colour.

... ALONGSIDE THE PROTAGONISTS OF CHANGE

Economic value distributed to the Ferrara area	A high-quality service... at a lower price
87 million euro, of which: 29 million workers 4 million shareholders 9 million PA 45 million suppliers 350 jobs created (lead-on employment of suppliers)	Customer satisfaction index in the Ferrara area: 71/100 Average yearly expense for the waste service for a household (Source: Cittadinanzattiva) -14% compared to Italian average 292 euro in Ferrara** the Italian average was 340 euro* Annual waste collection service expense for non-residential users*** -22% compared to Italian average 11.16 euro/m ² for Ferrara**** 14.23 euro/m ² for Italy

* 3 people in 100 m². Source: Cittadinanzattiva

*** Hotel of 1,000 m², restaurant of 180 m², supermarket of 200 m² and industry of 3,000 m². Source: Data from municipality websites processed by Hera

**** Considered as annual disposals of mixed waste amounting to 1,200 litres per hotel, 3,120 litres per restaurant, 9,360 litres for supermarkets and industrial activities

Forlì-Cesena

CREATING SHARED VALUE...

Pursuing carbon neutrality	Regenerating resources and closing the circle	Enabling resilience and innovating
Energy efficiency for households and businesses 31% of customers use energy efficiency services. They are 63 thousand	Recycling 73% separate waste collection, of which 84% was recycled* 0% of municipal waste in landfills	Digitalisation 93% of the gas meters are already electronic
Green energy 39% customers with electricity from renewable sources and gas with CO ₂ emissions offsetting	Reuse 30 thousand euro pharmaceuticals that have not yet expired and 99 tonnes of bulky waste collected and reused	Employment 597 employees in the Forlì-Cesena area and 26 hires in 2022
Energy production 18 energy production plants (67,7 MW of power) of which 7 from renewable sources (20.3 MW of power)	Wastewater purification 100% of urban areas with >2,000 PE became compliant 86% of urban areas with 200-2,000 PE became compliant	Social inclusion 29 million euro value of bills paid in instalments; 25 thousand households are involved (+29% from 2021)

* Excluding green waste, figures for 2021

CSV Investments	CSV Case Study	CSV Case Study
New LED lights in Gambettola, Montiano and Tredozio in the name of sustainability The interventions by Hera Luce in Gambettola and Montiano for the energy upgrading of public lighting have been completed: with the new LED street lamps, an average energy saving of 60% has been achieved, and the materials and technologies used are 98% recyclable. An agreement was also signed with the Municipality of Tredozio, to reduce consumption by over 62% and avoid the annual emission of around 206 tons of CO ₂ .	From the purifier to the fields: a circular use of water in Cesena An experimental agricultural space with 120 plants was set up at the Cesena purifier where, thanks to a smart prototype for controlling the quality of the purified water, saving was recorded, for example in the case of peach trees, for 32% of nitrogen and 8% of phosphorus. The initiative is part of the Value Ce-In research project, carried out by Hera in collaboration with Enea and the University of Bologna.	Door-to-door extended to the sea and in four hillside municipalities The door-to-door extension process has continued, specifically involving, in 2022, the hillside municipalities: Bagno di Romagna and Verghereto in the Cesena area, Premilcuore and Santa Sofia in the Forlì area. In these, the reorganization has also included the use of intelligent containers (Eco Smarty) in the areas that are most difficult to access. On the coast, the home care system has been extended to the entire municipal area of Cesenatico.

... ALONGSIDE THE PROTAGONISTS OF CHANGE

Economic value distributed to the Forlì-Cesena area	A high-quality service... at a lower price
118 million euro, of which: 38 million workers 9 million shareholders 14 million PA 57 million suppliers 440 jobs created (lead-on employment of suppliers)	Customer satisfaction index in the Forlì-Cesena area: <u>71/100</u> Average yearly expense for the waste service for a household* (Source: Cittadinanzattiva) -29% compared to Italian average 243 euro in Cesena, the Italian average was 340 Waste collection service expense for non-residential users** -57% compared to Italian average 6.07 euro/m ² for Cesena 14.23 euro/m ² for Italy

* 3 people in 100 m². Source: Cittadinanzattiva

** Hotel of 1,000 m², restaurant of 180 m², supermarket of 200 m² and industry of 3,000 m². Source: Data from municipality websites processed by Hera

Modena

CREATING SHARED VALUE...

Pursuing carbon neutrality	Regenerating resources and closing the circle	Enabling resilience and innovating
Energy efficiency for households and businesses 32% of customers use energy efficiency services. They are 118 thousand	Recycling 65% separate waste collection, of which 83% was recycled* 0% of municipal waste in landfills	Digitalisation 86% 202 thousand gas meters are already electronic, of which 46 thousand are NexMeter
Green energy 37% customers with electricity from renewable sources and gas with CO ₂ emissions offsetting	Reuse 136 thousand euro pharmaceuticals that have not yet expired and 132 tonnes of bulky waste collected and reused	Employment 907 employees in the Modena area and 80 hires in 2022
Energy production 8 energy production plants (33,1 MW of power) of which 4 from renewable sources (11.6 MW of power)	Wastewater purification 100% of urban areas with >2,000 PE became compliant 57% of urban areas with 200-2,000 PE became compliant	Social inclusion 40 million euro value of bills paid in instalments; 30 thousand households are involved (+38% from 2021)

* Excluding green waste, figures for 2020

CSV Investments	CSV Investments	CSV Case Study
Hera: two million euro for the new set up of the Vignola aqueduct Hera has carried out important works in Vignola to upgrade the city's aqueduct network, improving the network's ability to operate even in the event of water shortages. In fact, the municipality of Vignola was autonomous in terms of water supply sources only by 47%. Thanks to the two million euro of investments made by the Group, it was possible to connect the city aqueduct with the water network of an adjacent municipality.	Modena and its province: the Raccolta Smeraldo begins In Modena and in other municipalities in the province, the first steps have been taken to bring, by the end of 2023, the entire Modena area managed by Hera to have a new waste collection model, which will allow the traceability of waste deliveries, with the goal of minimizing unsorted waste, increasing the quantities sent for recycling, and raising the percentage of sorted waste.	Hydrogen for civil use: Hera Group launches the first national trial in Castelfranco Emilia About thirty homes in the Emilian city will use a mixture of hydrogen and natural gas in the gas distribution network. Furthermore, for the first time the experimentation involves all operators in the gas chain, from distribution companies to manufacturers of technological equipment, up to manufacturers of heating and cooking appliances and internationally recognized bodies that have supervised every security aspect of the initiative.

... ALONGSIDE THE PROTAGONISTS OF CHANGE

Economic value distributed to the Modena area	A high-quality service... at a lower price
146 million euro, of which: 58 million workers 17 million shareholders 8 million PA 63 million suppliers 492 jobs created (lead-on employment of suppliers)	Customer satisfaction index in the Modena area: <u>71/100</u> Average yearly expense for the waste service for a household* (Source: Cittadinanzattiva) -14% compared to Italian average 293 euro in Modena, the Italian average was 340 Waste collection service expense for non-residential users** -32% compared to Italian average 9.72 euro/m ² for Modena 14.23 euro/m ² for Italy

* 3 people in 100 m². Source: Cittadinanzattiva

**Hotel of 1,000 m², restaurant of 180 m², supermarket of 200 m² and industry of 3,000 m². Source: Data from municipality websites processed by Hera

Padua

CREATING SHARED VALUE...

Pursuing carbon neutrality	Regenerating resources and closing the circle	Enabling resilience and innovating
Energy efficiency for households and businesses 14% of customers use energy efficiency services. They are 20 mila	Recycling 65% separate waste collection, of which 92% was recycled* 0% of municipal waste in landfills	Digitalisation 29% customers with electronic billing
Green energy 37% customers with electricity from renewable sources and gas with CO ₂ emissions offsetting	Reuse 24 editions of the "Ecological Saturdays" to fight dumping bulky waste and promote the culture of reuse (47 tonnes of bulky waste collected)	Employment 589 employees in the Padua area and 35 hires in 2022
Energy production 4 energy production plants (17.5 MW of power) of which 1 from renewable sources (7.1 MW of power)	Wastewater purification 100% of urban areas >2,000 PE became compliant	Social inclusion 10 million euro value of bills paid in instalments; 8 thousand households are involved (+152% from 2021)

* Excluding green waste, figures for 2021

CSV Investments	CSV Case Study	CSV Case Study
First 100% electric street sweeper AcegasApsAmga has introduced the first fully electric street sweeper in its fleet. The vehicle is equipped with two 75 kWh batteries and has an autonomy of 8-10 hours. This investment, equal to approximately 250 thousand euro, represents one of the initiatives that contribute to the achievement of the goals of Padova Net Zero.	Recovery and reuse of excavated earth In 2022, a circular economy project was launched thanks to which the land resulting from the adaptation works of the Ca' Nordio purification plant have been reused for the greater safety of the nearby former Roncagette landfill. The plan has avoided over 3,800 journeys of 50 km by road for disposal and transfers, allowing for an overall saving of 243 tons of CO ₂ .	Circularity in the disposal of meters The meters of the various network services decommissioned by AcegasApsAmga are receiving new life thanks to their transfer to specialized plants, where over approximately 85% of electronic waste and metals are recovered. In 2022, 129 tonnes of meters were therefore sent for recovery which will become secondary raw materials.

... ALONGSIDE THE PROTAGONISTS OF CHANGE

Economic value distributed to the Padua area	A high-quality service... at a lower price
123 million euro, of which: 37 million workers 6 million shareholders 2 million PA 78 million suppliers 605 jobs created (lead-on employment of suppliers)	Customer satisfaction index in the Padua area: <u>73/100</u> Average yearly expense for the waste service for a household* (Source: Cittadinanzattiva) -31% compared to Italian average 236 euro in Padua, the Italian average was 340 Waste collection service expense for non-residential users** -22% compared to Italian average 11.16 euro/m ² for Padua 14.23 euro/m ² for Italy

* 3 people in 100 m². Source: Cittadinanzattiva

** Hotel of 1,000 m², restaurant of 180 m², supermarket of 200 m² and industry of 3,000 m². Source: Data from municipality websites processed by Hera

Pesaro-Urbino

CREATING SHARED VALUE...

Pursuing carbon neutrality	Regenerating resources and closing the circle	Enabling resilience and innovating
Energy efficiency for households and businesses 22% of customers use energy efficiency services. They are 27 thousand	Recycling 73% separate waste collection, of which 83% was recycled* 22% of municipal waste in landfills	Digitalisation 84% of the gas meters installed are electronic
Green energy 37% customers with electricity from renewable sources and gas with CO ₂ emissions offsetting	Reuse 125 tonnes of bulky waste collected and re-used	Employment 612 workers in the Pesaro-Urbino area and 36 new hires in 2022
Energy production 1 energy production plant (2.1 MW of power)	Wastewater purification 91% of urban areas >2,000 PE became compliant (100% by 2025)	Social inclusion 18 million euro value of bills paid in instalments; 13 thousand households are involved (+36% from 2021)

* Excluding green waste, figures for 2021

CSV Investments	CSV Investments	CSV Case Study
A new purifier in Montecchio Works on the new purifier in Montecchio di Vallefoglia have been completed, providing for a maximum treatment capacity of up to 30,000 population equivalent. This was a strategic intervention for the resolution of the non-conformities found by the European Community in the infringement procedure	The carbon footprint of purification In 2022 Marche Multiservizi has calculated the carbon footprint of the purification service to understand this service's impact on the decarbonisation process.	A new company to develop the circular economy Marche Multiservizi has acquired 70% of Macero Maceratese, a historic local company operating since 1969 in the waste management sector. This operation strengthens their presence in the waste management sector, with particular reference to the management and treatment of industrial waste.

... ALONGSIDE THE PROTAGONISTS OF CHANGE

Economic value distributed to the Pesaro-Urbino area	A high-quality service... at a lower price
73 million euro, of which: 39 million workers 9 million shareholders 7 million PA 18 million suppliers 138 jobs created (lead-on employment of suppliers)	Customer satisfaction index in the Pesaro-Urbino area: 73/100 Average yearly expense for the waste service for a household* (Source: Cittadinanzattiva) -19% compared to Italian average 275 euro in Pesaro, the Italian average was 340 Waste collection service expense for non-residential users** -40% compared to Italian average 8.56 euro/m ² for Pesaro 14.23 euro/m ² for Italy

* 3 people in 100 m². Source: Cittadinanzattiva

** Hotel of 1,000 m², restaurant of 180 m², supermarket of 200 m² and industry of 3,000 m². Source: Data from municipality websites processed by Hera

Ravenna

CREATING SHARED VALUE...

Pursuing carbon neutrality	Regenerating resources and closing the circle	Enabling resilience and innovating
Energy efficiency for households and businesses 32% of customers use energy efficiency services. They are 79 thousand	Recycling 71% separate waste collection, of which 88% was recycled* 0% of municipal waste in landfills	Digitalisation 94% of the gas meters installed are electronic
Green energy 41% customers with electricity from renewable sources and gas with CO ₂ emissions offsetting	Reuse 197 thousand euro pharmaceuticals that have not yet expired and 135 tonnes of bulky waste collected and reused	Employment 648 employees in the Ravenna area and 31 hires in 2022
Energy production 14 energy production plants (23.0 MW of power) of which 9 from renewable sources (11.2 MW of power)	Wastewater purification 100% of urban areas with >2,000 PE became compliant 89% of urban areas with 200-2,000 PE became compliant	Social inclusion 36 million euro value of bills paid in instalments; 28 thousand households are involved (+70% from 2021)

* Excluding green waste, figures for 2021

CSV Investments	CSV Case Study	CSV Case Study
The sewage system at the Darsena has been renewed Works on the new sewage system of the Ravenna dock have been completed, aimed at increasing hydraulic safety and environmental improvement. This was a long and complex construction site, starting in February 2020, in which controlled horizontal drilling technology was used, an underground installation method without excavation in which Hera has great experience.	Green Book and Piccoli Robot Rinascono: HeraLAB's green projects in Ravenna Two projects have originated as part of the HeraLAB laboratory of ideas: the Green Book, a handbook for restaurateurs which contains advice on how to properly separate waste collection and manage waste optimally, for better use of resources; Piccoli Robot Rinascono (Little Robots are Reborn), in collaboration with the Angelo Pescarini School of Arts and Crafts, to recover still functioning household appliances and allocate them to voluntary organisations.	New laboratory centre in Ravenna In a new 2,800 square metre hub in via Romea Nord, specialising in the analysis of solid waste, sludge, organic micro-pollutants, and emissions into the atmosphere, the analysis centres of Forlì and Ravenna have joined together, creating a leading laboratory pole in the utilities sector and first operator for drinking water and wastewater. This is Hera's second hub in Emilia-Romagna together with the one of Sasso Marconi (BO).

... ALONGSIDE THE PROTAGONISTS OF CHANGE

Economic value distributed to the Ravenna area	A high-quality service... at a lower price
151 million euro, of which: 39 million workers 10 million shareholders 8 million PA 94 million suppliers 726 jobs created (lead-on employment of suppliers)	customer satisfaction index in the Ravenna area**: 72/100 Average yearly expense for the waste service for a household* (Source: Cittadinanzattiva) -24% compared to Italian average 259 euro in Ravenna, the Italian average was 340 Annual waste collection service expense for non-residential users*** -37% compared to Italian average 8.91 euro/m ² for Ravenna 14.23 euro/m ² for Italy

* 3 people in 100 m². Source: Cittadinanzattiva

** Does not include the Imola-Faenza area where the customer satisfaction index was 70/100

*** Hotel of 1,000 m², restaurant of 180 m², supermarket of 200 m² and industry of 3,000 m². Source: Data from municipality websites processed by Hera

Rimini

CREATING SHARED VALUE...

Pursuing carbon neutrality	Regenerating resources and closing the circle	Enabling resilience and innovating
Energy efficiency for households and businesses 21% of customers use energy efficiency services. They are 5 thousand	Recycling 69% separate waste collection, of which 84% was recycled* 0% of municipal waste in landfills	Digitalisation 34% customers with electronic billing
Green energy 39% customers with electricity from renewable sources and gas with CO ₂ emissions offsetting	Reuse 26 thousand euro pharmaceuticals that have not yet expired and 25 tonnes of bulky waste collected and reused	Employment 504 employees in the Rimini area and 18 hires in 2022
Energy production 4 energy production plants (12.1 MW of power) of which 4 from renewable sources (6.8 MW of power)	Wastewater purification 100% of urban areas with >2,000 PE became compliant 100% of urban areas with 200-2,000 PE became compliant	Social inclusion 5 million euro value of bills paid in instalments; 4 thousand households are involved

* Excluding green waste, figures for 2021

CSV Investments	CSV Case Study	CSV Case Study
A new rainwater tank for the protection of the sea in Cattolica Work has begun in Cattolica for the construction of a five thousand cubic meter storm surge tank, an intervention that is integrated into the wider seafront redevelopment project. The work involves an investment of over 10 million euro and aims to protect the sea, intervening on the sewage system to reduce the critical issues related to bathing safety of the coast, and of the city, in the event of intense weather events.	The first reuse area has opened in Rimini The first reuse area in the province has opened in Rimini, at the ecological station of via Nataloni. Inside, residents can bring intact and still usable goods, creating a virtuous circle of waste. The initiative sees the involvement of the social cooperative La Fraternità, which has been collaborating with Hera for years as part of the Cambia il finale project, of which this area is a spin-off, periodically collecting the goods donated by residents to subsequently use them for social purposes.	Hera customer desk launched in Coriano The new customer desk in Coriano has been operational since March 2022, dedicated to families and companies, with a reference catchment area of approx. 25,000 inhabitants. The customer desk, previously housed in municipal spaces, can now count on extended opening hours and greater space, and is equipped with new sound-absorbing technologies to protect customer privacy.

... ALONGSIDE THE PROTAGONISTS OF CHANGE

Economic value distributed to the Rimini area	A high-quality service... at a lower price
104 million euro, of which: 32 million workers 7 million shareholders 14 million PA 51 million suppliers 401 jobs created (lead-on employment of suppliers)	Customer satisfaction index in the Rimini area: 70/100 Average yearly expense for the waste service for a household* (Source: Cittadinanzattiva) -13% compared to Italian average 296 euro in Rimini, Italian average was 340 Waste collection service expense for non-residential users** -2% compared to Italian average 13.98 euro/m ² for Rimini 14.23 euro/m ² for Italy

* 3 people in 100 m². Source: Cittadinanzattiva

** Hotel of 1,000 m², restaurant of 180 m², supermarket of 200 m² and industry of 3,000 m². Source: Data from municipality websites processed by Hera

Trieste, Udine, Gorizia

CREATING SHARED VALUE...

Pursuing carbon neutrality	Regenerating resources and closing the circle	Enabling resilience and innovating
Energy efficiency for households and businesses 23% of customers use energy efficiency services. They are 68 thousand	Recycling 45% separate waste collection, of which 91% was recycled* 0% of municipal waste in landfills	Digitalisation 79% of the gas meters installed are electronic 253 thousand meters, of which 56 thousand are NexMeter
Green energy 37% customers with electricity from renewable sources and gas with CO ₂ emissions offsetting	Reuse 12 editions of the "Ecological Saturdays" to fight dumping bulky waste and promote the culture of reuse (94 tonnes of bulky waste collected)	Employment 1.212 workers in the area and 50 hires in 2022
Energy production 6 energy production plants (18.2 MW of power) of which 2 from renewable sources (7.2 MW of power)	Wastewater purification 100% of urban areas >2,000 PE became compliant 97% of urban areas with 200-2,000 PE became compliant	Social inclusion 12 million euro value of bills paid in instalments; 13 thousand households are involved (+81% from 2021)

* Excluding green waste, figures for 2021

CSV Investments	CSV Case Study	CSV Case Study
First energetically self-sufficient gas cabin The construction of the first "green" gas substation in Villesse (GO) has been completed, energetically self-sufficient with the installation of heat pumps and thermal-photovoltaic panels. The investment will lead to annual savings of around 850 kWh, equivalent to 1.7 tons of CO ₂ , and will be replicated in other plants.	A single point in the region for sludge processing Thanks to the collaboration between all the Friuli-Venezia Giulia water cycle managers, the project for a low-temperature dryer with the use of renewable sources was drawn up (and financed by National Recovery and Resilience Plan funds), to which all the sludge produced in the region will be directed. The plant reduces waste and allows for a 40% increase in the production of dry residue that can be used in agriculture.	The first flows of biomethane in the regional gas network The first biomethane plant deriving from livestock effluents, agricultural matrices, and biomass has been connected to the Codroipo-Sedegliano gas distribution network. With the maximum capacity of almost 500 scm/hour, about a third of the families in the area receive gas from renewable energy sources.

... ALONGSIDE THE PROTAGONISTS OF CHANGE

Economic value distributed to the Friuli-Venezia Giulia area	A high-quality service... at a lower price
235 million euro, of which: 78 million workers 13 million shareholders 10 million PA 134 million suppliers 1,044 jobs created (lead-on employment of suppliers)	Customer satisfaction index in the Trieste area: 72/100 Customer satisfaction index in the Udine area: 72/100 Average yearly expense for the waste service for a household* (Source: Cittadinanzattiva) -6% compared to Italian average 321 euro in Trieste, the Italian average was 340 Waste collection service expense for non-residential users** -2% compared to Italian average 13.91 euro/m ² for Trieste 14.23 euro/m ² for Italy

* 3 people in 100 m². Source: Cittadinanzattiva

** Hotel of 1,000 m², restaurant of 180 m², supermarket of 200 m² and industry of 3,000 m². Source: Data from municipality websites processed by Hera

Information on eco-sustainable economic activities (EU Regulation 2020/852)

The European Taxonomy

In March 2018, the European Commission published the **Action plan on sustainable finance** to create a body of rules around sustainable finance, with the ultimate aim of directing the flow of private capital towards a more sustainable and inclusive development model that is in line with the commitments made under the Paris Climate Agreement. **The establishment of a unified classification system for sustainable activities**, i.e., a Taxonomy, is the most important and urgent action foreseen in the action plan.

What the Taxonomy is

The European Union Taxonomy is a unique classification system at European level which establishes a list of environmentally sustainable economic activities. This ranking tool is intended to help the European Union scale up sustainable investment and deliver the Green Deal. The Taxonomy intends to provide companies, investors, and policy makers with common criteria for determining the economic activities that contribute to an economy that does not negatively impact the environment. This way, according to the European Union, it is also possible to create security for investors regarding the phenomenon of greenwashing, to help companies in the ecological transition, and to help move investments where they are most needed.

How it works

The European Union Taxonomy defines six environmental objectives to identify environmentally sustainable economic activities:

- **climate change mitigation**
- **adaptation to climate change**
- **sustainable use and protection of water and marine resources**
- **transition towards a circular economy**
- **prevention and reduction of pollution**
- **protection and restoration of biodiversity and ecosystems.**

An economic activity is defined as environmentally sustainable if: it contributes substantially to the achievement of at least one of the six environmental objectives; it does not cause significant damage to any of the remaining environmental objectives (Do No Significant Harm - DNSH); it is carried out in compliance with the minimum safeguards (based on international guidelines for the respect of human rights); it complies with the technical screening criteria set by the Commission.

The definition process and entry into force

Based on the first recommendations developed by the TEG (Technical Expert Group), the subsequent contribution of the Sustainable Finance Platform, and a wide range of stakeholders and institutions, **Regulation 852** establishing the European Taxonomy of environmentally sustainable activities has been published in the Official Journal of the European Union on 22 June 2020 and entered into force on 12 July of the same year.

As envisaged by Regulation 852, the European Commission is called to adopt delegated acts aimed at integrating and developing the regulation itself, specifying the technical screening criteria and the procedures for respecting the DNSH standard in order to be able to consider an economic activity, among those contained in the list of eligible activities defined by the Commission, as sustainable from an environmental point of view. At the date of approval of this report, the Commission has published:

- the **first delegated act relating to the two climate objectives of mitigation and adaptation** (EU 2021/2139), which identifies 13 economic sectors and 108 activities that contribute substantially to the mitigation and/or adaptation to climate change. This list was defined, with particular reference to the mitigation objective, by prioritizing the NACE sectors with the greatest emission impact in terms of scope 1 emissions and considering those strategic to favour the energy transition. The list constitutes over 93% of total European scope 1 emissions (Eurostat 2018 data). All sectors and activities are expected to make a substantial contribution to climate change adaptation. However, it was not possible to conduct the DNSH assessment for all sectors of the economy, and so the starting point for the assessment was the same set of mitigation activities. For each of the activities, the technical screening criteria are identified making it possible to determine under which conditions an economic activity can be considered as contributing substantially to climate change mitigation and adaptation to climate change, and whether it causes significant damage to any other relevant environmental objective.

It is expected that the Commission will review and, if necessary, periodically modify the screening criteria in line with scientific and technological developments.

- **the delegated act specifying the information disclosure obligations** (EU 2021/2178), in terms of content, methodology and representation, for companies subject to the obligation to annually draw up the Non-Financial Statement (Sustainability Report) These companies are required to report turnover, operating expenses (Opex) and capital expenditure (Capex) of the part of the **eligible economic activities aligned with the Taxonomy**, i.e. those compliant with the technical screening criteria, the DNSH standard, and the minimum safeguard guarantees defined by the European Commission.
- **the complementary delegated act** (EU 2022/1214) which introduced certain nuclear energy and fossil gas energy production activities in the list of eligible economic activities by defining the technical screening criteria for their alignment.

The publication by the European Commission of the delegated act is expected during 2023, defining the activities and technical screening criteria relating to the remaining four environmental objectives. Furthermore, in parallel, the Sustainable Finance Platform is drafting and developing non-binding guidelines regarding the "Environmental Transition Taxonomy", which aim to also extend the Taxonomy approach to activities with low environmental impact and activities that need to make a transition to more sustainable performance, and the "Social Taxonomy" guidelines, which clearly establish what constitutes a social investment and which economic activities can be considered socially sustainable.

The Hera Group's position and commitment

The Hera Group has welcomed the introduction of the Taxonomy, given the importance of the ambitious goal of providing a common definition to all stakeholders of what can be considered sustainable from a scientific point of view. This legislation can only be seen as an added value, as it accompanies and integrates the quantification of the Shared-value Ebitda, which the Group has since 2016, among the first of its kind, undertaken to quantify with the aim of, through its work, giving evidence of its response, the need for change, and the global challenges in the direction of sustainability.

In addition to this, in continuity with what was done in 2021, it was decided on a voluntary basis to supplement this report with the quantification of the margins deriving from the Group's activities that comply with the technical screening criteria, and to highlight within the 2022-2026 Business plan the portion of investments in aligned activities.

During the development phase of the legislation, Hera actively participated in the many consultation processes, providing contributions both directly, through the official channels of the European Commission, and indirectly, through the various sector associations in which the Group participates. As part of these processes, its position was expressed with respect to some issues, which are important for the Group, which were the subject of discussion within various institutional working tables, both national and European. Among these are:

Sale of renewable energy: to date, the regulation does not provide for the inclusion, within the list of eligible activities, of the sale of energy, which on the contrary constitutes an important element of the entire value chain and plays a fundamental role in the itinerary of decarbonisation, allowing for a sustainable electrification of consumption. Companies that operate in the sales sector and promote the consumption of renewable energy among customers can make an important contribution to the energy transition, directing demand. The Group maintains that the sale of renewable electricity should be considered among the mitigation activities and should enjoy the same consideration and relevance associated with the generation and distribution of electricity (currently present in the list of eligible activities).

The role of waste-to-energy plants in the waste hierarchy: waste-to-energy plants with energy recovery are not included in the list of eligible activities. The Hera Group considers this type of plant essential in the transition phase towards a circular economy, as they contribute to the disposal of non-recyclable fractions of waste, avoiding landfills (a much more harmful alternative from an environmental point of view), and can provide the heat necessary for the operation of highly efficient district heating, thus avoiding the production of CO₂ emissions from fossil sources.

The role of gas in the energy transition process: on 11 July 2022, the European Parliament and the European Council approved the complementary delegated act EU 2022/1214 on climate objectives (mitigation and adaptation) which includes, under strict conditions, activities specifications of nuclear power and gas power generation in the list of eligible activities. According to the Commission, the criteria for these activities should help accelerate the transition from solid or liquid fossil fuel, including coal, towards a climate-neutral future. However, the Group considers the conditions of compliance with the technical screening criteria to be excessively challenging: the emission threshold to be respected for existing plants, for example, equal to 100 gCO₂/kWh,

does not seem to adequately take into account the state of available technologies and appears unrealistic in the absence of carbon abatement solutions, the use of which presents high costs and operational complexity that cannot always be overcome.

The Taxonomy analysis and reporting process

Following the recommendations of the delegated act 2021/2178, which introduces the obligations for the disclosure of information related to the Taxonomy, a multi-step process has been developed through which it has been possible to analyse the applicability of the Taxonomy along the entire value chain, taking into consideration all the consolidated companies of the Group. The process exclusively concerned the objectives of mitigation and adaptation to climate change for which the delegated acts 2021/2139 and 2022/1214 introduce the list of activities that contribute to these objectives substantially, and the list of technical screening criteria and the DNSHs that these activities must comply with in order to be classified as eco-sustainable, with the aim of identifying the Group's activities that are eligible aligned, eligible non-aligned, and non-eligible.

Eligible

Aligned eligible activity: an activity carried out by the Hera Group that is explicitly included in the taxonomy regulation and satisfies the technical screening criteria developed, respecting the DNSH principle and the minimum safeguarded guarantees

Non-aligned eligible activity: an activity carried out by the Hera Group that is explicitly included in the Taxonomy regulation and does not meet the technical screening criteria, does not comply with the DNSH principle and/or the minimum safeguarded guarantees

Non-eligible

Non-eligible activity: an activity carried out by the Hera Group that has not been explicitly included in the Taxonomy regulation because it does not contribute substantially to any environmental objective

The analysis was carried out in the following stages:

- establishment of a working group coordinated by the Shared Value and Sustainability Department together with the Central Administration, Finance, and Control Department;
- mapping of the activities reported in the delegated deeds attributable to the activities of the Hera Group. This analysis aimed to determine the Group's eligible and ineligible assets according to the Taxonomy. As part of this mapping, **21 eligible activities related to different Group companies were identified** for which different processes, services, plants, and other types of assets were analysed in detail;
- once the eligible assets forming part of the Group's portfolio had been identified, the technical representatives of the Group's management and companies have been involved, in order to verify compliance with the technical screening criteria and the DNSHs indicated in the regulation. In this phase, 36 people from 12 different Group companies and departments were involved. In order to verify the compliance of the technical criteria connected to the DNSHs relating to adaptation to climate change, the sustainable use and protection of water and marine resources, and the protection and restoration of biodiversity and ecosystems, the support of the Quality, safety, and environment Management and of the Central Market - energy risk analysis and control Management were also necessary.

More about DNSH

Adaptation to climate change

In 2019, Hera launched a systematic analysis of the risks and opportunities associated with climate change according to the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD). The objective of this analysis is to identify potential vulnerabilities for one's corporate assets to extreme natural events, assessing their impact and developing mitigation actions aimed at improving the resilience of the assets as well as recourse to the insurance market for residual risk. Hera carries out this analysis on the basis of three forecast periods, consistent with the duration of the investment: short term, medium term until 2030, and long term until 2050.

On the adaptation front, Hera is increasing the degree of resilience of its networks and services, with initiatives such as the integration and increase of water resources and their interconnections, high-tech detection of water leaks, the new drainage and water treatment system, and the upgrading of the electricity distribution network, to cope with the energy transition towards the electrification of consumption. A significant part of Hera Group's strategic investment plan is aimed at improving resilience to the physical risks of climate change. The adaptation solutions are set up in such a way to improve Hera Group's carbon footprint, with emission reduction targets validated by the Science Based Target Initiative and implemented using the best available technologies. Furthermore, specific initiatives are evaluated and designed with the involvement of local communities to understand and address their concerns, and with local public institutions to integrate their proposals and expectations into the final project. In 2022, the analysis of risks and opportunities related to climate change have continued. The new business plan is defined in relation to multiple strategic development guidelines, among others energy transition and resilience, in line with which the new investment plan has been articulated aiming towards pursuing opportunities and mitigating the risks identified. These include the creation of new primary substations on the electricity distribution side and resilience interventions on the electricity grids to face the risk of worsening due to extreme events, while on the integrated water service side there is a highlight on the district-based water networks, the upgrading of the water network backbones, the renewal and interconnection of networks, the enhancement of district control of water network plants, and the installation of smart meters. Finally, investments for the development of energy efficiency initiatives and heat management aimed at customers and initiatives for the development of photovoltaics at the utility scale level are important drivers towards the mitigation of climate risks.

Sustainable use and protection of water and marine resources

The Hera Group carries out all activities that may have an impact on water resources, in accordance with the Consolidated Act on the Environment Legislative Decree n. 152/2006, which details the protection of the soil and the fight against desertification, the protection of waters from pollution, and the management of water resources, also transposing from framework directive 2000/60/CE for community action in the field of water.

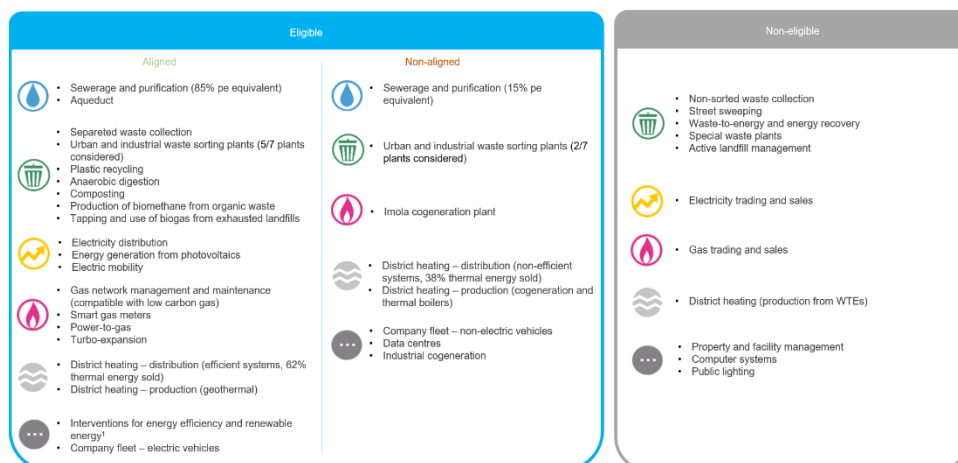
Protection and restoration of biodiversity and ecosystems

All the Group's activities take place in Italy and therefore, where applicable, an Environmental Impact Assessment (EIA) is carried out in accordance with Legislative Decree 152/2006 and subsequent amendments and additions (Consolidated Environmental Act or Environmental Code), transposing Directive 2011/92/UE as amended by 2014/52/UE. In cases where the EIA is not strictly required, the activities are still subject to authorizations by other national regulations. In line with this legislation, once the impacts have been assessed, specific mitigation measures are identified, where necessary, to reduce their significance and, if necessary, to implement appropriate compensatory measures. The main Environmental Impact Assessments presented during the year are made public in the Sustainability Report, on an annual basis.

- at the same time, the management control offices of the related companies and departments were involved with the aim of determining the availability and granularity of the economic data necessary to proceed with the quantification of the KPIs relating to turnover, Opex, and Capex connected to the eligible Group activities according to Taxonomy;
- compliance with the minimum safeguard guarantees was verified, pursuant to the provisions of Regulation 852. Hera complies with the minimum safeguard guarantees thanks to the adoption, by the Group companies, of the **Code of Ethics**, the last update of which was carried out during 2022, for which reference should be made to the "Sustainability management" paragraph of this Sustainability Report. The Group promotes the fight against corruption and fraud by making its commitment to "zero tolerance" its own, reaffirmed not only in the Code of Ethics but also in the **Model for the prevention of corruption**, for which reference is made to the paragraph "The compliance system for prevention of corruption and fraud". As part of the implementation of the procedures and safeguards for the management and control of tax risk (**Tax Control Framework**), Hera has defined and formalized its own **Tax Strategy**. The values expressed by this strategy are inspired by and consistent with the Group's Code of Ethics and guide company operations, providing for specific lines of conduct that Hera intends to maintain in order to achieve the strategic objectives it has set itself.
- finally, the economic KPIs (turnover, Opex and Capex) were quantified following the accounting standards described further ahead, in the point "Accounting standards".

During 2022, **the analysis on the activities was updated** by including in the eligible list those activities not considered during the previous year, as they had not yet started (such as, for example, the production of energy using **photovoltaic solar technology**, activity 4.1), and activities related to **high efficiency cogeneration** of heat/cold and electricity from gaseous fossil fuels (activity 4.30), and the production of heat/cold from gaseous fossil fuels in an **efficient district heating and cooling** system (activity 4.31), deriving from the complementary delegated act EU 2022/1214. A final difference in scope compared to the 2021 report concerns **gas distribution** (activity 4.14 Renewable and low-carbon gas transmission and distribution networks), which was prudentially considered as ineligible the previous year, with the exception of a small experimental project. In this report, gas distribution was considered eligible on the basis of the Commission Communication published on 6 October 2022 in the Official Journal (2022/C 385/01) and in particular the clarifications provided in point 9 "How to identify the activities eligible for the Taxonomy whose descriptions contain qualifiers such as 'low carbon' and 'climate-related hazards'?".

OVERVIEW OF HERA GROUP ACTIVITIES ALIGNED WITH THE TAXONOMY



¹ measures for renewables include the installation, maintenance, and repair of solar-powered photovoltaic systems, solar panels for hot water, heat pumps, storage units, recovery systems and heat exchangers, and micro cogeneration plants. Among measures for energy efficiency there has been the addition of external envelope on buildings, and the replacement and installation of windows and heating and ventilation systems.

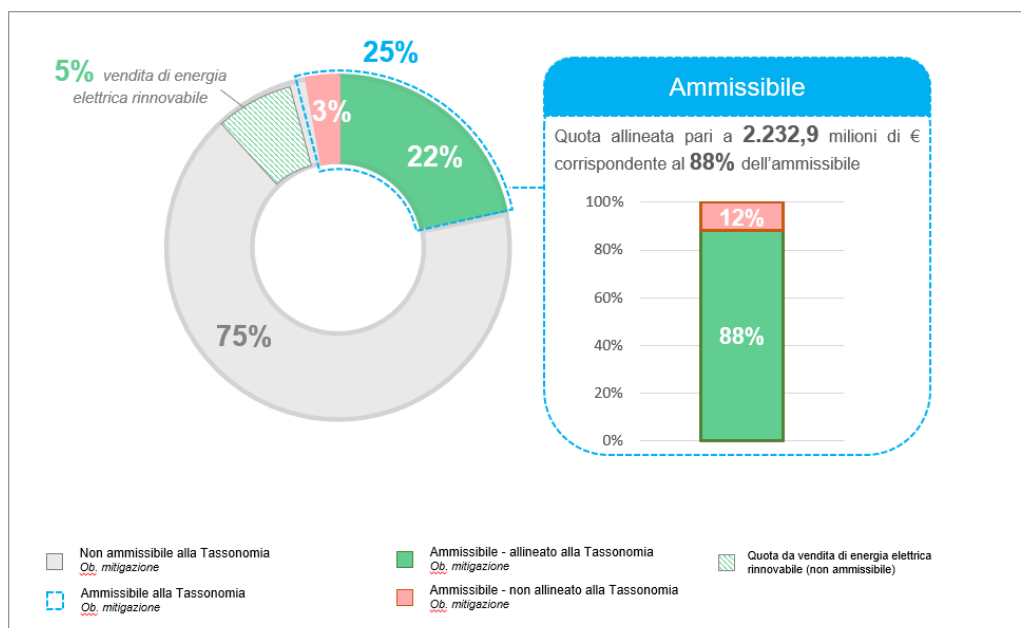
As shown by the overview, **most of the activities were found to be aligned**; however, the following activities remain unaligned with technical screening criteria or DNSH: a portion of the **sewage and purification** service (activity 5.3 Construction, expansion and management of wastewater collection and treatment systems), for a limited number of territories that do not yet meet the energy efficiency thresholds and some urban agglomerations in the process of adapting to current legislation on purification (corresponding to 15% of the equivalent inhabitants served), **waste selection** (activity 5.9 Recovery of materials from non-hazardous waste) in relation to two platforms that do not reach the required material recovery threshold, a part of the **district heating/cooling distribution** (activity 4.15) that does not meet the definition of systems with efficient district heating and cooling (equal to 38% of the energy sold in 2022), the part of the **corporate fleet** relating to non-electric vehicles (activity 6.5 Transport by motorbike, car, and light commercial vehicle and 6.6 Road freight transport services) and the **data centre** activity (activity 8.1 Data processing, hosting, and related activities), for aspects related to energy efficiency. Furthermore, all the activities introduced by the complementary delegated act EU 2022/1214 are not aligned with the technical screening criteria: the production of energy deriving from the **Imola cogeneration plant** (activity 4.30), the **production of thermal energy from cogeneration and boilers** in efficient district heating plants (activity 4.31), and finally the construction and management of **industrial cogeneration** plants (activity 4.30).

Our results

For the purposes of the correct representation and interpretation of the results obtained in the context of this analysis, note that the data relating to turnover, Opex and Capex **eligible for the Taxonomy** refer to the **climate change mitigation objective**.

In some cases, part of the Capex reported may also respond to the objective of adaptation to climate change. However, since the perimeter is perfectly overlapping, the reporting was focused only on the mitigation objective, as indicated by the FAQs published on 19 December 2022 by the EU Commission (Draft Commission Notice on the interpretation and implementation of certain legal provisions of the Disclosures Delegated Act under Article 8 of EU Taxonomy Regulation on the reporting of Taxonomy-eligible and Taxonomy-aligned economic activities and assets), in particular in point 8 "How should reporting undertakings address 'double-counting' in the context of business activities contributing to multiple environmental objectives?"

ADJUSTED TURNOVER KPI (YEAR 2022)



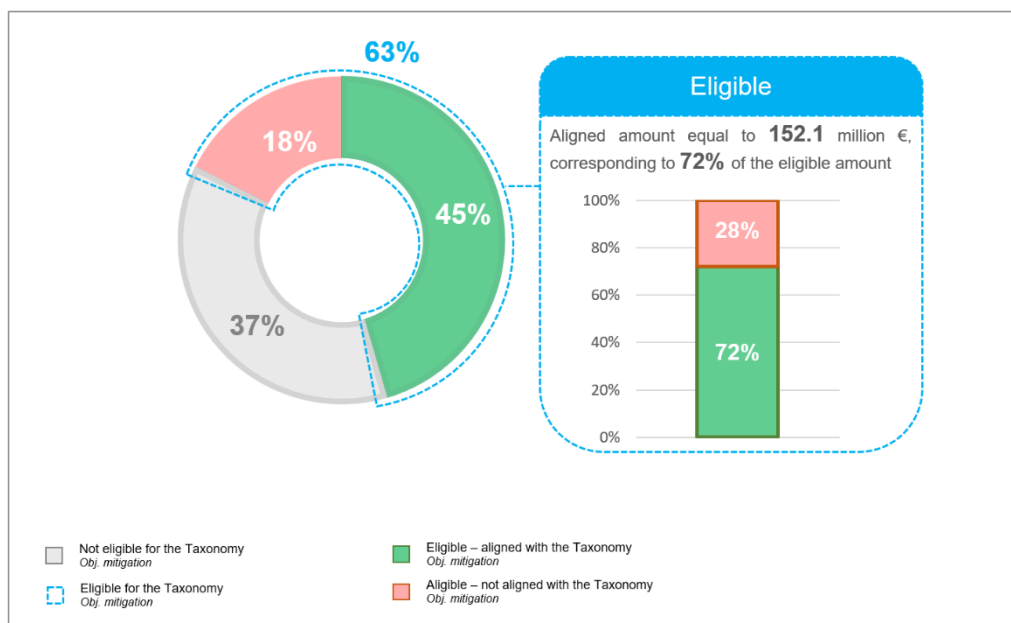
Turnover: in 2022, revenues relating to eligible business activities **aligned with the climate change mitigation objective** amounted to approximately **2.2 billion euro** (approximately 22% of the Group's total), i.e., 88% of the entire share eligible.

For a correct reading of the data, it is important to highlight that 5% of the ineligible turnover relates to the **sale of renewable electricity**, an activity which is sustainable but not included in the Taxonomy list due to the logic explained previously in the point "The process definition and entry into force". According to the Group's point of view, this activity constitutes an important element in the decarbonisation process, allowing for a sustainable electrification of consumption. Assuming that the renewable electricity sales activity sold were eligible aligned with the Taxonomy, the eligible aligned direct revenues would be 27% of the Group total.

Overall, moreover, 45% of the Group's turnover (corresponding to 51% of the ineligible portion for 2022) relates to the **sale and trading of electricity and gas**, activities subject to **significant price fluctuations** dictated by the energy market and which can lead to annual variations in the portion of eligible and non-eligible turnover. At the end of 2022, in particular, the denominator of the KPI relating to turnover is strongly influenced in the energy sectors by the increase in the price of commodities and by intermediation activities, which have also generated corresponding strong increases on the cost side. Therefore, to supplement the information and in order to guarantee a timely management analysis, as well as guaranteeing better comparability of the results, it was deemed appropriate to calculate the synthetic KPI of the "adjusted" turnover, sterilizing the anomalous price increase of 2022. In the detailed table in the attachments, the data relating to the turnover KPI are shown in the version without management adjustments, where the revenues from aligned eligible activities are equal to 11% of the total Group turnover.

For further details on the methods of calculating the economic data, see the information given in "Accounting standards".

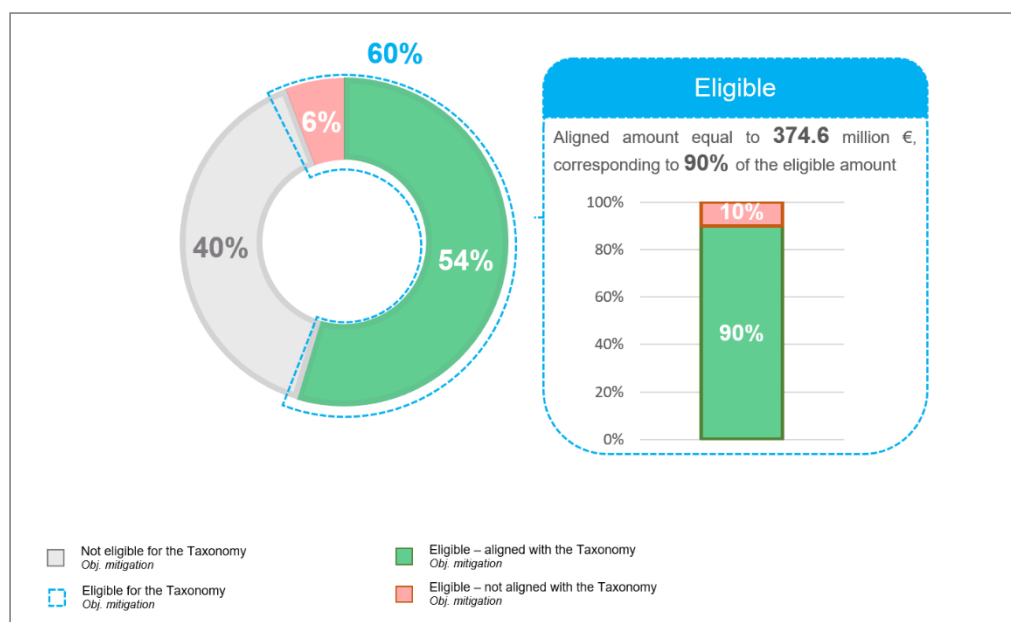
KPI OPEX (YEAR 2022)



Opex: in 2022, the opex relating to **eligible business activities aligned with the climate change mitigation objective** amounted to **152.1 million euro** (approximately 45% of the Group's total), or 72% of the entire share eligible.

For further details on the methods of calculating the economic data, see the information given in "Accounting standards".

KPI CAPEX (YEAR 2022)



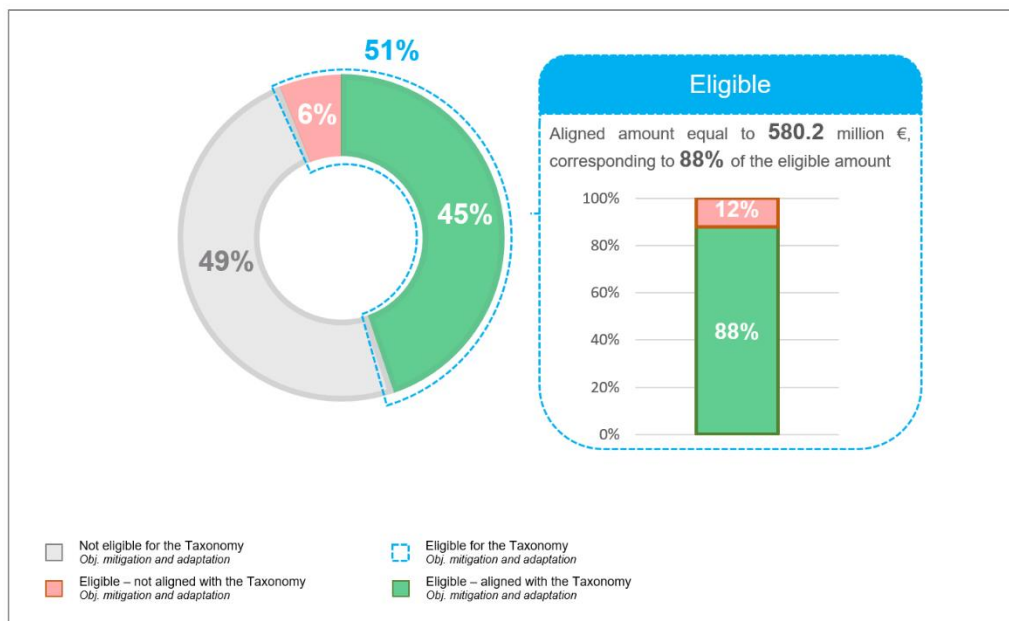
Capex: in 2022 the direct Capex relating to **eligible business activities aligned with the climate change mitigation objective** amounted to **374.6 million euro** (approximately 54% of the Group's total operating investments net of capital grants), i.e., 90% of the entire share eligible.

For further details on the methods of calculating the economic data, see the information given in "Accounting standards".

Taxonomy Ebitda vs CSV Ebitda

As mentioned above, the Hera Group has decided to provide the figure relating to the **gross operating margin** deriving from the Group's **activities eligible for the Taxonomy** and **aligned with the climate change mitigation objective** also for 2022. This is voluntary information, not required by the obligations of EU Regulation 2020/852 and subsequent delegated acts. It should also be noted that the Ebitda indicated was determined according to criteria consistent with the calculation of the Ebitda of the Group's consolidated financial statements and is not limited to taking into consideration only the Opex as indicated by the regulation and by the delegated acts of the Taxonomy. For further details on the methods of calculating Opex, see the information given in "Accounting standards".

"TAXONOMY EBITDA" (YEAR 2022)



In 2022, Ebitda relating to eligible business activities **aligned with the climate change mitigation objective** amounted to **580.2 million euro** (approximately 45% of the Group's total), or 88% of the entire share eligible.

It is therefore possible to compare "Taxonomy Ebitda" and the Shared-value Ebitda (CSV Ebitda) that the Group has been quantifying since 2016; these two indicators have **basic conceptual differences** and are by their nature two sets that are **not perfectly superimposable**. The differences found impact first of all on the list of activities considered for their quantification (what in the Taxonomy is called eligibility) and secondly on the methods of calculating the portion of activity to be considered.

From a conceptual point of view, CSV Ebitda covers all six environmental objectives of the Taxonomy in its impact areas. In particular, the answers to mitigation can be found in "promotion of energy efficiency" and "energy transition and renewables", analogies to the adaptation objective are found in "resilience and adaptation" (which however adopts a broader vision of the concept of resilience), while in the impact areas "transition towards a circular economy", "sustainable management of water resources", and "protection of air, soil, and biodiversity" the remaining four environmental objectives of the Taxonomy can be identified. This confirms the validity of the approach adopted for years by the Group, which actually anticipated European legislation.

The main differences between the two approaches, which are and will always be evident in the numbers, mainly depend on:

- the CSV framework also including activities with social objectives, such as the "economic development and social inclusion" impact area, and activities that promote innovation and digitisation;
- the different selection of activities that contribute to shared value, on the one hand, and to environmental objectives, on the other;
- the different method of calculating the economic values of the assets included both in the shared value and in the Taxonomy.

As far as activities with social objectives are concerned, in the CSV Ebitda we find value given to assignments to social cooperatives and initiatives to help customers in difficulty through the payment of bills in instalments. In the innovation and digitization area we find the development of projects and investments for the digitization of operational processes, the services offered to cities, and the remuneration deriving from investments in innovation.

CSV Ebitda includes other relevant activities from an environmental point of view and for the achievement of sustainable development, which are not included in the list of activities eligible for the Taxonomy, according to the logic adopted by the Commission (in particular see in “what is the European Taxonomy” the approach for the mitigation objective with reference to Scope 1 emissions):

- sales of renewable electricity;
- sale of methane gas with CO₂ offsetting;
- electricity and gas contracts signed with innovative energy efficiency commercial offers;
- efficient public lighting;
- the recovery of energy deriving from the incineration of waste (considered only for the portion of energy from renewable sources equal to 51%);
- obtaining white certificates.

Regarding the activities included both in the shared value and in the Taxonomy, for which different accounting methods are used, the following can be found:

- sewerage and purification, in the CSV Ebitda the marginality takes into account the proportion of reusable wastewater and the percentage of compliance with European and national legislation on the purification of wastewater in urban agglomerations >2,000 population equivalent;
- aqueduct, in the CSV Ebitda the marginality is quantified considering the users served by aqueduct systems “covered” by the water safety management plans;
- company fleet, in the Taxonomy Ebitda only the marginality deriving from electric vehicles is considered admissible, while in the CSV Ebitda methane/lpg vehicles are also included;
- telecommunications, in the Taxonomy Ebitda only the marginality of the component deriving from the data centre activity is considered admissible, while in the CSV Ebitda it is considered in full as it corresponds to the “innovation and digitization” impact area;
- waste collection, in the Taxonomy Ebitda only the marginality deriving from differentiated collection is reported as admissible aligned while in the CSV Ebitda the marginality of undifferentiated collection sent to the production of energy is also considered, partly destined for the district heating service;
- the selection of urban and industrial waste, in the Taxonomy Ebitda only the marginality of the plants that convert at least 50% of the waste into secondary raw materials is considered admissible, while in the CSV Ebitda the marginality is quantified considering the percentage of waste sent for recovery of matter and energy (the latter excluded from the Taxonomy, as indicated above).

Accounting standards

What follows is an illustration of the accounting standards that the Hera Group has followed for the construction of the economic KPIs represented.

As for the method of assigning the economic aggregates to the numerator, as already mentioned, we started with a detailed analysis of the map of the activities carried out by the Hera Group, identifying those that fall within the description of economic activities included in the delegated act 2021/2139 in attachments I and II. For the allocation of the amounts relating to turnover, Capex, and Opex to the aligned and non-aligned eligible activities, the information present in the Group’s accounting systems relating to general, analytical, and regulatory accounting was used as a priority, representing the primary source for both quantitative and qualitative information. In some cases, to better describe to what extent the company’s activities are associated with the economic activities considered eligible pursuant to articles 3 and 9 of this Regulation 852/2020, it was also necessary to resort to appropriate drivers, in order to obtain the best identification of the relative values. In any case, the Group’s analytical accounting system which supervises the destination and allocation of each accounting amount ensures the non-duplication of the values of the KPI numerator in the various economic activities of the Taxonomy.

As for the determination of the denominator of the KPIs, it is always constructed in line with the aggregates present in the numerator, but referred to the perimeter of the total economic activities of the consolidated Hera Group, with the exclusion of all intercompany relations and the activities carried out for consumption within the Group.

The accounting standards adopted for the construction of the KPIs illustrated below and applied for the first two environmental objectives could undergo evolutions and modifications in the

coming years in the light of regulatory developments of the Taxonomy or of the consolidated practices for its reporting.

The Taxonomy KPIs were calculated as follows:

- Turnover KPI: the portion of aligned and not aligned eligible turnover, pursuant to art. 8 paragraph 2 (a) of European Regulation 852/2020, is identified as the portion of consolidated net revenues generated by the sale of products or services, including intangible ones, associated with economic activities eligible for the Taxonomy / total net revenues. Net revenues are consistent with the values of the consolidated financial statements of the Group, drawn up in accordance with international accounting standards and referring to the provisions of IAS1, point 82, lett. a), adopted by EC Regulation no. 1126/2008. In particular, for the construction of the indicator, the items included in the value of production for revenues from sales and services were considered, with the exclusion of other revenues and increases in fixed assets for internal work.
- Capex KPI: the admissible portion of aligned and non-aligned Capex, pursuant to art. 8 paragraph 2 (b) of the European Regulation 852/2020 is calculated as the part of capital expenditure associated with eligible activities and defined on the basis of the criteria referred to in point 1.1.2.2 of the Delegated Act / the total budget Capex consolidated financial statements defined on the basis of the criteria referred to in point 1.1.2.1 of the Delegated Act. Specifically, capital expenditures are considered which generate increases in assets relating to tangible fixed assets, investment property, and intangible fixed assets for the year considered before depreciation and any write-down or revaluation, with the exclusion of investments in financial equity. There are also no expenses relating to "Capex plans" pursuant to point 1.1.2.2 of Attachment I to Delegated Regulation (EU) 2021/2178.
In May 2022, the Hera Group issued a Green bond whose funds raised are destined for the integrated water cycle (Sustainable water and wastewater management, aligned with SDGs 6, 13 and 14), circular economy, pollution prevention and control (Circular Economy & Pollution prevention and control, which responds to SDGs 11, 12 and 13), energy efficiency and infrastructure (Energy Efficiency and Energy Infrastructure, in line with SDGs 7, 11 and 13) and, therefore, also constitute a source of financing for some investments which fall within the Capex of economic activities aligned with the Taxonomy. For further information, see the information on the Green bond and the Hera Group's Green Financing framework reported in the "Hera Green bonds" paragraph of this Sustainability Report.
- Opex KPI: the portion of admissible Opex, pursuant to art. 8 paragraph 2 (b) of the European Regulation 852/2020, is calculated as the portion of non-capitalized expenses associated with eligible activities and defined on the basis of the criteria referred to in point 1.1.3.2 of the Delegated Act / the total of Opex from the consolidated financial statements defined on the basis of the criteria referred to in point 1.1.3.1 of the Delegated Act. In particular, this KPI includes the costs present in the income statement of the Group's consolidated financial statements, drawn up in accordance with the IAS-IFRS standards, associated with research and development, building renovations, short-term leases, maintenance and repairs, as well as other direct costs relating to the daily ordinary maintenance of the tangible assets necessary to ensure the continuous and efficient functioning of these assets, whether performed internally or outsourced to third party companies. Said costs therefore include portions of labour costs, external costs for services, and costs for the purchase of materials, directly attributable to this ordinary maintenance.

Furthermore, the Hera Group has decided to also provide the figure related to the gross operating margin deriving from the Group's activities eligible for the Taxonomy and aligned with the climate change mitigation objective. This information is not required by the obligations of EU Regulation 2020/852 and subsequent delegated acts, but we believe it is also important for a reconciliation of this "Taxonomy Ebitda" with the "Shared-value Ebitda" that the Group has been reporting for several years. The Taxonomy Ebitda is calculated in line with Ebitda (see the definition of alternative performance indicators in the financial statements) taken from the Group's consolidated financial statements and includes all operating costs, not limited, therefore, to the cost aggregates that fall within the Opex KPI. The numerator shows the portion of Ebitda relating to the aligned activities, while the Group's total Ebitda appears in the denominator.

The table below details the results of the analysis described above.

ELIGIBLE ALIGNED AND NON-ALIGNED HERA GROUP ACTIVITIES (CLIMATE CHANGE MITIGATION)

Area	Group activity	Code and description of the activity defined by the EU Taxonomy	Overall CVT and DNSH compliance
	Aqueduct	5.1 Construction, expansion, and operation of water collection, treatment, and supply systems Construction, expansion, and operation of water collection, treatment, and supply systems.	Aligned: The collection, adduction, distribution, and metering systems in relation to the aqueduct networks and plants considered for Hera Spa and AcegasApsAmga comply with the consumed energy threshold of 0.5 kWh/mc. The Marche Multiservizi system complies with the alternative criterion relating to water losses, calculated according to the requirements of Resolution ARERA 917/17 (RQTI), ref. macro indicator M1 ¹ . Overall DNSH compliance for the applicable objectives. Not aligned: -
	Sewage and wastewater treatment	5.3 Construction, expansion, and operation of wastewater collection and treatment systems Construction, expansion and management of centralized wastewater systems, including collection (sewer) and treatment.	Aligned: The wastewater collection and treatment systems with any level of treatment (including primary) considered for Hera Spa and Marche Multiservizi (with the exception of what is reported in the "non-aligned" section) comply with the net energy consumption thresholds. Overall DNSH compliance for the applicable objectives. Not aligned: The wastewater collection and treatment systems with any level of treatment (including primary) of AcegasApsAmga and Borgheria (Marche Multiservizi) do not comply with the net energy consumption thresholds; within the Marche region there are also three agglomerations in breach of the legislation on purification, not compliant with the DNSH prevention and reduction of pollution.
	Plastic recycling	3.17 Manufacture of plastic materials in primary forms Fabrication of resins, plastics and non-curing thermoplastic elastomers, custom blending of custom resins, as well as production of non-custom synthetic resins.	Aligned: Aliplast's washing and regeneration plants manufacture plastic in primary form entirely through mechanical recycling of plastic waste. Overall DNSH compliance for the applicable objectives. Not aligned: -
	Production of biomethane from organic waste	4.13 Production of biogas and biofuels for transport and bioliquids Production of biogas or biofuels for transport and bioliquids.	Aligned: The two Herambiente Group biomethane plants considered produce biomethane for transport, guaranteeing a reduction in greenhouse gas emissions of at least 65% compared to the emissions of the related reference fossil fuel. No agricultural or forest biomass is used for the production and the process satisfies criteria 1 and 2 of section 5.7. The capture and storage of CO ₂ is not planned. Overall DNSH compliance for the applicable objectives.

¹In accordance with Article 4 of Directive (EU) 2020/2184 of the European Parliament and of the Council.

Not aligned: -

Separate waste collection	5.5	Collection and transport of non-hazardous waste in fractions separated at the source Separate collection and transport of non-hazardous waste in single or mixed fractions intended for preparation for reuse or recycling.	Aligned: All non-hazardous waste collected separately and transported by Hera Spa, AcegasApsAmga, Marche Multiservizi, and Alibardi are separated at the source and destined for preparation for reuse or recycling. Overall DNSH compliance for the applicable objectives.
Not aligned: -			

Power to gas	5.6	Anaerobic digestion of purification sludge Construction and management of plants for the treatment of processing sludge through anaerobic digestion, with the consequent production and use of biogas and chemical products.	Aligned: The Inrete plant considered performs the digestion of purification sludge producing biogas which is transformed into biomethane to be injected into the natural gas network. A plan is in place for monitoring methane leaks. Overall DNSH compliance for the applicable objectives.
Not aligned: -			

Anaerobic digestion	5.7	Anaerobic digestion of organic waste Construction and management of dedicated plants for the treatment of organic waste collected separately through anaerobic digestion, with the consequent production and use of biogas and digestate and/or chemical products.	Aligned: The three anaerobic digestion plants of the Herambiente Group produce, starting from the digestion process of separately collected urban organic waste: 1) biogas, using it directly for the production of electricity; 2) digestate, used as a fertiliser. A monitoring and emergency plan is in place to minimise methane losses in the plants. Overall DNSH compliance for the applicable objectives.
Not aligned: -			

Composting	5.8	Composting of organic waste Construction and management of dedicated plants for the treatment of organic waste collected separately through composting (anaerobic digestion), with the consequent production and use of compost.	Aligned: The two Herambiente Group composting plants produce compost from organic waste collected separately. The compost produced is used as a fertilizer in accordance with EU and Italian legislation. Overall DNSH compliance for the applicable objectives.
Not aligned: -			

Municipal and industrial waste sorting plants	5.9	Recovery of materials from non-hazardous waste Construction and operation of facilities for the sorting and transformation of separately collected non-hazardous waste streams	Aligned: Five of Herambiente Group's seven urban and special non-hazardous waste sorting plants convert at least 50% of waste into secondary raw materials or send more than 70% of outgoing waste for recovery (safety threshold chosen to ensure compliance with 50% mps conversion). Overall DNSH compliance for the applicable objectives.

			into secondary raw materials involving mechanical reprocessing, except for backfilling purposes.	Not aligned: Two of Herambiente Group's seven urban and special non-hazardous waste sorting plants do not convert at least 50% of waste into secondary raw materials or do not send more than 70% of outgoing waste for recovery.
	Capture and use of landfill biogas	5.10	Capture and use of landfill gas Installation and operation of infrastructures for the capture and use of landfill gas in permanently closed landfills or landfill cells, using new or additional dedicated engineering and equipment installed during or after the closure of the landfill or of the landfill cell.	Aligned: All permanently closed landfills did not come into operation after 8 July 2020. The landfill gas produced is used for the production of electricity or heat in the form of biogas. Methane emissions from landfill and leakages from landfill gas collection and utilization facilities are subject to the control and surveillance procedures set out in Attachment III of Council Directive 1999/31/EC. Overall DNSH compliance for the applicable objectives. Not aligned: -
	Photovoltaic energy production	4.1	Electricity production using photovoltaic solar technology Construction or management of plants for the production of electricity using photovoltaic solar technology.	Aligned: The plants produce electricity using photovoltaic solar technology. Overall DNSH compliance for the applicable objectives. Not aligned: -
	Electricity distribution	4.9	Transmission and distribution of electricity Construction and operation of transmission systems that transport electricity in the interconnected system of extra high and high voltage. Construction and operation of distribution systems that carry electricity in high, medium and low voltage distribution systems.	Aligned: The electricity distribution networks of Inrete and AcegasApsAmga are part of an interconnected European system. The activity includes the installation of intelligent metering systems, as defined by the standard and the installation of equipment to specifically allow the exchange of renewable electricity between users. Overall DNSH compliance for the applicable objectives. Not aligned: -
	Electrical mobility	7.4	Installation, maintenance and repair of charging stations for electric vehicles in buildings (and in the parking spaces belonging to the buildings) Installation, maintenance and repair of charging stations for electric vehicles in buildings (and in the parking spaces belonging to the buildings).	Aligned: The activity consists in the installation, maintenance or repair of charging stations for electric vehicles. Overall DNSH compliance for the applicable objectives. Not aligned: -
	Gas network management and maintenance (compatible with low carbon gas)	4.14	Transmission and distribution networks for renewable and low carbon emissions Conversion, change of use, or upgrading of gas networks for the transmission and distribution of renewable and low-carbon gases.	Aligned: The upgrading of the gas distribution networks of Inrete, AcegasApsAmga, and Marche Multiservizi enables the integration of hydrogen and other low-carbon gases into the network, in line with what is defined by the DM June 3, 2022 - Gas Quality Technical Rule - Update and confirmed by the first national experience of hydrogen injection into the gas distribution network carried out by Inrete. The three Group companies carry out leak detection and repair of existing pipelines and other network elements to

		Construction or operation of transmission and distribution pipelines for the transport of hydrogen or other low-carbon gases.	reduce methane leakage. Overall compliance with DNSH criteria for applicable targets.
			Not aligned:
Cogeneration	4.30	High efficiency cogeneration of heat, cooling, and energy from gaseous fossil fuels Construction, renovation, and operation of combined heat/cooling and electricity plants using gaseous fuels. This activity does not include high efficiency cogeneration of heat/cooling and electricity from the exclusive use of renewable non-fossil gaseous and liquid fuels, and of biogas and bio-liquid fuels.	Aligned: - Not aligned: HSE's industrial cogeneration plants and the Imola cogeneration plant do not comply with the threshold of 100gCO ₂ /kWh of greenhouse gas emissions of the cogeneration life cycle.
Smart meter gas	7.5	Installation, maintenance, and repair of instruments and devices for measuring, regulating, and controlling the energy performance of buildings Installation, maintenance, and repair of instruments and devices for measuring, regulating, and controlling the energy performance of buildings.	Aligned: Inrete, AcegasApsAmga, and Marche Multiservizi carry out the installation, maintenance and repair of smart meters for gas, heating, cooling, and electricity. Overall DNSH compliance for the applicable objectives. Not aligned: -
 District heating (distribution)	4.15	District heating/cooling distribution Construction, refurbishment, and operation of pipelines and related infrastructure for the distribution of heating and cooling, ending at the substation or heat exchanger.	Aligned: 62% of the thermal energy distributed (and sold) through pipelines and related infrastructure for heating and cooling distribution is generated by district heating systems that comply with the EU definition of efficient district heating. Overall DNSH compliance for the applicable objectives. Non-aligned: 38% of the thermal energy distributed (and sold) through pipelines and related infrastructure for heating and cooling distribution is generated by systems that do not comply with the EU definition of efficient district heating.
District heating (produced with geothermal power)	4.22	Production of heat/cold from geothermal energy Construction or management of plants that produce heat/cold from geothermal energy.	Aligned: The Ferrara geothermal plant produces heat and cooling while respecting the threshold of 100gCO ₂ e/kWh of greenhouse gas emissions in the life cycle. Overall DNSH compliance for the applicable objectives Not aligned: -

	District heating (production from cogeneration and thermal boilers)	4.31	Production of heat/cooling from gaseous fossil fuels in an efficient district heating and cooling system Construction, renovation, and operation of heat generation plants producing heat/cooling using gaseous fuels related to efficient district heating and cooling within the meaning of Article 2(41) of Directive 2012/27/EU of the European Parliament and of the Council. This activity does not include the production of heat/cooling from efficient district heating and from the exclusive use of non-fossil renewable gaseous and liquid fuels and biogas and bio-liquid fuels.	Aligned: - Non-aligned: One of the four efficient district heating plants considered, which partially uses gaseous fossil fuel boilers, does not meet the 100gCO ₂ /kWh GHG emissions threshold of the heat generation/cooling life cycle. Data is not available for the remaining three plants.
	Company fleet	6.5	Transport by motorcycle, passenger car and light commercial vehicle Purchase, financing, rental, leasing, and operation of vehicles belonging to category M1, N1, both of which fall within the scope of Regulation (EC) n. 715/2007 of the European Parliament and of the Council, or L (vehicles with two or three wheels and quadricycles).	Aligned: Uniflotte purchases, leases, and manages light electric vehicles, belonging to the M1 and N1 categories, which comply with the emission thresholds of 50gCO ₂ /km (until 2025) and 0gCO ₂ /km (from 2026). Overall DNSH compliance for the applicable objectives. Not aligned: All non-electric light vehicles that Uniflotte purchases, leases, and manages, belonging to the M1 and N1 category, do not comply with the emission thresholds of 50gCO ₂ /km (until 2025) and 0gCO ₂ /km (from 2026).
		6.6	Road haulage services Purchase, financing, leasing, rental, and operation of N1, N2, or N3 category vehicles falling within the scope of the EURO VI standard, stage E or later, for road haulage services.	Aligned: - Non-aligned: Uniflotte purchases, leases, and manages vehicles used for the transport of goods, belonging to category N2 and N3 with a mass not exceeding 7.5 tonnes, which do not comply with the definition of "zero-emission heavy vehicle" as defined by EU legislation.
	Energy efficiency interventions and renewable energies	7.3	Installation, maintenance, and repair of energy efficiency devices Individual renovation measures consisting of the installation, maintenance or repair of energy efficiency devices.	Aligned: HSE and Hera Comm carry out the activities of adding insulation to the components of the existing envelope, replacement of existing windows with new energy efficient windows, installation and replacement of energy efficient light sources, heating systems, ventilation, and air conditioning. Overall DNSH compliance for the applicable objectives. Not aligned: -
		7.6	Installation, maintenance and repair of renewable energy technologies Installation, maintenance and on-site repair of	Aligned: Inrete, HSE, and Hera Comm carry out on-site installation, maintenance, and repairs of photovoltaic solar systems, solar panels for hot water, heat pumps, electrical or thermal energy storage units, micro-cogeneration plants, recovery systems/heat exchangers. Overall DNSH compliance for the applicable objectives.

		renewable energy technologies.	Not aligned: -
Data Centre	8.1	Data processing, hosting, and related activities Storing, manipulating, managing, moving, controlling, displaying, switching, interchanging, transmitting, or processing data through data centres, including edge computing	Aligned: - Non-aligned: Acantho carries out the activity of management, movement, control, display, switching, interchange, transmission, or processing of data through data centres that do not comply with the expected practices contained in the European code of conduct on energy efficiency of data centres.

Models for key performance indicators

PORTION OF TURNOVER ARISING FROM PRODUCTS OR SERVICES ASSOCIATED TO ECONOMIC ACTIVITIES ALIGNED WITH TAXONOMY

Economic activities	Absolute turnover 2022 (in millions of €)	Portion of turnover 2022	Substantial contribution		DNSH						Minimum safeguard guarantees	Taxonomy-aligned revenue share	Enabling activities	Transition activity
			Climate change mitigation	Climate change adaptation	Climate change mitigation	Climate change adaptation	Marine waters and resources	Circular economy	Pollution	Biodiversity and ecosystems				
A. Activities eligible for the Taxonomy														
A1. Aligned eligible activities														
3.17. Manufacture of plastic materials in primary forms	140.5	0.7%	100.0%	0%		Y	Y	N/A	Y	Y	Y	0.7%	-	T
4.1. Electricity production using photovoltaic solar technology	-	0.0%	100.0%	0%		Y	N/A	Y	N/A	Y	Y	0.0%	-	-
4.9. Transmission and distribution of electricity	111.5	0.6%	100.0%	0%		Y	N/A	Y	Y	Y	Y	0.6%	E	-
4.13. Production of biogas and biofuels for transport and bioliquids	24.4	0.1%	100.0%	0%		Y	Y	N/A	Y	Y	Y	0.1%	-	-
4.14. Transmission and distribution networks for renewable gas and low carbon emission	169.5	0.9%	100.0%	0%		Y	Y	N/A	Y	Y	Y	0.9%	-	-
4.15. District heating/cooling distribution	5.1	0.0%	100.0%	0%		Y	Y	N/A	Y	Y	Y	0.0%	-	-

Economic activities	Absolute turnover 2022 (in millions of €)	Portion of turnover 2022	Substantial contribution		DNSH						Minimum safeguard guarantees	Taxonomy-aligned revenue share	Enabling activities	Transition activity
			Climate change mitigation	Climate change adaptation	Climate change mitigation	Climate change adaptation	Marine waters and resources	Circular economy	Pollution	Biodiversity and ecosystems				
4.22. Production of heat and cold from geothermal energy	8.8	0.0%	100.0%	0%		Y	Y	N/A	Y	Y	Y	0.0%	-	-
5.1. Construction, expansion, and operation of collection, treatment, and supply systems	482.4	2.4%	100.0%	0%		Y	Y	N/A	N/A	Y	Y	2.4%	-	-
5.3. Construction, expansion, and operation of wastewater collection and treatment systems	250.0	1.3%	100.0%	0%		Y	Y	N/A	Y	Y	Y	1.3%	-	-
5.5. Collection and transport of non-hazardous waste in fractions separated at the source	343.8	1.7%	100.0%	0%		Y	N/A	Y	Y	Y	Y	1.7%	-	-
5.6. Digestion of purification sludge	-	0.0%	100.0%	0%		Y	Y	N/A	Y	Y	Y	0.0%	-	-
5.7. Anaerobic digestion of organic waste	20.0	0.1%	100.0%	0%		Y	Y	N/A	Y	Y	Y	0.1%	-	-
5.8. Composting of organic waste	4.0	0.0%	100.0%	0%		Y	N/A	N/A	Y	Y	Y	0.0%	-	-
5.9. Recovery of materials from non-hazardous waste	37.7	0.2%	100.0%	0%		Y	N/A	N/A	N/A	Y	Y	0.2%	-	-
5.10. Capture and use of landfill gas	2.2	0.0%	100.0%	0%		Y	N/A	N/A	Y	Y	Y	0.0%	-	-
6.5. Transport by motorcycle, passenger car and light commercial vehicle	0.1	0.0%	100.0%	0%		Y	N/A	Y	Y	N/A	Y	0.0%	-	-

Economic activities	Absolute turnover 2022 (in millions of €)	Portion of turnover 2022	Substantial contribution		DNSH						Minimum safeguard guarantees	Taxonomy-aligned revenue share	Enabling activities	Transition activity
			Climate change mitigation	Climate change adaptation	Climate change mitigation	Climate change adaptation	Marine waters and resources	Circular economy	Pollution	Biodiversity and ecosystems				
7.3. Installation, maintenance, and repair of energy efficiency devices	522.1	2.6%	100.0%	0%		Y	N/A	N/A	Y	N/A	Y	2.6%	E	-
7.4. Installation, maintenance and repair of charging stations for electric vehicles in buildings	1.0	0.0%	100.0%	0%		Y	N/A	N/A	N/A	N/A	Y	0.0%	E	-
7.5. Installation, maintenance, and repair of instruments and devices for measuring, regulating, and controlling the energy performance of buildings.	31.1	0.2%	100.0%	0%		Y	N/A	N/A	N/A	N/A	Y	0.2%	E	-
7.6. Installation, maintenance, and repair of technologies for renewable energy	78.8	0.4%	100.0%	0%		Y	N/A	N/A	N/A	N/A	Y	0.4%	E	-
Turnover of aligned eligible activities (A1)	2,232.9	11.2%										11.2%	3.7%	
A2. Non-aligned eligible activities														
4.15. District heating/cooling distribution	57.3	0.3%											-	-
4.30. High efficiency cogeneration of heat/cold and electricity from gaseous fossil fuels	102.2	0.5%											-	T

Economic activities	Absolute turnover 2022 (in millions of €)	Portion of turnover 2022	Substantial contribution		DNSH								Enabling activities	Transition activity
			Climate change mitigation	Climate change adaptation	Climate change mitigation	Climate change adaptation	Marine waters and resources	Circular economy	Pollution	Biodiversity and ecosystems	Minimum safeguard guarantees	Taxonomy-aligned revenue share		
4.31. Production of heat/cooling from gaseous fossil fuels in an efficient district heating and cooling system	8.9	0.0%											-	T
5.3. Construction, expansion, and operation of wastewater collection and treatment systems	51.8	0.3%											-	-
5.9. Recovery of materials from non-hazardous waste	13.6	0.1%											-	-
5.10. Capture and use of landfill gas	2.4	0.0%											-	-
6.5. Transport by motorcycle, passenger car and light commercial vehicle	19.1	0.1%											-	-
6.6. Road haulage services	35.9	0.2%											-	-
8.1. Data processing, hosting, and related activities	4.1	0.0%											-	T
Turnover of non-aligned eligible activities (A2)	295.2	1.5%												
Aligned eligible (A1) + Non-aligned eligible (A2)	2,528.1	12.7%												
B. Non-eligible activities														

Sustainable strategy and shared value	Pursuing carbon neutrality	Regenerating resources and closing the circle	Enabling resilience and innovating
Governance and creating value	Customers	People	Suppliers

Economic activities	Absolute turnover 2022 (in millions of €)	Portion of turnover 2022	Substantial contribution		DNSH								Enabling activities	Transition activity
			Climate change mitigation	Climate change adaptation	Climate change mitigation	Climate change adaptation	Marine waters and resources	Circular economy	Pollution	Biodiversity and ecosystems	Minimum safeguard guarantees	Taxonomy-aligned revenue share		
Turnover of non-eligible activities (B)	17,343.2	87.3%												
Total: Aligned eligible (A1) + Non-aligned eligible (A2) + Non-eligible (B)			19,871.3	100%										

PORTION OF OPEX ARISING FROM PRODUCTS OR SERVICES ASSOCIATED TO ECONOMIC ACTIVITIES ALIGNED WITH TAXONOMY

Economic activities	Absolute Opex 2022 (in millions of €)	Portion of Opex 2022	Substantial contribution		DNSH						Minimum safeguard guarantees	Portion of Opex aligned to Taxonomy	Enabling activities	Transition activity
			Climate change mitigation	Climate change adaptation	Climate change mitigation	Climate change adaptation	Marine waters and resources	Circular economy	Pollution	Biodiversity and ecosystems				
A. Activities eligible for the Taxonomy														
A1. Aligned eligible activities														
3.17. Manufacture of plastic materials in primary forms	3.6	1.1%	100.0%	0%		Y	Y	N/A	y	Y	Y	1.1%	-	T
4.1. Electricity production using photovoltaic solar technology	-	0.0%	100.0%	0%		Y	N/A	Y	N/A	Y	Y	0.0%	-	-

Economic activities	Absolute Opex 2022 (in millions of €)	Portion of Opex 2022	Substantial contribution		DNSH							Portion of Opex aligned to Taxonomy	Enabling activities	Transition activity
			Climate change mitigation	Climate change adaptation	Climate change mitigation	Climate change adaptation	Marine waters and resources	Circular economy	Pollution	Biodiversity and ecosystems	Minimum safeguard guarantees			
4.9. Transmission and distribution of electricity	10.4	3.1%	100.0%	0%		Y	N/A	Y	Y	Y	Y	3.1%	E	-
4.13. Production of biogas and biofuels for transport and bioliquids	1.9	0.6%	100.0%	0%		Y	Y	N/A	Y	Y	Y	0.6%	-	-
4.14. Transmission and distribution networks for renewable gas and low carbon emission	15.7	4.7%	100.0%	0%		Y	Y	N/A	Y	Y	Y	4.7%	-	-
4.15. District heating/cooling distribution	0.4	0.1%	100.0%	0%		Y	Y	N/A	Y	Y	Y	0.1%	-	-
4.22. Production of heat and cold from geothermal energy	0.9	0.3%	100.0%	0%		Y	Y	N/A	Y	Y	Y	0.3%	-	-
5.1. Construction, expansion, and operation of collection, treatment, and supply systems	40.0	12.0%	100.0%	0%		Y	Y	N/A	N/A	Y	Y	12.0%	-	-
5.3. Construction, expansion, and operation of wastewater collection and treatment systems	19.5	5.8%	100.0%	0%		Y	Y	N/A	Y	Y	Y	5.8%	-	-
5.5. Collection and transport of non-hazardous waste in fractions separated at the source	22.7	6.8%	100.0%	0%		Y	N/A	Y	Y	Y	Y	6.8%	-	-
5.6. Digestion of purification sludge	-	0.0%	100.0%	0%		Y	Y	N/A	Y	Y	Y	0.0%	-	-
5.7. Anaerobic digestion of organic waste	2.2	0.7%	100.0%	0%		Y	Y	N/A	Y	Y	Y	0.7%	-	-

Economic activities	Absolute Opex 2022 (in millions of €)	Portion of Opex 2022	Substantial contribution		DNSH							Portion of Opex aligned to Taxonomy	Enabling activities	Transition activity
			Climate change mitigation	Climate change adaptation	Climate change mitigation	Climate change adaptation	Marine waters and resources	Circular economy	Pollution	Biodiversity and ecosystems	Minimum safeguard guarantees			
5.8. Composting of organic waste	0.3	0.0%	100.0%	0%		Y	N/A	N/A	Y	Y	Y	0.0%	-	-
5.9. Recovery of materials from non-hazardous waste	2.4	0.7%	100.0%	0%		Y	N/A	N/A	N/A	Y	Y	0.7%	-	-
5.10. Capture and use of landfill gas	0.3	0.1%	100.0%	0%		Y	N/A	N/A	Y	Y	Y	0.1%	-	-
6.5. Transport by motorcycle, passenger car and light commercial vehicle	0.0	0%	100.0%	0%		Y	N/A	Y	Y	N/A	Y	0%	-	-
7.3. Installation, maintenance, and repair of energy efficiency devices	-	0.0%	100.0%	0%		Y	N/A	N/A	Y	N/A	Y	0.0%	E	-
7.4. Installation, maintenance and repair of charging stations for electric vehicles in buildings	-	0.0%	100.0%	0%		Y	N/A	N/A	N/A	N/A	Y	0.0%	E	-
7.5. Installation, maintenance, and repair of instruments and devices for measuring, regulating, and controlling the energy performance of buildings.	4.9	1.5%	100.0%	0%		Y	N/A	N/A	N/A	N/A	Y	1.5%	E	-
7.6. Installation, maintenance, and repair of technologies for renewable energy	26.9	8.0%	100.0%	0%		Y	N/A	N/A	N/A	N/A	Y	8.0%	E	-
Opex of aligned eligible activities (A1)	152.1	45.5%										45.5%	12.6%	

Economic activities	Absolute Opex 2022 (in millions of €)	Portion of Opex 2022	Substantial contribution		DNSH						Minimum safeguard guarantees	Portion of Opex aligned to Taxonomy	Enabling activities	Transition activity
			Climate change mitigation	Climate change adaptation	Climate change mitigation	Climate change adaptation	Marine waters and resources	Circular economy	Pollution	Biodiversity and ecosystems				
A2. Non-aligned eligible activities														
4.15. District heating/cooling distribution	0.4	0.1%											-	-
4.30. High efficiency cogeneration of heat/cold and electricity from gaseous fossil fuels	19.5	5.8%											-	T
4.31. Production of heat/cooling from gaseous fossil fuels in an efficient district heating and cooling system	0.1	0.0%											-	T
5.3. Construction, expansion, and operation of wastewater collection and treatment systems	2.7	0.8%											-	-
5.9. Recovery of materials from non-hazardous waste	0.5	0.2%											-	-
5.10. Capture and use of landfill gas	0.2	0.0											-	-
6.5. Transport by motorcycle, passenger car and light commercial vehicle	9.4	2.8%											-	-
6.6. Road haulage services	22.1	6.6%											-	-

Economic activities	Absolute Opex 2022 (in millions of €)	Portion of Opex 2022	Substantial contribution		DNSH							Portion of Opex aligned to Taxonomy	Enabling activities	Transition activity
			Climate change mitigation	Climate change adaptation	Climate change mitigation	Climate change adaptation	Marine waters and resources	Circular economy	Pollution	Biodiversity and ecosystems	Minimum safeguard guarantees			
8.1. Data processing, hosting, and related activities	3.9	1.2%											-	T
Opex of non-aligned eligible activities (A2)	58.7	17.6%												
Aligned eligible (A1) + Non-aligned eligible (A2)	210.8	63.0%												
B. Non-eligible activities														
Opex of non-eligible activities (B)	123.5	37.0%												
Total: Aligned eligible (A1) + Non-aligned eligible (A2) + Non-eligible (B)	334.3	100.0%												

PORTION OF CAPEX ARISING FROM PRODUCTS OR SERVICES ASSOCIATED TO ECONOMIC ACTIVITIES ALIGNED WITH TAXONOMY

Economic activities	Absolute Capex 2022 (in millions of €)	Portion of Capex 2022	Substantial contribution		DNSH						Minimum safeguard guarantees	Portion of Capex aligned to Taxonomy	Enabling activities	Transition activity
			Climate change mitigation	Climate change adaptation	Climate change mitigation	Climate change adaptation	Marine waters and resources	Circular economy	Pollution	Biodiversity and ecosystems				
A. Activities eligible for the Taxonomy														
A1. Aligned eligible activities														
3.17. Manufacture of plastic materials in primary forms	7.4	1.1%	100.0%	0%		Y	Y	N/A	Y	Y	Y	1.1%	-	T
4.1. Electricity production using photovoltaic solar technology	0.1	0.0%	100.0%	0%		Y	N/A	Y	N/A	Y	Y	0.0%	-	-
4.9. Transmission and distribution of electricity	43.8	6.4%	100.0%	0%		Y	N/A	Y	Y	Y	Y	6.4%	E	-
4.13. Production of biogas and biofuels for transport and bioliquids	13.0	1.9%	100.0%	0%		Y	Y	N/A	Y	Y	Y	1.9%	-	-
4.14. Transmission and distribution networks for renewable gas and low carbon emission	69.0	10.1%	100.0%	0%		Y	Y	N/A	Y	Y	Y	10.1%	-	-
4.15. District heating/cooling distribution	2.3	0.3%	100.0%	0%		Y	Y	N/A	Y	Y	Y	0.3%	-	-
4.22. Production of heat and cold from geothermal energy	0.1	0.0%	100.0%	0%		Y	Y	N/A	Y	Y	Y	0.0%	-	-
5.1. Construction, expansion, and operation of collection, treatment, and supply systems	110.4	16.1%	100.0%	0%		Y	Y	N/A	N/A	Y	Y	16.1%	-	-

Economic activities	Absolute Capex 2022 (in millions of €)	Portion of Capex 2022	Substantial contribution		DNSH						Minimum safeguard guarantees	Portion of Capex aligned to Taxonomy	Enabling activities	Transition activity
			Climate change mitigation	Climate change adaptation	Climate change mitigation	Climate change adaptation	Marine waters and resources	Circular economy	Pollution	Biodiversity and ecosystems				
5.3. Construction, expansion, and operation of wastewater collection and treatment systems	60.1	8.8%	100.0%	0%		Y	Y	N/A	Y	Y	Y	8.8%	-	-
5.5. Collection and transport of non-hazardous waste in fractions separated at the source	30.1	4.4%	100.0%	0%		Y	N/A	Y	Y	Y	Y	4.4%	-	-
5.6. Digestion of purification sludge	0.8	0.1%	100.0%	0%		Y	Y	N/A	Y	Y	Y	0.1%	-	-
5.7. Anaerobic digestion of organic waste	1.1	0.2%	100.0%	0%		Y	Y	N/A	Y	Y	Y	0.2%	-	-
5.8. Composting of organic waste	0.3	0.0%	100.0%	0%		Y	N/A	N/A	Y	Y	Y	0.0%	-	-
5.9. Recovery of materials from non-hazardous waste	2.7	0.4%	100.0%	0%		Y	N/A	N/A	N/A	Y	Y	0.4%	-	-
5.10. Capture and use of landfill gas	-	0.0%	100.0%	0%		Y	N/A	N/A	Y	Y	Y	0.0%	-	-
6.5. Transport by motorcycle, passenger car and light commercial vehicle	-	0.0%	100.0%	0%		Y	N/A	Y	Y	N/A	Y	0.0%	-	-
7.3. Installation, maintenance, and repair of energy efficiency devices	1.7	0.2%	100.0%	0%		Y	N/A	N/A	Y	N/A	S	0.2%	E	-
7.4. Installation, maintenance and repair of charging stations for electric vehicles in buildings	0.6	0.1%	100.0%	0%		Y	N/A	N/A	N/A	N/A	S	0.1%	E	-

Economic activities	Absolute Capex 2022 (in millions of €)	Portion of Capex 2022	Substantial contribution		DNSH						Minimum safeguard guarantees	Portion of Capex aligned to Taxonomy	Enabling activities	Transition activity
			Climate change mitigation	Climate change adaptation	Climate change mitigation	Climate change adaptation	Marine waters and resources	Circular economy	Pollution	Biodiversity and ecosystems				
7.5. Installation, maintenance, and repair of instruments and devices for measuring, regulating, and controlling the energy performance of buildings.	30.6	4.5%	100.0%	0%		Y	N/A	N/A	N/A	N/A	Y	4.5%	E	-
7.6. Installation, maintenance, and repair of technologies for renewable energy	0.6	0.1%	100.0%	0%		Y	N/A	N/A	N/A	N/A	Y	0.1%	E	-
Capex of aligned eligible activities (A1) ²	374.6	54.6%										54.6%	11.3%	
A2. Non-aligned eligible activities														
4.15. District heating/cooling distribution	1.5	0.1%											-	-
4.30. High efficiency cogeneration of heat/cold and electricity from gaseous fossil fuels	10.2	5.8%											-	T

²As required by Delegated Regulation (EU) 2021/2178, in point 1.2.3.2, the Capex KPI adjusted according to the Taxonomy-aligned capital expenditure financed with the Green bond issued in 2022 is equal to 24%, and was calculated by subtracting the Green bond financed Capex from both the numerator (Capex of aligned eligible assets) and the denominator (total Capex).

Economic activities	Absolute Capex 2022 (in millions of €)	Portion of Capex 2022	Substantial contribution		DNSH							Portion of Capex aligned to Taxonomy	Enabling activities	Transition activity
			Climate change mitigation	Climate change adaptation	Climate change mitigation	Climate change adaptation	Marine waters and resources	Circular economy	Pollution	Biodiversity and ecosystems	Minimum safeguard guarantees			
4.31. Production of heat/cooling from gaseous fossil fuels in an efficient district heating and cooling system	0.9	0.0%											-	T
5.3. Construction, expansion, and operation of wastewater collection and treatment systems	16.7	0.8%											-	-
5.9. Recovery of materials from non-hazardous waste	0.6	0.2%											-	-
5.10. Capture and use of landfill gas	0.4	0.0											-	-
6.5. Transport by motorcycle, passenger car and light commercial vehicle	2.1	2.8%											-	-
6.6. Road haulage services	6.0	6.6%											-	-
8.1. Data processing, hosting, and related activities	1.6	1.2%											-	T
Capex of non-aligned eligible activities (A2)	39.9	5.8%												
Aligned eligible (A1) + Non-aligned eligible (A2)	414.5	60.5%												
B. Non-eligible activities														

Sustainable strategy and shared value	Pursuing carbon neutrality	Regenerating resources and closing the circle	Enabling resilience and innovating
Governance and creating value	Customers	People	Suppliers

Economic activities	Absolute Capex 2022 (in millions of €)	Portion of Capex 2022	Substantial contribution		DNSH					Minimum safeguard guarantees	Portion of Capex aligned to Taxonomy	Enabling activities	Transition activity
			Climate change mitigation	Climate change adaptation	Climate change mitigation	Climate change adaptation	Marine waters and resources	Circular economy	Pollution	Biodiversity and ecosystems			
Capex of non-eligible activities (B)	271.0	39.5%											
Total: Aligned eligible (A1) + Non-aligned eligible (A2) + Non-eligible (B)													
	685.5	100.0%											

GRI content index

The GRI content index contains only those indicators relevant to the material topics identified by the Group's materiality analysis. Indicator 3-3 (Management of material topics) is reported only once within the following index, as the connection between material topic and its management method is already explicit in the Methodological Guide table.

Statement of use	The Hera Group's non-financial statement is reported with the "in accordance with" option of the GRI Standards for the year 2022
GRI 1 used	GRI 1: Foundation 2021
Applicable GRI industry standards	No industry standard applicable

GRI standards and other indicators		Paragraph (Page)	Omissions Requirement omitted	Reason and explanation
GENERAL INFORMATION				
The organisation and its reporting practices				
GRI 2-1	Organisational details	The scope of reporting (2) About us (15) The composition of the shareholding structure (211)		
GRI 2-2	Entities included in the organization's sustainability reporting	The scope of reporting (2)		
GRI 2-3	Reporting period, frequency and contact point	Methodological guide (2) The Management Review Committee and the work group (4)		
GRI 2-4	Restatements of information	Methodological guide (4)		
GRI 2-5	External assurance	Auditing of the report (4) Independent auditors' report (350)		
Activities and workers				
GRI 2-6	Activities, value chain and other business relationships	About us (15) Services provided (15) Suppliers (289)		
GRI 2-7	Employees	Hera Group's workforce (265)		
GRI 2-8	Workers who are not employees	Lead-on employment of the suppliers (173)		
Governance				
GRI 2-9	Governance structure and composition	Corporate governance (194) Managing sustainability (200) Site: Internal committees Site: BoD composition		
GRI 2-10	Nomination and selection of the highest governance body	Corporate Governance Report 2022: Board of Directors - Appointment and replacement Site: Corporate governance report		
GRI 2-11	Chair of the highest governance body	Corporate Governance Report 2022: Board of Directors – Functioning of the Board of Directors; Role of the Executive Chairman of the Board of Directors		

GRI standards and other indicators	Paragraph (Page)	Omissions	
		Requirement omitted	Reason and explanation
GRI 2-12	Role of the highest governance body in overseeing the management of impacts	Stakeholders and materiality analysis (5) Corporate governance (194) Ethics and Sustainability Committee (194) Risk management (196) Managing sustainability (200)	
GRI 2-13	Delegation of responsibility for managing impacts	Corporate governance (194) Ethics and Sustainability Committee (194) Managing sustainability (200) Corporate Governance Report 2022: Board of Directors – Executive Directors	
GRI 2-14	Role of the highest governance body in sustainability reporting	Methodological guide (2) Stakeholders and the materiality analysis (6)	
GRI 2-15	Conflicts of interest	Corporate Governance Report 2022: Board of Directors – Functioning of the Board of Directors Site: Corporate governance report	
GRI 2-16	Communication of critical concerns	Ethics and Sustainability Committee (194) Main activities and results achieved (199)	
GRI 2-17	Collective knowledge of the highest governance body	Corporate Governance Report 2022: Board of Directors – Role of the Executive Chairman of the Board of Directors Site: Corporate governance report	
GRI 2-18	Evaluation of the performance of the highest governance body	Corporate Governance Report 2022: Self-assessment and succession of directors Site: Corporate governance report	
GRI 2-19	Remuneration policies	Incentives also depend on sustainability (275) 2022 Remuneration Report Site: Remuneration policy and objectives	
GRI 2-20	Process to determine remuneration	Remuneration and incentives (274) 2022 Remuneration Report Site: Remuneration policy and objectives	
GRI 2-21	Annual total compensation ratio	Remuneration and incentives (274)	
Strategy, policies and practices			
GRI 2-22	Statement on sustainable development strategy	Letter to stakeholders (1)	
GRI 2-23	Policy commitments	Environmental impact assessments presented during the year (98) The Code of Ethics (200)	
GRI 2-24	Embedding policy commitments	The Code of Ethics (200) Website: Code of Ethics	

GRI standards and other indicators	Paragraph (Page)	Omissions	
		Requirement omitted	Reason and explanation
GRI 2-25	Processes to remediate negative impacts	Stakeholders and materiality analysis (6) Ethics and Sustainability Committee (194) Compliance system for corruption and fraud prevention (196) The Code of Ethics (200) Website: Code of Ethics	
GRI 2-26	Mechanisms for seeking advice and raising concerns	Compliance system for corruption and fraud prevention (196)	
GRI 2-27	Compliance with laws and regulations	Pending legal proceedings (225) The relationship with the Italian regulatory and supervisory authorities (228) Litigations with customers (261) Litigation with suppliers (301) Sanctions imposed on the Group (230) Litigation with the workforce (287)	
GRI 2-28	Membership associations	Our commitment to sustainability in national and international networks (34) Associations of which Hera is a member (222)	
Stakeholder engagement			
GRI 2-29	Approach to stakeholder engagement	Stakeholders and materiality analysis (5) Dialogue and consultation initiatives (216)	
GRI 2-30	Collective bargaining agreements	Remuneration and incentives (274)	
Disclosure on material topics			
GRI 3-1	Process to determine material topics	Materiality analysis and definition of the contents (5)	
GRI 3-2	List of material topics	Breakdown of the information required by Italian Legislative Decree no. 254/2016 and material topics in order of priority (6)	
GRI 3-3	Management of material topics	Breakdown of the information required by Italian Legislative Decree no. 254/2016 and material topics in order of priority (6)	
TOPIC STANDARDS			
Climate change mitigation			
GRI 201-2	Financial implications and other risks and opportunities due to climate change	Risks and opportunities arising from climate change (63)	
GRI 305-1	Direct (Scope 1) GHG emissions	Total emissions of the Hera Group (68)	
GRI 305-2	Energy indirect (Scope 2) GHG emissions	Total emissions of the Hera Group (68)	
GRI 305-3	Other indirect (Scope 3) GHG emissions	Total emissions of the Hera Group (68) Greenhouse gases: metrics and objectives (386)	
GRI 305-4	GHG emissions intensity	Carbon intensity indices (70)	
GRI 305-5	Reduction of GHG emissions	Emissions avoided (74)	

GRI standards and other indicators	Paragraph (Page)	Omissions	
		Requirement omitted	Reason and explanation
Green Bond 2019	GHG emissions avoided by selling recycled plastic and with district heating [in thousands of tonnes of CO ₂ e]	Aliplast measures the carbon footprint of its products (354)	District heating: an answer to protect air quality (125)
Green Bond 2019 and 2022	Direct (scope 1) and indirect emissions (scope 2 + scope 3 from sales of electricity and downstream gas) in total	GHG emissions and science-based reduction objectives (71)	
Circular economy			
GRI 306-1	Production of waste and significant waste-related impact	The circular approach within the Hera Group (101; 104)	
GRI 306-2	Management of significant waste-related impact	The circular approach within the Hera Group (103; 104)	
GRI 306-3	Waste produced	The circular approach within the Hera Group (101)	
GRI 306-4	Waste not destined for disposal	The circular approach within the Hera Group (102)	
GRI 306-5	Waste destined for disposal	The circular approach within the Hera Group (102)	
Green Bond 2019 and 2022	Waste sent for recovery out of total waste treated in the selection plants [%]	Material and energy recovery in Herambiente's separation plants (109)	
Green Bond 2019 and 2022	Amount of plastic recycled by Aliplast	Hera Group's commitment to the new plastics economy (357)	
Green Bond 2022	Reusable purified wastewater (%)	The recovery of purified water in the interest of the local area (106)	
Safety, cost, and continuity of the service			
GRI 416-1	Assessment of the health and safety impacts of product and service categories	Quality of drinking water ¹¹² Safety and continuity of the service (254)	
GRI 416-2	Incidents of non-compliance concerning the health and safety of products and services	Quality of drinking water (112)	
Green Bond 2019 and 2022	Electronic gas meters installed (number)	Electric meters (108)	
Green Bond 2019	Average number of power outages per customer [number]	Electricity distribution service safety and continuity (254)	
Innovation and digital transformation			
GRI 203-1	Infrastructure investments and services supported	"Shared value" investments (29) Investments in innovation (139) The investments (204)	
GRI 418-1	Proven complaints relating to breaches of customer privacy and the loss of customer data	IT security (156)	

GRI standards and other indicators		Paragraph (Page)	Omissions Requirement omitted	Reason and explanation
Quality, cost of waste collection and city integrity service				
GRI 417-2	Episodes of non-compliance in information and labelling of products and services	Relations with the Italian regulatory and supervisory authorities (237) Penalties imposed on the Group (237)		
GRI 417-3	Cases of non-compliance relating to marketing communications	The relationship with the Italian regulatory and supervisory authorities (237) Penalties imposed on the Group (237)		
Green Bond 2019 and 2022	Separate waste collection [%]	Separate waste collection (79)		
Resilience and adjustment				
GRI 303-1 (2018)	Interactions with water as a shared resource	Resilient aqueduct and water source management (186)		
GRI 203-1	Infrastructure investments and services supported	“Shared value” investments (29)		
IF-EU-550a.2	Grid resiliency	Electricity distribution service safety and continuity (254)		
IF-WU-450a.4	Network resiliency and impacts of climate change	Resilient aqueduct and water source management (186) Interventions in gas and electricity networks to deal with hydrogeological instability (191) Resilience of electricity grids (191)		
Management of the supply chain				
GRI 204-1	Proportion of expenses on local suppliers	Focus on economic value distributed to suppliers (161)		
GRI 308-1	New suppliers that were evaluated using environmental criteria	The supplier qualification procedure (290)		
GRI 308-2	Negative environmental impacts in the supply chain and actions taken	Supplier assessment and checking (292)		
GRI 403-9	Accidents at work	Monitoring of supplier accidents at work (300)		
GRI 414-1	New suppliers that were evaluated using social criteria	The supplier qualification procedure (290)		
GRI 414-2	Negative social impacts on the supply chain and actions taken	Supplier assessment and checking (292)		
Commercial relations with customers				
Hera specific indicator	Customer relations	Customer relations (257)		
Energy efficiency and renewables				
GRI 302-1	Energy consumption within the organisation	Primary energy consumption of the Hera Group (41)		
GRI 302-2	Energy consumption outside the organisation	Primary energy consumption of the Hera Group (42)		
GRI 302-3	Energy intensity	Energy efficiency within the Hera Group (42)		
GRI 302-4	Reduction of energy consumption	Energy efficiency within the Hera Group (43)		
Green Bond 2019	Public lighting points using LEDs (%)	Energy efficiency in public lighting (49) Errore. Il segnalibro non è definito.)		
Green Bond 2022	Biomethane produced by FORSU	Biomethane development (55)		
Protection of air				

GRI standards and other indicators	Paragraph (Page)	Omissions	
		Requirement omitted	Reason and explanation
GRI 302-5	Reductions in energy requirements of products and services	Environmental benefits of district heating (127)	
GRI 305-7	Nitrogen oxides (NOX), sulphur oxides (SOX), and other significant emissions	Atmospheric emissions from waste-to-energy plants (121) Atmospheric emissions generated by district heating (128) Emissions of the Imola cogeneration plant (128)	
Green Bond 2019	Atmospheric emissions of the waste-to-energy plants with respect to the regulatory limits [%]	Atmospheric emissions from waste-to-energy plants (121)	
Occupational Health and Safety			
GRI 403-1	Occupational health and safety management system	The quality, safety, environmental, and social responsibility management system (201)	
GRI 403-2	Hazard identification, risk assessment, and incident investigation	Health and safety (278)	
GRI 403-3	Occupational health services	Health and safety (281)	
GRI 403-4	Worker participation, consultation, and communication on occupational health and safety	Health and safety (282)	
GRI 403-5	Worker training on occupational health and safety	Training initiatives (269) Health and safety (282)	
GRI 403-6	Promotion of worker health	Welfare (277)	
GRI 403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	Supplier assessment and checking (292)	
GRI 403-8	Workers covered by an occupational health and safety management system	The quality, safety, environmental, and social responsibility management system (201) Hera's commitment to quality, safety, environment and social responsibility certification (201)	
GRI 403-9	Accidents at work	Monitoring of supplier accidents at work (300) Health and safety (279)	
Local development and social inclusion			
GRI 201-1	Direct economic value generated and distributed	The economic value distributed to stakeholders (160) The production and allocation of value added (202)	
GRI 203-2	Significant indirect economic impacts	Focus on economic value distributed to suppliers (160) Placement under supply contracts with social cooperatives (168)	
GRI 204-1	Proportion of expenses on local suppliers	Focus on economic value distributed to suppliers (161)	
GRI 207-1	Approach to taxation	The tax strategy and model (204)	
GRI 207-2	Fiscal governance, control and risk management	The tax strategy and model (204)	
GRI 207-3	Stakeholder engagement and management of tax concerns	The tax strategy and model (204)	
GRI 207-4	Country-by-country reporting	The tax strategy and model (206)	

GRI standards and other indicators	Paragraph (Page)	Omissions	
		Requirement omitted	Reason and explanation
GRI 401-1	New employee hires and employee turnover	Stable employment and turnover (170)	
GRI 401-3	Parental leave	Diversity and inclusion (179)	
GRI 413-1	Operations with local community engagement, impact assessments, and development programs	HeraLAB, a tool for listening to the local communities (220)	
GRI 415-1	Political contributions	Focus on distributed economic value with donations and sponsorships (222)	
Diversity			
GRI 401-1	New employee hires and employee turnover	Stable employment and turnover (170)	
GRI 401-3	Parental leave	Diversity and inclusion (179)	
GRI 405-1	Diversity of governance bodies and employees	Diversity and inclusion (177) Corporate governance (194)	
GRI 405-2	Ratio of basic salary and remuneration of women to men	Diversity and inclusion (179)	
Training and professional development, remuneration and incentives			
GRI 404-1	Average hours of training per year per employee	Training initiatives (269)	
GRI 404-2	Employee Skills Updating Programs and Transition Assistance Programs	Training initiatives (269) Scuola dei Mestieri and the knowledge management system (271) HerAcademy: Hera Group's corporate university (271)	
GRI 404-3	Percentage of employees receiving regular performance and career development reviews	The development process (272)	
Activities against corruption			
GRI 205-1	Operations assessed for risks related to corruption	231-related risk assessment activities (198)	
GRI 205-2	Communication and training on anti-corruption policies and procedures	Training initiatives (269)	
GRI 205-3	Episodes of corruption found and the actions taken	231-related risk assessment activities (198) Management and prevention of fraud (199)	
Quality and consumption of the mains water			
GRI 416-1	Assessment of the health and safety impacts of product and service categories	Quality of drinking water (112) Safety and continuity of the service (254)	
GRI 416-2	Incidents of non-compliance concerning the health and safety of products and services	Quality of drinking water (112)	
GRI 417-1	Information and labelling requirements for products and services	Quality of drinking water (113)	
Sustainable management of water resources			
GRI 303-1 (2018)	Interactions with water as a shared resource	The commitment to reduce the consumption of residential customers and businesses (110) Water resources (111)	
GRI 303-2 (2018)	Management of water discharge related impacts	Wastewater purification quality (115)	

GRI standards and other indicators	Paragraph (Page)	Omissions	
		Requirement omitted	Reason and explanation
GRI 303-3 (2018)	Water withdrawal	Water resources (111)	
Green Bond 2019 and 2022	Quality of treated water [%]	Wastewater purification quality (115)	
Green Bond 2019 and 2022	Urban areas >2000 inhabitant equivalents adjusted to wastewater purification regulations (% of inhabitant equivalents)	Wastewater purification quality (115)	
Green Bond 2022	Annual volume of waste water treated [mc]	The recovery of purified water in the interest of the local area (106)	
Green Bond 2022	Reduction of internal water consumption [%]	Reduction in consumption within the Group (108)	

[2-5]

Independent auditors' report



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Independent auditors' report on the consolidated non-financial disclosure in accordance with Art 3., par. 10 of Legislative Decree 254/2016 and with Art. 5 of Consob Regulation adopted with Resolution n. 20267 of 18 January 2018

To the Board of Directors of
Hera S.p.A.

We have been appointed to perform a limited assurance engagement pursuant to Article 3, paragraph 10, of Legislative Decree 30 December 2016, n. 254 (hereinafter "Decree") and Article 5 of Consob Regulation adopted with Resolution 20267/2018, on the consolidated non-financial disclosure of Hera S.p.A. and its subsidiaries (hereinafter the "Group" or "Hera Group") for the year ended 31 December 2022, in accordance with Article 4 of the Decree and approved by the Board of Directors on 21 March 2023 (hereinafter the "NFD"). Our limited assurance engagement does not cover the information required by article 8 of the European Regulation 2020/852, included in the paragraph *Information concerning environmentally sustainable economic activities - Regulation (EU) 2020/852* of the NFD.

Responsibility of the Directors and the Board of Statutory Auditors for the NFD

The Directors are responsible for the preparation of the NFD in accordance with the requirements of Articles 3 and 4 of the Decree and the "Global Reporting Initiative Sustainability Reporting Standards" issued by GRI - Global Reporting Initiative (hereinafter "GRI Standards"), which they identified as the reporting standards.

The Directors are also responsible, within the terms provided by law, for that part of the internal control they consider necessary to allow the preparation of the NFD that is free from material misstatement, caused by fraud or unintentional behaviours or events.

The Directors are responsible for identifying the content of the NFD, within the matters mentioned in article 3, paragraph 1, of the Decree, considering the activities and characteristics of the Group and to the extent deemed necessary to ensure the understanding of the Group's business, its trends, its results, and related impacts.

The Directors are responsible for defining the management and organisational business model of the Group and, with reference to the matters identified and reported in the NFD, for the policies adopted by the Group and for the identification and management of risks generated or incurred by the Group.

The Board of Statutory Auditors is responsible, within the terms provided by the law, for overseeing the compliance with the requirements of the Decree.

Auditor's independence and quality control

We are independent in accordance with the principles of ethics and independence disclosed in the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants, which are based on the fundamental principles of integrity, objectivity, competence and professional diligence, confidentiality, and professional behaviour. Our audit firm applies the International Standard on Quality Control 1 (ISQC Italy 1) and, accordingly, maintains an overall quality control system, that includes documented policies and procedures for the compliance with ethical and professional standards and with applicable laws and regulations.

Auditor's Responsibility

It is our responsibility to express, based on the procedures performed, a conclusion about the compliance of the NFD with the requirements of the Decree and of the GRI Standards. Our work has been performed in accordance with the principle "International Standard on Assurance Engagements ISAE 3000 (Revised) - Assurance Engagements Other than Audits or Reviews of Historical Financial Information" (hereinafter "ISAE 3000 Revised"), issued by the International Auditing and Assurance Standards Board (IAASB) for limited assurance engagements. The principle requires that we plan and perform procedures to obtain a limited assurance that the NFD is free from material misstatements. The procedures performed in a limited assurance engagement are less in scope than those performed in a reasonable assurance engagement in accordance with ISAE 3000 Revised ("reasonable assurance engagement")



and, consequently, do not provide us with a sufficient level of assurance to become aware of all significant facts and circumstances that would be identified in a reasonable assurance engagement.

The procedures performed on the NFD were based on our professional judgment and included inquiries, primarily with the Group's personnel responsible for the preparation of information included in the NFD, in the analysis of documents, recalculations and other procedures to obtain evidence considered appropriate.

In particular, we carried out the following procedures:

1. analysis of the relevant topics reported in the NFD relating to the activities and characteristics of the Group, to assess the reasonableness of the selection process applied, in accordance with the provision of Article 3 of the Decree and considering the reporting standards applied;
2. analysis and assessment of the criteria for identifying the consolidation area, to assess its compliance with the Decree;
3. comparison of the economic and financial data and information reported in the NFD with those included in the Hera Group's Consolidated Financial Statements;
4. understanding of the following matters:
 - business and organisational model of the Group, with reference to the management of the topics specified by article 3 of the Decree;
 - policies adopted by the Group with reference to the topics specified by article 3 of the Decree, actual results, and related key performance indicators;
 - main risks generated or incurred by the Group, with reference to the topics specified by article 3 of the Decree.

With reference to such matters, we obtained the documentation supporting the information disclosed in the NFD and performed the procedures described under point 5, letter a) below.

5. understanding of the processes underlying the preparation, detection and management of the significant qualitative and quantitative information included in the NFD.

In particular, we had meetings and we conducted interviews with the management and with the personnel of Hera S.p.A., Hera Comm S.p.A., INRETE Distribuzione Energia S.p.A., Herambiente S.p.A., Hestambiente S.r.l., HERatech S.r.l., Hera Servizi Energia S.p.A., Hera Luce S.r.l., Acantho S.p.A., Aliplast S.p.A., Uniflotte S.r.l., AcegasApsAmga S.p.A., Marche Multiservizi S.p.A., and we performed limited analysis and validation procedures, in order to collect information about the processes and procedures that support the collection, aggregation, processing and submission of non-financial information to the management responsible for the preparation of the NFD.

Moreover, for significant information, considering the activities and characteristics of the Group:

- at parent company's and subsidiaries' level:
 - a) with reference to the qualitative information included in the NFD, and to the business model, the policies adopted and main risks, we carried out inquiries and obtained supporting documentation to verify its consistency with the available evidence;
 - b) with reference to quantitative information, we performed analytical procedures and limited assurance procedures, to assess, on a sample basis, the proper consolidation of the information.
- for the following companies and sites, which we selected based on their activities, their contribution to the performance indicators at consolidated level and their location, we carried out site visits and remote interviews, during which we had discussion with management and obtained supporting evidence regarding the appropriate application of the procedures and calculation methods used for the performance indicators:
Hera S.p.A. Bologna, Modena, Imola (BO) offices, the Forlì Telecontrol site; Hera Comm S.p.A., INRETE Distribuzione Energia S.p.A., Herambiente S.p.A., HERatech S.r.l., AcegasApsAmga S.p.A., Marche Multiservizi S.p.A. office and the water treatment plant of Borgheria (PU).



Conclusion

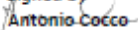
Based on the procedures performed, nothing has come to our attention that caused us to believe that the NFD of the Hera Group for the year ended on 31 December 2022 has not been prepared, in all material respects, in accordance with the requirements of Articles 3 and 4 of the Decree and the GRI Standards.

Our conclusions on the NFD of the Hera Group do not extend to the information required by Article 8 of the European Regulation 2020/852, included in the paragraph *Information concerning environmentally sustainable economic activities - Regulation (EU) 2020/852 of the NFD,*

Bologna, 5 April 2023

Audirevi S.p.A.

Signed by

Antonio Cocco

Partner

This report has been translated into the English language solely for the convenience of international readers.

Attachments

CASE STUDIES

Energy - Pursuing carbon neutrality

Promoting energy efficiency

Consumption Log

The **Consumption Log** is a free service that allows customers to compare their consumption with that of a similar virtuous customer in terms of size, province and use of resources over time, and provides useful tips for savings through personalised information on individual and contractual characteristics. At present, this tool is active for all free market electricity, gas and district heating customers, as well as households using water and waste management services.

This report, currently provided to **over 750,000 electricity and gas supply points** and about **370,000 water and waste management points**, aims to make customers **constantly aware of their consumption habits over time** and the potential effects of optimising them, in order to help them consume less and better.

The **Water Consumption Log**, available to customers who have provided the company with their e-mail address, allows them to compare their water consumption with that of similar, virtuous users. In addition, it describes their behaviour over time according to the evolution of their consumption and provides useful tips for household savings.

In 2022, the **Waste Management Consumption Log** was made available to all customers with activated e-mails in the 18 municipalities in which the Unit Pricing Tariff (UPT) is applied. With this tool, customers can compare their own non-sorted waste disposal compared to the previous year and to other residents in the same municipality, and receive useful advice to help them reduce their impact on the environment. The "Access to ecological stations" section indicates their contribution to delivering sorted waste to ecological stations (or collection centres) compared to total deliveries in their city.

SUPPLY POINTS WITH CONSUMPTION LOG

%	2020	2021	2022
Electricity customers (free market and protected households)	26.8%	32.5%	35.0%
Gas customers (free market and protected households)	15.0%	19.4%	21.4%
District heating customers	8.0%	7.9%	7.4%
Water service customers (Hera Spa households)	20%	27%	35%
Waste management services customers (in municipalities with unit pricing)	44.3%	50.6%	42.1%

These figures do not include the following companies: Eco Gas, Con Energia and AresGas.

During 2022, as regards the Energy Services Log, **collaboration** continued with the **Milan Polytechnic** concerning the launch of a project aimed at increasing the salience of behavioural interventions, analysing how a certain trending topic can attract a customer's attention when reading the Consumption Log and how certain related messages can impact on their consumption habits. Furthermore, a project for an integrated report on easily understandable indicators aggregating various resources (electricity, natural gas, water and waste) was initiated, providing customers with a holistic view of their actions and behaviours impacting different consumptions at the same time.

Thanks to the conclusions reached by the Milan Polytechnic, which confirm **synergies in reducing water and electricity consumption**, the Water Consumption Log was proposed to the Energy Services Manager as an energy saving project **for obtaining Energy efficiency certificates**. This project proposal comes alongside the one already underway that provides for a recognition of savings in terms

of toe (tonnes of oil equivalent) on lots of electricity customers affected by energy saving initiatives based on behavioural indicators, such as the Consumption Log.

How does this initiative contribute to responsible digital transformation? The benefits achieved in Corporate digital responsibility factors (see the section on “Corporate digital responsibility”)

Social		A customised service that helps Customers effectively understand the environmental and economic effects of their behaviour and provides advice through applications for waste reduction. The report can be consulted on various apps (Online Services and MyHera App).
Environmental		Creation of a digital service aimed at promoting and communicating more sustainable behaviour, with less waste and greater customer awareness of consumption habits.
Economic		Quantification of savings related to the reduction of waste caused by more sustainable consumption habits.

The Consumption Log contributes to achieving **UN 2030 Agenda goals 7.3, 11.3, 11.6 and 12.8**, as well as – through the involvement of customers and residents – **goal 17.17**.

Energy transition and renewables

Hydrogen in the gas distribution network in Modena

Inrete Distribuzione Energia has initiated trials to **supply the gas distribution network with a mixture of hydrogen and methane**. This project aims to explore the possibilities of decarbonising household and municipal uses of gas by feeding hydrogen (which by its nature has no carbon content) into city distribution networks.

The activities began in Castelfranco Emilia, near Modena, in October 2022, involving roughly thirty households, and were the **first trial** of this kind in **Italy**. The aim is to study innovative solutions for the use of green gases, which are energy vectors with a low environmental impact that can contribute to the decarbonising local areas, with important benefits for the environment.

This trial is part of the Hera Group's broader strategy for developing hydrogen, in a twofold perspective. On the one hand, it will see the Group's assets evolve, first and foremost its own gas distribution networks, and on the other, new business opportunities will be created, which Hera can seize by leveraging its multi-business skills, including partnerships with other major industrial operators.

Moreover, hydrogen is a vector that can be produced in “zero km” industrial processes (specific characteristics and infrastructural features were in fact identified in the Modena area) and therefore the partial replacement of fossil gas with this resource contributes to reducing the energy dependence that characterises traditional fossil sources.

The project was also designed to **acquire direct technical data** on the distribution and use of mixtures of hydrogen and natural gas **using the existing gas network**, and is included in the broader set of activities aimed at certifying the Hera Group's supply chain as qualified to use green gas. These also include the introduction, again in the Modena area, of “**hydrogen-ready**” **gas meters**. A few months ago, in fact, Hera's technicians began installing the new **NexMeter**, an innovative meter both for its cutting-edge technology and for its advanced safety functions, also in terms of reducing gas dispersion into the atmosphere.

Hydrogen in the Modena gas distribution network contributes to achieving **UN 2030 Agenda goals 7.2, 9.1, 9.2, 9.4 and 11.6**.

Climate change mitigation

Aliplast measures the carbon footprint of its products

In order to provide information on the carbon footprint of certain products, since 2018 Aliplast has been carrying out a broad calculation of the carbon footprint of five product types: PE granules, PE films, PET granules, PET plates, PET flakes.

Aliplast to commissioned this study in order to carry out research on the **environmental performance of these products**, as regards global warming, and to quantify the greenhouse gas emissions related to a functional unit of each product (set at one kilogram), in order to **identify** the phases of their life cycle showing the highest environmental criticalities and **intervene** so as to reduce their environmental impact. The European impact methodology EF v3.0, developed by the Joint Research Centre for the Product

Environmental Footprint (PEF) initiative, was used. One of the outcomes of the LCA is the amount of CO₂ equivalent, whose calculation method is the IPCC 2013 Gwp 100, contained in EF v3.0.

The project involved **analysing the greenhouse gas emissions of Aliplast products and comparing them with those of the corresponding virgin products**. The result is expressed in kg of CO₂ equivalent involved in production. CO₂ equivalent is, indeed, the unit of measurement used to bring greenhouse gas emissions with different climate-changing effects (the so-called Global Warming Potential, GWP) in relation to a single index. CO₂ has been taken as a reference by the IPCC (Intergovernmental Panel on Climate Change) and its GWP set at 1; other gases are then transformed into CO₂ equivalent according to their GWP (a gas with a climate-changing potential 21 times greater than CO₂, for example, is counted as 21 tonnes of CO₂ equivalent).

From the analysis carried out, it appears that in 2022, a production of roughly 100 thousand tonnes including PE granules, PE films, PET granules, and regenerated PET plates, **avoided the production of roughly 170 thousand tonnes of CO₂ equivalent**, corresponding to more than 400 thousand barrels of oil. The greenhouse gas savings achieved thanks to the contribution of suppliers and customers who choose Aliplast's recycled products is comparable to the emissions of approximately 100 thousand cars running on gas and travelling 10 thousand kilometres in a year.

Aliplast's activities contribute to achieving **UN 2030 Agenda goals 11.6, 12.2, 12.4, 12.5 and 13.2**.

Environment - Regenerating resources and closing the circle

Transition to a circular economy

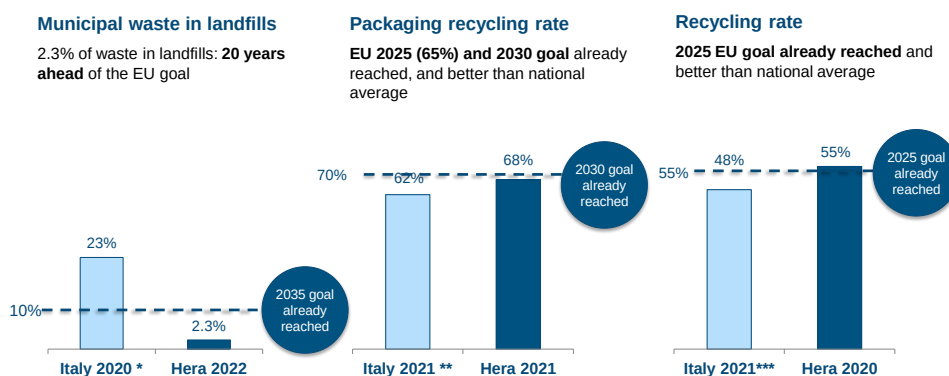
European package on circular economy: Hera anticipates the steps

Hera has confirmed its targets on packaging recycling and landfill reduction, showing that it is **ahead of both European targets for municipal waste**.

In the areas served by the Group, in fact, all 3 main European targets have been met, including those for: landfills (2.3% in 2022, against a target of a maximum of 10% by 2035), packaging (68% in 2021, against a target of 65% by 2025 and 70% by 2030) and the overall recycling rate (57% in 2021, against a target of 55% by 2025, 60% by 2030 and 65% by 2035). Data on the latter two targets will be updated to 2022 in the coming months and as usual published in the report "Tracking waste".

The report "Tracking waste", whose thirteenth edition was published in 2022, transparently and comprehensively certifies that the percentage of sorted waste actually recovered by the Group came to 91%, broken down into 84% of material recycling and 7% of energy recovery, the latter only in the plastic and green sectors. This project covered all main materials collected separately: compostable, paper, organic, glass, plastic, wood, iron and metals (aluminium, steel and tinplate packaging).

This report, which covers the entire area served by the Group, indicates a 98% recovery rate for compostable waste and 66% for plastic, as well as 92% material recycling for paper, 91% for organic waste, 94% for glass, 99% for wood, 99% for iron and 94% for metal.



* Source: Eurostat

** Source: Conai, Waste prevention program 2021. This data only refers to packaging from municipal waste.

*** Source: Ispra, Municipal waste report 2021

Meeting and exceeding the European municipal waste targets contributes to achieving **UN 2030 Agenda goals 12.2, 12.4, 12.5**.

Publishing the report "Tracking Waste" contributes to achieving **UN 2030 Agenda goal 12.8**.

Hera measures "circularity" with Circulytics

In 2019, the Ellen MacArthur Foundation, as part of a collaboration with 13 strategic partners and 30 members of its Network, including Hera, developed a digital tool for measuring circular economy performance, "**Circulytics**". This tool supports a company's transition towards the circular economy, going beyond a simple evaluation of products and material flows and using the broadest set of qualitative-quantitative indicators available, divided into two sections: **Enablers**, i.e. critical aspects that enable a company to make a broad transformation towards the circular economy (such as business strategy, innovation, human resource management, and stakeholder engagement) and **Outcomes**, useful elements for measuring circular inputs and outputs that provide an overview of current performance (such as material and water flows, products used, services performed, assets owned and energy used). This tool supports the decision-making process and the incorporation of circularity into business strategies, highlights strengths and areas for improvement, and provides transparency to investors and customers as to circularity projects, for a multi-stakeholder value creation.

In August 2022, the Hera Group, through the company Hasi, submitted its third version to **Circulytics** and obtained a tailor-made company scorecard containing an assessment of its circularity performance. This assessment showed a C- level on a scale from A to E, areas where Hasi's performance is already

very good and others where improvement is needed. Areas in which Hasi has already achieved optimal performance include:

- **management of water resources** by reusing a considerable amount of the water sent into industrial processes;
- **promoting services** which, through specific projects, provide for an improvement in customers' and its own circularity.

The areas where improvement is needed, instead, include the **management of its own assets** with circularity criteria.

Based on this result, Hasi decided to set up an improvement plan in order to continue the efforts made to enable the company's transition to a circular economy model.

Circulytics contributes to achieving **UN 2030 Agenda goals 12.2, 12.4, 12.5 and 17.16**.

The Hera Group's commitment to the new plastics economy

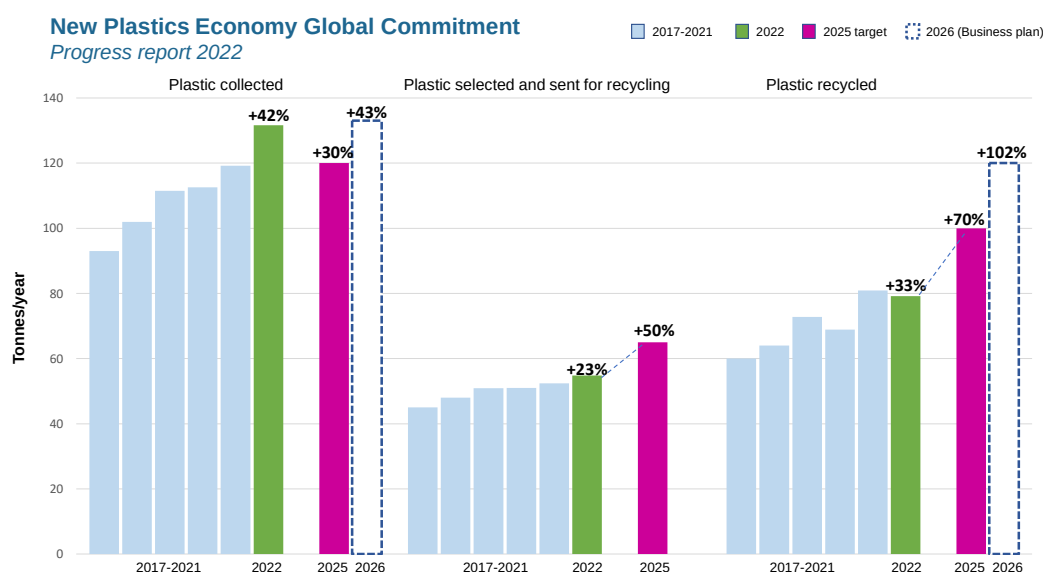
Hera is one of the 250 companies worldwide, and the only Italian multiutility company, that in 2018 signed the **New Plastics Economy Global Commitment**, launched by the Ellen MacArthur Foundation in collaboration with the UN Environment Programme (UNEP). The Foundation's initiative is ultimately aimed at tackling the problem of plastic pollution at its source and making the entire supply chain more circular: eliminating disposable products as much as possible, producing and using only recyclable, reusable or compostable packaging and promoting the use of recycled plastic. To this end, the Foundation has created a global movement, involving all players in the supply chain, such as plastic packaging manufacturers and companies that use them to pack their products, large-scale retailers and recycling companies, as well as governments and investors.

The Hera Group has committed to increase by 2025 (compared to 2017):

- plastics collected in the municipalities served by 30%;
- plastics sorted and sent to be recycled by the Group's plants by 50%;
- plastic recycled by Aliplast by 70%.

To date, the Global Commitment has gathered more than 500 signatures worldwide, including governments and public administrations on five continents, companies operating at various stages of the plastic packaging value chain, institutions including National Geographic, the WWF, the World Economic Forum, the Consumer Goods Forum, the International Union for Conservation of Nature (IUCN), universities and research organisations, and financial institutions.

In November 2022, the fourth Progress report was published, containing data from 130 companies (96% of those eligible for reporting, depending on the date they became members) and 17 governments/administrations (of the 20 eligible for reporting). The momentum created around the circular economy of plastics was unprecedented and the early progress made by signatories is significant. Despite this, efforts to eliminate the problem of plastic waste pollution at source must progress to a more ambitious level. The data reported on this occasion by the Hera Group referred to 2021.



The Hera Group's data at the end of 2022, while showing different performances for each target, indicate that the path undertaken is the right one. With regard to the **plastics collected** in the municipalities served, the Group has reached the target set for 2025 three years in advance, partially thanks to the contribution made by residents who, in recent years, have been engaged and incentivised to improve collection in a rationale oriented towards recycling. With respect to the **plastics sorted and sent for recycling** in the Group's plants, there has also been progressive and positive progress compared to the target. However, as of 2023, the performance linked to this indicator will undergo a significant reduction due to the effect of Emilia-Romagna regional law no. 16 of 18 July 2017, which establishes that an amount coming to no less than 30% of municipal waste collected and sorted by type must be managed by an economic operator selected through a competitive procedure in which companies controlled by or connected to the concessionaire (in this case, the Group) cannot participate. In this regulatory context, the Group may only be responsible for managing 70% of the municipal waste collected and sorted by type by the Group itself, which will jeopardise achieving the target within 2025. As for the **plastic recycled** in 2022, a slight decrease was due to a fall in sales, caused in turn by the unfavourable energy scenario. Nevertheless, the improved performance related to plastics recycling envisaged in the Group's 2022-2026 Business plan shows that achieving this target will only be possible by continuing efforts in innovation and by leveraging industrial capacity.

The same targets were presented by Hera in the context of the “**EU-wide pledging** campaign for the **uptake of recycled plastics**”, the campaign promoted by the European Commission to accelerate the uptake of recycled plastics and reach the European target of ten million tonnes of recycled plastics used for new products by 2025.

Achieving the targets on the plastics supply chain contributes to achieving **UN 2030 Agenda goals 12.2, 12.4, 12.5**.

Recycled plastic bags with Aliplast

In November 2019, an experimental circular economy project was launched by Hera and Aliplast, aimed at increasing the reuse of reels made from post-consumer recycled plastic in the production of bags intended for sorted waste collection. The ultimate goal was to “close the circle” of the lifecycle of these products, increasing their recycling and reuse, so as to increase economic sustainability and reduce their environmental impact as much as possible.

During 2022, the industrialisation of this process, involving all areas managed by the Hera Group (including the Triveneto and Marche regions) continued. The main results were:

- production of 1,958 tonnes of reels (+28% compared to 2021) subdivided respectively;
- roughly 38 million recycled plastic bags produced.

Going beyond the mere numbers, this project achieved other important positive results, since the quality of the bags clearly improved in that Aliplast itself guarantees the technical requirements. Furthermore, the problem of disputes with third-party suppliers, who might not comply with product specifications, has been eliminated and the service offered to Hera users has improved, resulting in a positive image return for the Group.

The use of recycled plastic bags for waste collection contributes to **UN 2030 Agenda goals 9.4, 11.6, 12.2, 12.4 and 12.5**.

Innovative Carbon Fibre Recycling Plant

An agreement has been reached for the construction of the first plant in Italy, and among the first in Europe, to use an innovative pyrogasification process to produce recovered carbon fibre. It will be carried out by Herambiente and the project is the result of a collaboration with the Department of Industrial Chemistry of the University of Bologna and Curti Costruzioni Meccaniche.

Currently, carbon fibre waste is almost exclusively destined for landfills or energy recovery. The challenge involved in the project for the plant make it pioneering, because it aims to recover carbon through an innovative pyrogasification process while maintaining the lightness and strength of this fibre, a material that can potentially be recycled countless times.

The advantages of this new technological solution are clear, with a 70% saving on the environmental impact associated with the life cycle compared to traditional methods of carbon fibre treatment and disposal. In addition, it will result in approximately 160 tonnes of recycled carbon fibre with a 90% energy saving compared to virgin fibre production and a reduction in CO₂ emissions into the atmosphere coming to approximately 7,000 tonnes per year

The plant will be built in Imola and will operate through a complex process guaranteeing a completely clean and reusable outgoing product, ready to be rewoven and impregnated for reuse in the sectors from

which the waste comes: automotive, aerospace, nautical and wind energy, to name but a few, but more generally from a market that now shows a 9% annual increase in demand for carbon fibre, which today is almost entirely a virgin raw material.

Construction is expected to begin in 2023, and in early 2024 the plant will become operational, and will have a total maximum treatment capacity (on two lines) of 320 tonnes per year, operating for roughly 7,000 hours per year. It is also designed to recover syngas from resins and additives, which will be reused to generate part of the energy needed for the process in order to maximise energy recovery as well.

The carbon fibre recycling plant contributes achieving **UN 2030 Agenda goals 9.1, 9.2, 9.4, 11.6, 12.2, 12.4 and 12.5**, as well as - thanks to the partnership developed - to achieving **goal 17.17**.

Operation & maintenance service in Granarolo's sewage treatment plants

The O&M (operation & maintenance) service is part of the distinctive, high-value services offered by Hasi aimed at improving the environmental performance of customer companies. As with the Global Waste Management offer, O&M also takes up Hasi's philosophy, ranking it as a Circular Engine Company: guiding companies towards the ecological transition by pooling Herambiente's experience and knowhow in increasing the efficiency of industrial processes.

In 2022, the O&M activities carried out within the framework of the contracts for the operation and maintenance of the purification plants owned by some customers led to highly positive results as regards sustainability and the circular economy, thanks to the control of the purification process, the rationalisation of the chemicals used and the introduction of a number of efficiency improvements.

For Granarolo, of whom three plants are currently under management, located in Cadriano (BO), Usmate (MB) and Pasturago (MI), thanks to management through the O&M service, it has been possible to achieve high performance levels, along with full compliance with emissions limits. Various efficiency enhancement measures are currently being implemented in all three plants, thanks to which it is expected that the purification process will be further improved and significant reductions will be achieved in the consumption of electricity, the use of chemical additives and the production of sludge. Note that following the performance achieved, Hasi has been commissioned by Granarolo to design and construct its new biological purification plant in Usmate (MB).

The operation & maintenance service provided by Hasi for managing sewage treatment plants at Granarolo's facilities contributed to achieving **UN 2030 Agenda goals 9.2, 11.6, 12.2, 12.4 and 12.5**, as well as - thanks to the partnership developed - achieving **goal 17.17**.

Hera and Eni: partnership to turn cooking oil into biofuel

As part of the transition to a circular economy promoted by the Group, the **collection of waste oils** has become increasingly visible and important, also leading to significant economic returns. A street collection service for cooking oils started in 2018, using attractive bins specifically designed to collect residual household cooking oil.

The results of this collection feed into a **virtuous circular economy project**. In fact, under a framework agreement stipulated with Eni, all discarded cooking oil collected by Hera, once processed in affiliated plants, is transported to the Eni bio-refinery in Porto Marghera (VE) where it is transformed into hydrogenated biofuel. Under this agreement, Eni supplies Hera with approximately 600,000 litres/year of this biofuel, which is used to power 35 waste compactors in the areas served. The compactors bear images and logos on their sides highlighting this initiative.

The total number of bins for street collection of discarded vegetable oils in the area served by Hera Spa amounts to more than 800, distributed over 120 municipalities for a served population of roughly 2.4 million inhabitants. In 2022, the results achieved with the collection service came to 1,220 tonnes, with further improvement over previous years. This data refers to the amount collected in the areas served by Hera Spa, Marche Multiservizi and AcegasApsAmga.

In addition to the volume from municipal collections, in 2022 Hera increased its collection of vegetable oils from commercial users in the area. In addition to restaurants and companies operating in the food sector, the project also contracted important groups in the catering sector such as Camst, Cirfood, Elixir, Road House and Chef Express. A total of 1,008 catering outlets were involved in the project. The extension of the project made it possible to start producing hydrogenated biofuel at the ENI Bio-Refinery in Porto Marghera from an additional 320 tonnes of vegetable oils.

In total, the oil collected during 2022 amounted to 1,540 tonnes. This generated **significant positive environmental impacts**, as shown in the table below.

ENVIRONMENTAL BENEFITS PRODUCED BY THIS PROJECT

2022

Quantity of waste cooking oils collected (tonnes)	1,540
Quantity of hydrogenated biofuel produced (thousand litres)	1,700,000
Greenhouse gas emissions avoided (tonnes of Co2eq)	4,930
Primary energy saved (toe)	1,500

In 2022, Hera was certified by Bureau Veritas Italy as regards the AFNOR XP X30-901 standard for its circular economy projects. The French AFNOR standard is now the main international reference for implementing a management system for circular economy projects. More specifically, the waste cooking oil management project was selected and verified in accordance with the requirements of this standard, which includes, among others, a risk/opportunity analysis. This allowed the foundations of the project to be strengthened by assessments of possible criticalities, such as the risk of spills and the maintenance of roadside containers, but also on the important benefits of the initiative, which push for its extension and promotion throughout the area served, as well as the possible actions to be put in place to reduce the former and amplify the latter.

AFNOR certification thus confirms that the reorganisation of the exhausted cooking oil recovery process in the areas served by the Hera Group has taken place in full respect of the circular economy, yielding important environmental and economic benefits.

The partnership between Hera and Eni contributes to achieving **UN 2030 Agenda goals 9.4, 11.6, 12.2, 12.4 and 12.5**, as well as - thanks to the partnership developed – to achieving **target 17.17**.

Important new partnerships signed to “close the circle”

In 2022, 5 new strategic circular economy partnerships were signed with important national bodies, following up on those signed in previous years.

In January 2022, the Hera Group signed two 3-year cooperation agreements with **Federdistribuzione**, the federation of Distribuzione Moderna, which groups together more than 40 companies in the food and non-food sectors with a total of 17,400 sales points. The first agreement concerns the development of circular economy and environmental sustainability initiatives, including actions related to sustainable mobility and environmental communication, while the second agreement concerns the promotion of energy efficiency initiatives. Federambiente’s role in both cases is to promote the development of projects aimed at member companies.

March 2022 saw the beginning of the Hera Group’s collaboration with the **Italian Exhibition Group**, to which it provided its support in the ISO 12121 Integrated System certification process relating to the implementation of Sustainable event management systems, a project that included the Rimini and Vicenza exhibition centres and the organisation of Ecomondo. This certification, which states that the activity is designed and carried out with respect for economic, social and environmental factors, was acquired in November on the occasion of the Ecomondo trade fair event.

In April 2022, **Aeroporti di Roma** also became one of the Hera Group’s strategic circular economy partners, signing of a framework agreement concerning the development of initiatives in favour of sustainability and a circular approach at the Rome Fiumicino and Rome Ciampino airport hubs. The areas identified for interventions, to be developed over a two-year period, range from optimising waste management, to waste water treatment in the airport purification plants and the optimisation of water network management. In the second half of 2022, the first projects to be implemented were identified, concerning the district-based drinking water network and the quality and management of water in the Aeroporti di Roma water plant system, aimed at controlling its quality, maximising its reuse and making its use more efficient.

Between April and September 2022, the Hera Group signed two additional circular economy partnerships with two leading catering companies: **Elior** and **Cirfood**. Among the first activities to be launched was the collection and valorisation of used cooking oils produced in their catering outlets, to produce hydrogenated biofuel at the Eni biorefinery in Porto Marghera thanks to the agreement between Hera and Eni. This service was activated in July 2022 at more than 160 Elior refreshment points and in September 2022 at more than 260 Cirfood points located throughout Italy. This project also includes the measurement of organic waste produced at some of the catering outlets that deliver to the S. Agata Bolognese plant, where waste is treated to produce compost and biomethane, in order to determine the

contribution and virtuous effects of the concrete combination of the circular economy and sustainable mobility.

Hera's partnership with the **Camst Group** was also renewed in 2022, with the expectation of a tacit renewal from year to year, confirming the excellent results achieved in the first three years of this collaboration. One example concerns the collection and valorisation of used cooking oil produced by Camst catering outlets, which has expanded from the initial 62 points located in the provinces of Bologna, Modena and Ravenna, to a total of more than 240 points found throughout the country, rising from 20t of oil collected in 2021 to more than 49t in 2022, thus leading to 157t of CO₂ equivalent emissions savings. Over the next few years, plans have been made to extend the scope of circular initiatives to the Facility sector managed by the Camst Group.

In 2022, the collaboration with **Aeroporto di Bologna** also continued with significant results. The collection of used cooking oils produced by refreshment areas inside the airport began, to be used for producing hydrogenated biofuel.

Once again concerning sustainable mobility, the Hera Group, Aeroporto di Bologna and TPER promoted a campaign called "Together for a Circular City", to communicate the commitment made by these three companies in the regional capital city to contribute to its decarbonisation. In fact, the organic waste collected at the airport, together with similar waste produced by residents, goes towards the production of biomethane and compost at Hera's plant in S. Agata Bolognese. This biomethane is also used by TPER to fuel a significant portion of its bus fleet, including some vehicles connecting the airport with the city of Bologna. Therefore, buses and public transport shelters have been equipped with a dedicated communication campaign to make residents aware of this virtuous circuit that contributes to the decarbonisation of transportation in the city.

During 2022, Hera also provided important support to improve the sorted collection of waste produced at the airport, with information and environmental awareness activities directed at employees, sub-concessionaires, the staff of businesses based at the airport and cleaning companies. This allowed the percentage of sorted waste collected to more than double compared to the figures seen in 2021, reaching a peak of over 50% in July and confirming a trend of over 40% in the following months of the year. The goal for 2023 is to consolidate and further improve these results, while also involving passengers more actively.

Lastly, an exhibition of works from the Hera Group's Scart art project was inaugurated in September 2022. Seven statues from the "Business Wo/men" art project will remain on display until the end of March 2023 in the new airside space dedicated to passenger seating and in the Marconi Business Lounge, with the aim of raising passengers' awareness on the topic of recycling and reuse and the protection of resources.

The agreement with **McDonalds**, the first to be signed by Hera and in effect as of January 2020, also continued in 2022. This collaboration concerns an environmental sustainability pilot project to reduce the amount of waste and improve the quality of sorted waste collection in 30 restaurants served by Hera in Emilia-Romagna, with an average of almost 49,000 McDonalds customers per day.

Aimed at developing new paths featuring higher circularity, an ambitious experimental project for regenerating household appliance waste was launched together with **Dismeco**, which is active in the WEEE recovery sector, with a plant located in Marzabotto, in the province of Bologna. The project is intended to test the feasibility of a new management that would allow the regeneration of washing machines brought as waste to the Group's ecological stations. Concretely speaking, in this WEEE flow, washing machines are inspected in order to test, on those that in better conditions, repairs that make them suitable for being used again. This project, developed in an agreement with the WEEE Coordination Centre (a consortium that brings together the Collective Systems of producers of electrical and electronic equipment) and Dismeco, calls for a collaboration with associations of installers and repairers, and also aims to develop in-depth studies to establish whether and under what conditions it is actually possible to conceive a marketing of washing machines (and in general of household appliances) regenerated in this way. At the same time, the project will provide a great opportunity for professional training and preparation, and an opportunity to create potential new jobs to support and develop the Bologna area's mountains and their communities. The project became operational in late 2021, with the activation of the transfers from the first 15 ecological stations in the area, which became 31 during 2022.

The projects described here contribute to achieving **UN 2030 Agenda goals 12.2, 12.4, 12.5**, as well as – thanks to the partnerships developed – to achieving **goal 17.17**.

AFNOR XP X30-901: certification for circular economy projects

Hera has obtained from Bureau Veritas Italia, for its circular economy projects, a certification of compliance with the AFNOR XP X30-901 standard, the **first issued to an Italian multi-utility**. Continuing along this path within the Group, AcegasApsAmga, ASE and Hera Luce also obtained AFNOR certification in 2022.

The French AFNOR XP X 30-901 standard is now the **main international reference for implementing circular economy project management systems**. The certification process led to the standardisation of corporate methodologies for their management, by adopting a concrete tool to perform a critical analysis in relation to the areas of action and factors of sustainable development. In particular, it is based on a framework that interweaves the 3 classical factors (environment, economy, society) with the 7 areas for action of the circular economy (Sustainable Procurement, Ecodesign, Industrial Symbiosis, Service Economy, Responsible Consumption, Product Life Extension, Efficient Product and Material Management).

Hera has implemented this management system in its own circular economy projects, and has designed the following projects according to this framework: the “O.V.E.” project, to transform exhausted cooking oils collected in the areas served into biofuel; a project to integrate circularity criteria within the Group’s procurement, and a project to reuse purified wastewater. The AcegasApsAmga group, in turn, brought the following projects to the attention of Bureau Veritas Italia: in the procurement sector, a project that replicates the one used by the parent company for pursuing circularity in procurement; the “Recap” project, which involved recovering plastic coffee capsules in the Trieste area; the third project concerns the water and waste management sector, and called for the reuse of soil resulting from excavations carried out in the Ca’ Nordio (PD) purification plant at the former Roncasette (PD) landfill; for Hera Luce, the project to measure environmental performance through a certified tool allowing the drafting of a material balance; and finally, ASE has developed a project for the recovery of WEEE deriving from thermal power plant upgrading activities.

Bureau Veritas was therefore called upon to analyse them in detail and certified the compliance of the Group’s management system with the AFNOR standard. This was a further important step for the Hera Group, which has been committed for years to initiatives aimed at fostering the transition to an increasingly circular economy.

Obtaining AFNOR XP X 30-901 certification contributes to achieving **UN 2030 Agenda goals 12.2, 12.4, 12.5**.

Production and use of compost from Herambiente plants

Herambiente’s **compost** is an organic biofertiliser obtained by treating separately collected organic waste at six of its own facilities:

- 1 traditional aerobic composting plant with static heaps at Ostellato (FE), in which only mixed composted soil improver is produced;
- 4 anaerobic digestion plants with final composting of mixed composted soil improver (S. Agata Bolognese (BO), Voltana (RA), Rimini and Cesena plants);
- 1 traditional aerobic composting plant with static heaps at Ostellato (Fe), in which green composted soil improver is produced.

To summarise, the process used in all Herambiente plants involves processing and recovering the organic portion of sorted waste from which **soil improver** and **biogas** are produced; in the particular case of S. Agata alone, biomethane is produced, which is fed directly into the Snam network for use in motor vehicles.

In 2022, these plants produced approximately 41.4 thousand tonnes of mixed composted soil improver (63.7% destined for extensive agriculture and fruit growing at **local farms**, 35.7% for the pellet and soil industry and the remaining 0.5% for small local gardeners) and approximately 5.5 thousand tonnes of green composted soil improver (95% destined for the **soil** industry and the remainder for small local gardeners).

For years, Herambiente has carried out significant on-field trial activities aimed at researching and evaluating the performance of its biofertilisers. The study carried out with the University of Bologna and the Navarra Foundation, located in Ferrara, compares the organic fertilisers produced by the Group, not only in terms of quantitative and qualitative production performance in extensive and specialised crops (fruit and floriculture), but also the impact that organic fertilisers have on the soil’s microbiological composition and the soil/plant ratio. The results confirm **production equal to or higher than the one obtained with chemical fertilisation**, but with a significant increase in the organic substances present,

leading to a qualitative improvement in production as well as significant resilience of the soil to climatic stress (drought) and other physiopathologies.

Producing compost through aerobic digestion, anaerobic digestion and composting processes in Herambiente's facilities contributes to achieving **UN 2030 Agenda goals 12.2, 12.4, 12.5**.

Evaluation and measurement of "circularity" in Hera Luce, Ase, Hse and in new water and gas connections

In 2017, Hera Luce developed a system for measuring the circularity of public lighting systems, considering their lifecycle based on an analysis of material flows (materials used in relation to their origin and end-of-life destination) and economic flows (costs/revenues at the beginning and end of the lifecycle).

This approach to measuring circularity was already aligned with the indications provided by the Ministry of the Environment (MATTM) at the time, and was later confirmed to be consistent with the most recent international methodological approaches, such as the Circulytics tool developed by the Ellen MacArthur Foundation. Hera Luce's circularity measurement system also anticipated the requirements of the Minimum environmental criteria (MEC) for the public lighting service, approved in March 2018, which introduce an obligation for the bidder to carry out a material analysis.

The measurement system designed acts as a fundamental strategic lever and, along with the awareness-raising process with suppliers, allows the Group to obtain higher scores in tenders and thus gain an advantage over its competitors.

Hera Luce, in order to proceed with measuring its material circularity, has prepared a measurement tool intended both for the actual calculation of material balances and for gathering the input data, providing access to the manufacturers/suppliers of the components used so that they can enter the material data of their products.

This activity made it possible to create a database containing the material data of all products used in the redevelopment projects, and to start raising awareness among suppliers with the aim of directing them towards more sustainable supply chains. The material analysis measurement and reporting system was developed in accordance with the requirements set out in a specification for designing management systems for the implementation of material balances, and the certification process of the same with a third party body was started.

The project was also extended to the companies Hse and Ase, which provide energy efficiency services to public administrations and private entities. During 2021, they continued to refine the evaluation system to measure the circularity of the main technologies used to carry out energy-saving measures, from a lifecycle perspective.

Considering the binding inclusion of a circularity measurement system within the Decreto Rilancio regarding the 110% super-bonus, Ase and Hse's approach proved to provide a strategic advantage. The measurement system will be gradually extended to the markets for public administrations, industrial customers and condominiums in which Ase and Hse operate. Furthermore, in 2022 the process for the certification of the system was expected, thus further improving the company's competitiveness, as well as consistency with the targets in Hera's Business plan and respect for the UN's SDGs.

In 2020-2021, a circularity assessment model was applied to some simpler and more repetitive assets, in order to optimise them in terms of sustainability by redefining Standards and Procedures. This process consisted of the following steps:

- **Project circularity evaluation system:** implementation of calculation tools for evaluating the material circularity of networks and plants throughout their lifecycle, as previously foreseen for public lighting with the introduction of Minimum Environmental Criteria (MEC);
- **Process optimisation:** application of the previously codified analysis system to certain types of assets, with the objective of optimising processes in terms of choice of materials, construction technologies and maintenance methods, aimed at minimising the impact on material consumption and maximising the use of secondary raw materials;
- **Elaboration of new standards and procedures:** the results of the analyses developed will be transformed into new standards and procedures for the design, construction, operation and maintenance of the evaluated infrastructures.

During 2020, the material and economic circularity calculation tool was implemented, which was subsequently applied to the water connection typology (2020) and the polyethylene gas network typology in 2021.

The assessment and measurement of “circularity” in Hera Luce, Ase, Hse and in new water and gas connections contributes to achieving **UN 2030 Agenda goals 12.2, 12.4 and 12.5**.

CiboAmico:
roughly 120,000 complete meals recovered in Hera cafeterias since the start of the project

Launched in 2009 with the support of **Last Minute Market**, a social enterprise and accredited spin-off of the University of Bologna active in the fight against waste and in environmental sustainability, CiboAmico is a concrete initiative that encourages an expansion of the circular economy, bringing together different entities in the local area to work towards a **shared social responsibility**, providing concrete help to those in need. Six company cafeterias are currently involved: Bologna, Granarolo dell'Emilia, Imola, Rimini, Ferrara and Ravenna. Recovered meals are donated to local non-profit organisations that provide hospitality and assist people in need on a daily basis.

In 2022 alone, more than **6,800 complete meals were recovered** in favour of six local non-profit organisations that assist about 100 people every day with these recovered meals, corresponding to more than 3.1 tonnes of food with an economic value of over 28,000 euro. This furthermore avoided the production of 3.1 tonnes of waste, corresponding to the capacity of over 7 bins, and the emission of over 12.1 tonnes of CO₂ into the environment. Furthermore, the waste of water, energy and land consumption that were necessary to package those meals was avoided.

After fourteen years since the project began, a total of **over 125,000 meals** have been donated, with an economic value of **over 520,000 euro**. This has avoided the production of over 55 tonnes of waste (corresponding to over 120 bins) and the emission of over 230 tonnes of CO₂.

Many non-profit organisations located in the area are involved, guaranteeing increasingly important results, such as: Fraternità Cristiana Opera di Padre Marella - Pronto Soccorso Sociale in Bologna, Fraternità Cristiana Opera Padre Marella - Città Dei Ragazzi in San Lazzaro di Savena, Associazione Comunità Papa Giovanni XXIII in Rimini, Associazione Viale K in Ferrara, Cooperativa Sociale Mano Tesa in Imola and Cooperativa Sociale San Vitale in Ravenna. Numerous partner facilities of the initiative at which the recovered meals are consumed: Pronto Soccorso Sociale in Bologna, Comunità terapeutica “Gemma Nanni Costa” in San Lazzaro di Savena, Capanna di Betlemme in Rimini, Casa della Donne, Casa Mambro and Mensa in via Gaetano Pesci in Ferrara, the Co-Housing facility for the elderly in via del Tiglio in Sesto Imolese and the cafeteria at the headquarters of the Cooperativa San Vitale in Ravenna.

Moreover, at the end of 2017, CiboAmico went beyond company cafeterias to **involve a municipal market**. This initiative, proposed by HeraLAB Modena, was promoted together with the City of Modena, and carried out with the collaboration of the Market Consortium. While in the cafeterias the objective was to recover unconsumed meals, the collaboration between Hera and the Albinelli retailers, instead, aims to avoid the waste of fresh products which, at the end of the day, may remain in the stalls of the market, food which is still perfectly edible but which, for various reasons, can no longer be sold the following day. Food recoveries from individual shopkeepers take place every Wednesday and Friday when the Albinelli Market is open, and mainly consist in bread and bakery products, as well as fresh fruit and vegetables. For these products, which would otherwise be thrown away, there is a virtuous alternative thanks to the cooperation between Modena City Council, the Hera Group, Last Minute Market, and the Market itself. The retailers, in fact, can choose to donate their unsold goods to the Ceis Foundation, which are then recovered and used to benefit people facing hardship. As of 2020, once again in agreement with the City of Modena, food surpluses have also been recovered at Agricola Prima Natura in Via Rainusso. This made it possible to extend the cooperation network to Caritas Diocesana di Modena, which carries out recoveries through its own local structures and parishes. In 2022, thanks to 15 participating retailers, a total of over 3,900 kg of products were collected and reused in Modena.

In 2022, the City of Imola's initiative “**Un s'bota veja gnet – Nothing gets thrown away**” was launched. This initiative is promoted by Hera and coordinated by Last Minute Market, and is aimed at recovering surplus food in the city and preventing food waste. During the year, 13,800 kg of food products were recovered, including over 1,000 kg of ready-to-eat meals, and given to local organisations that take care of people facing hardship. The following organisations have joined this initiative and regularly donate surplus foodstuffs: Interspar Imola, Mensa Hera di Imola, Ecu Imola, and CLAI with the Imola Pedagna and Imola Centro local butcher's shops. Recovery is also underway from: Crai in Sesto Imolese, TeaPack, Pasticceria Dulcis café, Naturasi, and the Imola racetrack.

The three local non-profit organisations currently involved are the Coop. Soc. Mano Tesa, the No Sprechi Odv Association, and the Italian Red Cross - Imola Committee, which distribute surplus food both at their facilities and to families facing hardship, disabled persons and the elderly.

Thanks to this initiative, the Municipality of Imola won the “**Living with Zero Waste 2022**” award promoted by Last Minute Market's Zero Waste campaign, in the public administrations category. This award goes to innovative actions and projects that are potentially replicable in other contexts and are

focused on waste reduction, efficient use of resources, and decoupling economic and social development from resource consumption and environmental degradation.

Waste prevention initiatives such as CiboAmico contribute to achieving **UN 2030 Agenda goals 12.2, 12.4, 12.5**, as well as – thanks to partnerships with non-profit organisations – to achieving **goal 17.17**.

FarmacoAmico: over 739,000 packages of non-expired medicines recovered since the start of the project

FarmacoAmico is a project promoted by Hera to collect non-expired medicines and create a network of solidarity for reuse in the local area. Intact medicine, still valid for at least six months and in an adequate state of conservation, is reused by non-profit organisations operating in local or decentralised cooperation projects. The aim is to prevent waste production by spreading good practices in waste reduction and supporting organisations that assist the weaker members of the community.

Launched in 2013, in Bologna, FarmacoAmico is implemented in cooperation with Last Minute Market and now involves 32 municipalities in Emilia-Romagna, a region with approximately 1.6 million inhabitants (equivalent to 67% of the population to whom waste management services are provided).

In 2022, almost 51,000 packages of medicine, having a total value of over 729,000 euro, were sent for reuse. Centralised management of the collection, selection and distribution of this medicine made it possible to overcome the difficulties that arose in some local areas participating in the initiative, partially due to the difficulties caused by the health emergency.

In 2022, this project involved a total of 160 pharmacies and 37 non-profit organisations, some operating in Italy and others abroad, as well as various partners, institutions, trade associations and corporate bodies, amounting to a total of 52 parties.

Since the start of the project, **more than 739,000 packages of medicine** with a total economic value coming to over **5.4 million euro** have been collected and sent for reuse, which partially and potentially corresponds to lower costs for the National Health System.

Waste prevention initiatives such as FarmacoAmico contribute to achieving **UN 2030 Agenda goals 12.2, 12.4, 12.5**, as well as – thanks to the involvement of residents and municipalities – to achieving **goal 17.17**.

The success of Cambia il Finale continues: 840 tonnes of bulky waste collected in 2022

The Cambia il Finale (Change the Ending) project, now in its **ninth year**, makes it possible to collect all objects in good condition that would otherwise be disposed of as bulky and allow them to be reused, thanks to a network of non-profit organisations distributed over the area served, capable of giving new life to goods donated by residents. The project is linked to a specific Memorandum of Understanding between Atersir and Hera on the management of bulky waste, and is developed in cooperation with Last Minute Market. Goods can be donated by residents to a circuit of non-profit organisations in Emilia-Romagna that collect more or less bulky goods at their own premises or at home, allocating them to flea markets, using them in their own premises or donating them to people in need. All the Hera Group's communication tools promote the collection of goods carried out by non-profit organisations, in particular its call centre operators, who offer users the possibility of donating bulky items in good condition that they wish to dispose of.

This initiative promotes good habits related to reuse and generates positive social benefits thanks to the activities carried out by the non-profit organisations involved, in line with the Hera Group's principles of social responsibility and environmental protection. Moreover, it responds to current developments in environmental legislation, which aims at management models based on the concepts of prevention and reuse.

Fifteen non-profit organisations were partners in the project at the end of 2022, distributed throughout the Emilia-Romagna region served by Hera, guaranteeing coverage of all main cities. During 2022, the organisations received more than **8,950 phone calls** from residents willing to donate their bulky goods and carried out more than 5,700 collections, totalling over **320,000 items and over 840 tonnes collected**. The majority of the goods donated were indeed reused, with an average percentage close to 70%. From January to December 2022, **more than 587 tonnes** of bulky waste were thus avoided by this project.

Since the start of the project, **more than 4.8 thousand tonnes of waste** have been avoided, bringing great savings for the environment and lower waste collection costs.

Moreover, as part of the "Cambia il finale" project, **six "Reuse Areas"** have been installed in the municipalities of Cesena, Ferrara, Modena, Ravenna and Rimini. These are actual boxes inside Hera's Collection Centres, where residents can bring furniture and small objects in good condition, which are

then collected and sent for reuse by accredited non-profit organisations. In 2022, 863 donations were made by residents, totalling 4,604 items and corresponding to 10,913 kg of goods.

Waste prevention initiatives such as Cambia il finale contribute to achieving **UN 2030 Agenda goals 12.2, 12.4, 12.5, as well as** – thanks to citizen collaboration and partnerships with non-profit organisations – to achieving **goal 17.17**.

SCART®: the beautiful and useful side of waste

SCART® is the **Hera Group's art and communication project** that has been developing a combination of art and waste for twenty-five years. It is a corporate waste art project, created within one of Herambiente's industrial waste treatment and disposal plants. Today, SCART® is a trademark registered throughout the European Community, designed to **breathe new life into some of those many industrial waste products** that are disposed of as waste on a daily basis and, thanks to the creativity of the artists collaborating in the project, are transformed into unique, exclusive pieces of art in full respect of the circular economy. The aim is to encourage environmentally responsible behaviour, offering new stimuli to create artistic, design, fashion and performance objects using only and exclusively waste as a raw material. This has led to the creation of furniture, games, musical instruments, clothes, paintings, statues, as well as sets for shows and stage costumes. SCART® is an invitation to think about new intelligent, creative and above all sustainable lifestyles.

The numerous national and international initiatives include, for example, important conventions with the Fine Arts Academies in Florence, Bologna and Ravenna, Brera Milan, the Free Academy of Fine Arts of Rimini, and the Academy of Design of San Marino. A collaboration with the young people at the Sanpatignano Rehabilitation Community is also important in terms of social profile. The Scart Project, during 2022, involved over 100 students in seminars and workshops held at the SCART® laboratories located within the Herambiente plant complex in Santa Croce sull'Arno and Pisa. These artistic and educational initiatives focus on experimenting with the artistic use of industrial waste and involve not only enrolled students but also many artists specialised in trash art.

Since 2012, the SCART® project has been the exclusive partner for the production of costumes and stage components for Andrea Bocelli's concert at the Teatro del Silenzio in Lajatico (PI), the small Tuscan town where this great tenor was born. Every year, roughly 250 stage costumes are made using only industrially produced waste.

Over the years, SCART® has also participated in numerous national – Ravenna, Imola, Modena, Pisa, Udine, Bologna, Padua, Trieste, Rimini, Florence and Rome, only to name a few – and international (Berlin 2016 and Hong Kong 2021, Doha in Qatar in 2022) exhibitions.

In 2020/2021 and 2022 the project will appear in Milan as a protagonist in "RoGUILTLESSPLASTIC", an event conceived by design guru Rossana Orlandi for Milano Design Week. In 2022, a bench was created using 40 car mufflers to furnish the outdoor area of the Via Bandello gardens, adjacent to the Galleria Orlandi. This Hera Group installation also invites users of this furnishing component to reflect more broadly on the importance of pursuing a form of economic and industrial development that is also sustainable.

The documentary "The Cycle of Beauty" continued to be broadcast on Sky Arte in 2022, providing a closer look at this project by the Hera Group, that talks about the environment in the language of art.

One of the more significant events for the Scart Project in 2022 was unquestionably the participation in creating sets and costumes for the programme "Ci vuole un Fiore" hosted by Francesco Gabbani and Francesca Fialdini broadcast on RAI1 in prime time on 8 April 2022.

Another highly impactful moment came from the collaboration with RAI for the set design of Superstudio Maxi in Milan, for the presentation of the RAI's 2022/2023 programme schedule. All RAI top management, as well as TV presenters from all main newspapers and entertainment publications, were able to admire over 30 Scart works, including statues and paintings dedicated to Italian cinema, providing a considerable return in terms of image and communication.

This is yet another emotion offered by Scart, which after many years of searching for beauty, starting from poor, discarded and no longer used materials, continues to amaze, communicate and raise awareness.

The SCART® project contributes to **UN 2030 Agenda goals 12.2, 12.4, 12.5 and 12.8**.

Sustainable management of water resources

All the quality of tap water in one report: In good water

In 2022 Hera published the fourteenth edition of its report *In buone acque* (In Good Water), dedicated to tap water and completely revised in its graphic form. This report is still the first and only example of a specific report on tap water in Italy and its environmental and economic benefits. The report contains, region by region, analysis data on 29 parameters and non-standard parameters, such as emerging contaminants and asbestos fibres.

The report shows that drinking tap water is an environmentally sustainable choice and is also good for your wallet. In fact, tap water avoids the production, transport and disposal of 305 million plastic bottles and saves 480 euro per year for a family of three.

For the full contents of the report: www.gruppohera.it/report

Hera, Iren, Smat and A2A together to improve the integrated water service

On 8 April 2014, a **partnership agreement for applied research** was signed between Hera, Iren and Smat, aimed at developing shared research, **innovation** and training projects in sectors and activities related to the integrated water service. The partnership agreement for applied research between Hera, Iren and Smat, which was renewed in 2022 and identified new project areas of interest, under development between 2022 and 2023, briefly outlined below.

Coordinated by A2A, an in-depth project on the **biological removal of phosphorous in the oxidative phase** was launched, with the Marche Polytechnic University acting as a scientific partner. In this work group, a deeper knowledge of the biological removal process in wastewater purification plants is being gained, evaluating its managerial, plant engineering and economic aspects, for subsequent possible scale-up assessments in plants managed by the utilities participating in the Agreement.

Hera was entrusted with coordinating the project for optimising plans for leakage searches and network replacements, in which practices and tools are shared for optimising plans for leakage searches and network replacements. In particular, the focus goes to methods and technologies for pre-localisation and localisation of leaks and the identification of algorithms for the selection and prioritisation of critical sections to support programming leakage search plans and network replacement plans.

The third project, led by Iren, deals with the reuse of **wastewater**, using as a basis for the discussion current regulatory developments, the treatments possibly required by the New European Regulation on Reuse and the agreements with the stakeholders concerned (drainage consortia, regions), to formalise indirect reuse.

Smat has been charged with the last project, concerning **reporting greenhouse gas emissions**, comparing different calculation methods and the underlying assumptions, to finalise a guideline document to support the strategic orientations of the Utilities concerned.

All projects contribute to comparing innovative technologies supporting strategic processes for the utilities involved, providing a useful basis for current or longer-term planning and investment choices.

The partnership described above between Hera, Iren, A2A and Smat contributes to achieving **UN 2030 Agenda goals 6.3, 9.1, 9.4 and 17.17**.

Convention with the University of Bologna for the aqueduct

In June 2022, a consultancy contract was signed with the Department of Civil, Chemical, Environmental and Materials Engineering of the University of Bologna (Unibo), with the aim of **analysing the environmental impacts related to the water supply chain** with the Life Cycle Assessment (LCA) method. Through this collaboration with Unibo, the positive environmental contributions coming from the Group's various project initiatives will be measured, with efficiency and innovation as the primary targets, and which, based on the LCA analysis results, may be enhanced and extended to other Group companies. Indeed, the choice of materials with which to carry out renovations has strategic importance, and an awareness of the mechanical and environmental performance of different materials is increasingly becoming a lever to orient choices in planning.

In particular, the project initiatives falling under this collaboration that have already been launched include:

- an analysis for the selection of different **materials in the aqueduct** used for the construction, maintenance and renewal of pipelines. The LCA analysis will identify which materials have the greatest impact on the environment, considering their entire life cycle, from production to operation and maintenance.

- a technological innovation project involving the installation of **ultrasound platforms to prevent algae** in the lagoon basins of the Pontelagoscuro plant. This technology, by inhibiting chlorophyll photosynthesis, makes it possible to reduce the subsequent use of chemical additives to remove algae, which, especially with the increase in temperature seen in recent years, tend to form in increasing quantities. This experimentation, the first of its kind in Italy, is believed to have positive environmental effects precisely because it does not intervene following the appearance of algae with chemical treatments, but prevents their onset. At the same time, rising temperatures lead to algae in several basins, even outside the areas served by the Group. The results of the Pontelagoscuro experiment and the analysis of possible reductions in energy and chemical consumption may therefore represent a case of success that can be applied to other basins.
- installation of **smart water metering**, a project under development within the Group, aimed not only at acquiring consumption data remotely but also at providing remote users with comparative information on their daily consumption trends and alerts relating, for example, to leakage in the internal system. The rapidity of these alerts and the availability of real consumption data will lead to savings in water resources, which the collaboration with Unibo will quantify. Metering through smart meters could lead to offers of value-added services, which from a LCA perspective can lead to benefits on consumed or lost volumes of water resources.

The partnership described above between Hera and Unibo contributes to achieving **UN 2030 Agenda goals 6.3, 9.1, 9.4 and 17.17**.

The Rimini seawater protection plan continues

The Rimini seawater protection plan was created in 2013 to eliminate bans on bathing following intense rainfall, by implementing structural measures on the sewage-purification system of the City of Rimini. Intense rainfall, in fact, causes the flow rate manageable by the sewage system to be exceeded, making an emergency discharge of untreated water into the environment necessary. The gradual implementation of the measures set out in the Plan will lead to a gradual reduction of critical elements and up to a 90% reduction of the polluting impact, measured in terms of COD not discharged into the environment, compared to the initial state of the system.

From the very beginning of the Plan, mathematical modelling of the sewage and purification system has played an essential role in identifying possible synergies between the interventions and systemically optimising works and management criteria. The modelling activities, in fact, since they can rely on an ever-increasing amount of data and the management feedback of the works as they were built, were able to significantly change the system structure as initially planned.

The evolution of the Plan, from its implementation start-up to the present, has made it possible to pursue not only the environmental protection of the coastline as initially foreseen, but also the hydraulic protection of urban areas in the municipality of Rimini that were subject to flooding. More specifically, in 2014, the Plan included interventions referred to as “Mavone spillway”, “Via Santa Chiara pumping station”, “Ausa dorsal sewerage collector” (the latter financed with 8.5 million euro as part of the public investments related to hydrogeological instability in the initiative known as “Italia Sicura”), as well as the modification of rainwater management in the plant system serving the Fossa Ausa. Subsequently, in 2019 and 2020, the plant engineering systems serving the Colonnella and Rodella Ditches were further optimised, taking advantage of the possible synergies with the sewerage system, which reduced the storage volumes of the tanks, thus also reducing both the investment required and the implementation timeframe, while at the same time strengthening the hydraulic control of the area.

In particular, the construction of the Dorsale Sud was completed in 2022, which, with the implementation of the plant and the laying of new collectors, allows for a considerable improvement in the capacity to collect wastewater from southern Rimini to the purification plant. The completion of this intervention, in addition to improving the overall efficiency of an important sewage infrastructure of the city, introduces a further environmental improvement, essentially due to the increase in the volume of waste water that, in the event of rainfall, can be sent to purification, proportionally reducing the number of activations of the emergency drains of the Ausa and Colonnella I Ditches.

The Plan essentially consists of the ten measures originally planned, to which additional measures due to optimisations introduced have been added, making a **total of 14 measures**.

The ongoing optimisation of the Plan, with the design improvements made and the indispensable permitting steps required, has meant that achieving the environmental objectives initially planned for 2020 has been postponed to 2026. Note that by that year, the works necessary to reduce the city's hydraulic risk will also be completed. The postponement in the Plan's implementation schedule is strictly

related to a substantial improvement in its impact on the city, which, as mentioned above, will benefit from a significant improvement in both hydraulic and environmental aspects compared not only to the pre-operational state of the sewage-depuration system, but especially compared to the one expected at the outset of the Plan.

The state of progress of the interventions does not reveal any major criticalities and allows the quality objectives fixed to be achieved. At the end of 2022, ten interventions had been completed and all interventions that had not yet been completed were being implemented or planned.

The situation of the 14 measures is as follows:

Intervention	Status at 31 December 2022	Planned / actual year of completion	Motivations/benefits
1. Doubling the Santa Giustina purification plant	Concluded	2016	Improving the purification process
2. Conversion of the Rimini Marecchiese purification plant into a storage tank	Concluded	2018	Improving the purification process
3. Construction of the northern backbone to connect the Bellaria purification plant to the S. Giustina purification plant	Concluded	2016	Improving the purification process
4. Completion of sewer network separation in northern Rimini	In progress 2 nd section of which 4 lots out of a total of 7 have been completed. (1 st instalment completed in 2018)	2024	Conversion to white water discharge of five sea outlets (three of which have already been implemented in the 1st section)
5. Construction of the southern backbone	Concluded	2022	Reducing the number of openings of the AUSA and Colonnella I sea outlets
6. Completion of separation in the Roncasso and Pradella basins	Network separation completed. Water-supply plant serving Pradella reservoir planned	2024	Conversion of two sea outlets to white water discharge
7. Construction of submarine pipeline and hydro-swelling plant for AUSA basin and resevoirs	Concluded	2020	Reducing the number of openings of the AUSA sea outlets
8. Construction of hospital lamination tank	Concluded	2016	Reducing the number of openings of sea outlets Colonnella I
9. Construction of connection pipeline between Fossa Colonnella I and Fossa Colonnella II; Colonnella II tank and Rodella tank and submarine discharge pipeline	In progress	2026	Reduction in the number of openings of the sea outlets Colonnella I, Colonnella II and Rodella
10. Sewerage rehabilitation island	Concluded	2014	Optimisation of the sewerage system
11. AUSA beach section	Concluded	2016	Improving the usability of the area and environmental conditions
12. AUSA backbone sewer	In progress	2024	Hydraulic risk reduction
13. Mavone spillway	Concluded	2018	Hydraulic risk reduction
14. Drainage of Via Santa Chiara	Concluded	2020	Hydraulic risk reduction

The completion of nine interventions has resulted in significant environmental benefits, reducing the quantities of organic substances (COD/BOD) discharged into the sea during intense meteorological

events. The intervention concluded in 2020 led to a considerable reduction in the pollutant load discharged near the shore, with benefits for the water quality of the coastline. This means that the bathing bans that occur if discharges are opened along a wide strip of the city's coastline, including both areas where the separation of the sewerage networks has been completed and the stretch of sea adjacent to Fossa Ausa, will no longer apply. From this point of view, **6,500 metres of beach, corresponding to almost 60% of the city's coastline**, have been **"freed" from bathing bans** since 2017.

Moreover, as a further proof of the Plan's strong links with the City of Rimini, note that a significant part of the planned works are being integrated with the urban redevelopment project promoted by the Municipality called Parco del Mare (Sea Park), so as to pursue synergies that can provide an overall improvement of the urban structure.

The Rimini seawater protection plan was included among the best practices in the SDG Industry Matrix report published by Global Compact and KPMG in 2017, which reports on business opportunities linked to the goals of the UN's 2030 Agenda.

The RSPP, through its interventions to improve the water-sewerage system, reduce marine pollution, upgrade infrastructures and involve municipalities and residents in the project, contributes to achieving **UN 2030 Agenda goals 6.2, 6.3, 6.b, 9.1, 9.4 and 14.1**.

Protection of air, land, and biodiversity

More than 24,000
trees planted by
2024

The Hera Group has carried out, and continues to carry out **tree planting projects** in various areas of the regions in which it operates, confirming its commitment to protecting biodiversity and air quality. **Since 2012, 15,077 trees have been donated to areas in Emilia-Romagna, Veneto and Friuli-Venezia Giulia, totalling over 1,500 tonnes of carbon dioxide absorbed each year**, and a further 4,293 trees will be planted in the coming years through numerous initiatives involving Hera Group employees and customers and the public served. The plantings were the result of reward mechanisms associated with specific **virtuous behaviour**, such as delivering sorted waste to ecological stations or requesting electronic bills instead of paper bills.

For example, with the **"ECO Trees"** initiative, the Hera Group has joined the Emilia-Romagna Region's project "Planting roots for the future" aimed at planting 4.5 million trees (one per inhabitant of the region). In particular, Hera aims to reach the target of **10,000 trees planted by 2024** by collaborating with municipalities and other entities participating in the project by making available resources, skills and areas of the region, and thanks to an economic commitment coming to 250,000 euro. In this context, the **collaboration of residents** is fundamental because their choices in efficient energy consumption and sustainable mobility are what supports the initiative. In fact, Hera Comm offers its customers a wide range of services and products that allow them to reduce consumption and the related environmental impact, and by opting for these solutions they contribute to implementing the project: every four products purchased, including LED light bulb kits or smart thermostats, for example, corresponds to planting and care of one tree. The same applies to two boilers, two air conditioners or one boiler and one air conditioner, or two means of sustainable mobility such as scooters or electric bicycles. By the end of 2022, **5,707 trees had been planted** in the Bologna, Modena, Ferrara, Forlì-Cesena, Ravenna and Rimini areas.

In 2022, the **"More trees in the city"** initiative also continued, in collaboration with municipal administrations, to launch an urban forestation project promoting an increased use of ecological stations by residents: one tree is donated for every 50 new households that deliver their waste to the drop-off points. This initiative **encourages residents to use the drop-off points** and thus to recycle, and is beneficial for the environment and urban cleanliness since it helps reduce waste dumping, and it offers an economic advantage to households through a discount on the TARI (local waste tax) that municipalities grant for each kilogram of waste deposited. Moreover, thanks to this project, the city's parks can once again be filled with greenery, with benefits for biodiversity and improved air quality. From the start of the project to 2022, **370 new trees have** been planted in Modena, Sassuolo and Rimini.

The project entitled **"The Air Factory"**, active in the Triveneto area, it aimed at valorisation, sustainability and respect for the environment and the area in which Ascotrade operates, by planting **5,000 trees** in collaboration with Azzerio CO₂. One of the special features of this project is the **exclusive use of indigenous species** and, where possible, **pioneer plants**, which are important for regenerating degraded soils and favouring the colonisation of other species, fundamental for creating ecological corridors and the establishment of birdlife.

The associations that the Hera Group supports through **Hera Solidale** include Treedom, promoter of **"Lets Green Madagascar"**. The project aims to **counteract the practice of slash and burn**, which involves burning entire areas of forest and old farmland, by offering the alternative of an integrated

agroforestry system capable of protecting biodiversity and at the same time giving local communities the possibility to benefit from several harvests over the course of the seasons. The donation will be used to build a modern nursery that will supply the community with good quality plants, to train the local community in agroforestry techniques and activities, and to plant trees with a mix of forest and fruit species. To date, the first target of **3,500 trees** has been reached, which will allow roughly 9,257 tonnes of carbon dioxide to be absorbed in 10 years.

Lastly, the now-completed activities “**Operation More Trees**” in Padua and “**Give a Tree**” in Emilia-Romagna, which included the active involvement of residents and customers, allowed **4,000 trees to be planted**.

Further details of the tree-planting initiatives are available at alberi.gruppohera.it/hera-per-patrimonio-naturale-e-la-biodiversita.

The reported projects contribute to achieving **UN 2030 Agenda goals 7.3, 11.3, 11.2, 11.6, 12.2, 12.4, 12.5 and 12.8**, as well as – thanks to the involvement of residents, municipalities and institutions – to achieving **goal 17.17**.

The “Capiamo – To Bee Understanding” project: environmental biomonitoring with bees

The “**Capiamo – To Bee Understanding**” project **uses bees as bio-indicators of environmental quality** near industrial facilities. These insects are particularly sensitive to environmental changes caused by pollutants, and are therefore able to signal the onset of any imbalances in biodiversity, the ecosystem and human health in general at an early stage, thus enabling corrective actions to be rapidly planned.

Bees are particularly well-suited for biomonitoring. They are, in fact, social insects that live in large colonies and are easy to breed. In addition, their hairy bodies and regular foraging activity (collecting nectar and pollen) allow individual colonies to **take about 10,000 samples per day** from the air, water and soil with which they come into contact, bearing in mind that during its daily activity a single bee normally moves over an area of 7 km². Substances present in the environment thus accumulate within the hive, on the bees and their products (honey, propolis, wax, pollen and royal jelly), **making it easy to recover highly representative samples for analysis**. Bees, as bio-indicators, offers a lot of useful information in both the short and long term: honey, for example, can be used to assess pollution in the short term, since it is the first product in which contaminants can accumulate. Wax, on the other hand, can be used to assess pollution levels in the long term, since due to its lipidic nature it can absorb and retain non-volatile, lipophilic and persistent contaminants.

In spring 2020, **three beehives** were installed at the facilities of the **waste-to-energy** plant in **Pozzilli**, in order to monitor the area consisting of the eastern part of the Venafrò Plain, between the Meta and Matese mountains, where, in addition to the waste-to-energy plant, chemical industries, private health companies, abandoned construction sites and small inhabited agricultural centres are found. This initiative includes two sampling and analysis campaigns per year concerning the bee population, the three hives and their products, as well as medical-veterinary checks to verify their health and productivity, to limit swarming, and to position and remove the honeycombs. Samples collected from the hives (bees, honey and wax) are **subjected to chemical analyses** at accredited laboratories using certified methods. The information obtained makes it possible to know and quantify the possible effects of the impact of human activities on the environment.

The results obtained show an overall good state of environmental quality. Investigations on honey samples showed an **overall absence** of dioxins, PCBs and pesticides, while as far as anions (chlorides, sulphates and nitrates) are concerned, their presence is **in line with the average values for Italian honey**. Analyses on polycyclic aromatic hydrocarbons (PAHs), whose main source is the combustion of fossil fuels, waste incineration, energy production or asphalt and chemical products, show an environmental condition to which several emission sources contribute, such as traffic, industry, and biomass household heating, typical of the anthropisation of this area, **without a significant incidence** from the waste-to-energy plant. The metals present are also due to the presence of abandoned construction sites, industry and infrastructure.

In 2021-2022, the project was also extended to the composting plant with biomethane production in **S. Agata Bolognese** (Bo). In spring 2021, three beehives were installed in the plant’s facilities, with the aim of monitoring a larger and more complex area, located in the Bolognese plain bordering with the province of Modena, where large and small scale industrial and agricultural activities are located. This project was carried out in the same way as in Pozzilli: **two sampling and analysis campaigns** were carried out on the bee population and their products (honey and wax), in addition to medical-veterinary checks on their health and productivity. The samples collected from the hives were then subjected to chemical analyses. The results obtained confirm a state of **environmental quality**: the honey produced is **free of heavy metals** such as cadmium and lead, polycyclic aromatic hydrocarbons and pesticides, and its pollen profile is typical of the lower Emilian Apennines.

In 2022, this project was also launched at the **Serravalle Pistoiese landfill**. The results will be available during 2023.

This biomonitoring project contributes to achieving **UN 2030 Agenda goals 11.6 and 12.4**.

Local Areas (and Businesses) - Enabling resilience and innovation

Innovation and digitalisation

Analysing the carbon footprint of IT and telecommunication service providers

As part of the process undertaken by the Hera Group to analyse and report on the impacts of its digitalisation activities according to the Corporate digital responsibility framework, an **involvement of the main suppliers** has been continued in 2022 in order to monitor and describe in the Sustainability Report how the digital innovation projects and activities carried out for Hera respond to the four dimensions of digital responsibility (in particular the environmental one) and what their impacts are.

Five main suppliers of the Information Systems Department and Acantho (the Group's digital company) were involved in order to **quantify the main environmental impacts resulting from the services provided** and directly related to Hera's activities (cloud software management, telephone services, work on the telecommunications network).

In particular, it was requested to quantify - for the portion attributable to the activities and services provided for the Hera Group - electricity consumption, renewable electricity consumption, greenhouse gas emissions related to electricity consumption, total greenhouse gas emissions, offset greenhouse gas emissions, and fuel consumption (the latter indicator only for the supplier of work on the telecommunications network). From the data collected, the greenhouse gas emissions of the five suppliers attributable to the activities and services provided for the Group in 2022 can be estimated at approximately 546 tonnes of CO₂ equivalent; this value is affected by the total electricity consumption profile of the five suppliers, 60% of which is electricity produced from renewable sources (two of the five suppliers have declared that they only buy electricity from renewable sources). Only one supplier offsets its CO₂ emissions, and the offset is for its total inventory.

In this way, Hera aims to extend to its main suppliers of digital services the attention to the climate impacts resulting from their activities, in order to make them aware of the responsible management of these impacts.

Gridspertise and Hera for the smart grid of the future

Hera and **Gridspertise**, an Enel Group company dedicated to the digital transformation of electricity grids, have signed a collaboration agreement aimed at **developing the smart grids of the future**.

This agreement concerns the trial of an **integrated system for collecting and measuring data** from the Hera Group's gas devices and Gridspertise's smart meters for electricity grids. The multi-service gas-electricity integration tests will be carried out in Italy on the network managed by Inrete Distribuzione Energia, the Hera Group's distribution company.

With this activity, the two companies will combine their expertise and achieve **technical synergies** in the area of **network digitisation**. In particular, Hera will be able to count on its experience in the field of **smart gas meters**, in which it patented the advanced NexMeter, the first of its kind internationally in terms of technology and safety functions adopted, also in terms of reducing gas dispersion into the atmosphere. Gridspertise will provide its most innovative solutions for an integrated management of metering data to help develop **new smart and sustainable grids**, to accelerate the digital transformation of electricity infrastructures. In recent months, Gridspertise has signed agreements with the Hera Group for supplying 435 thousand smart meters and concentrators, as well as an innovative remote management system that will be used in the trial. At the same time, Hera has made plans to install 300 thousand NexMeters by 2026, 180 thousand of which are already operational.

The result is a package of network management solutions whose key element consists in facilitating the energy transition. Based on the results of the trial, the two companies will evaluate joint participation in future tenders, which will also be held outside Italy, in which hardware and software solutions for gas and electricity metering will be sold. This collaboration may also extend, at a later stage, to solutions concerning the integrated water cycle, in terms of both metering and smart water grids.

The results of this collaboration may also interest multi-utility companies **abroad**, thus extending the outstanding technology conceived and developed in our country to international markets.

Predictive models for network maintenance

Since 2018, Hera has undertaken a research project with the University of Bologna to **investigate the causes of ruptures in water networks**. This study, carried out on a timeline of six years of ruptures, showed that pipeline ruptures must be analysed considering different variables, and that an effective forecasting model can only be built by integrating and weighting the incidence of:

- characteristics within to the water infrastructure, such as material, diameter and age of the pipeline;
- **external factors** such as soil type, ambient temperature and some external stresses including road traffic.

After some initial applications of models developed by external providers, Hera worked with the University of Bologna to combine these elements with **artificial intelligence algorithms**, thus arriving in 2022 at its own **predictive algorithm** capable of foreseeing the risk class for pipeline failure. This algorithm makes it possible to identify which sections are most likely to break down during the following year, thus becoming a **decision-support tool** for better targeting network renewal and active leakage searches.

In 2022, the algorithm was applied to the Bologna and Modena networks, but as early as 2023 it will be **extended to Hera Spa's entire aqueduct**, consolidating the model and envisaging its industrialisation in the Group's system architectures.

Predictive maintenance of the aqueduct is a **tool that complements other actions to reduce leakage volumes**, with which the Group is consolidating its operational strategy to reduce leakage, such as a district-based network and active research with acoustic and experimental methods.

The Ferrara training centre for employees and suppliers

In 2022, the **Ferrara Training Centre** was inaugurated, a structure conceived to promote the integration of physical and virtual learning environments, designing customised training processes according to different learning objectives and promoting the development of on-line and off-line learning communities.

This centre was used as part of the **Employability project**, initiated in cooperation with the personnel selection company Manpower. Its objective is to acquire talented people (about 300 new hires) throughout the country, particularly those with a technical and operational profile. This is an important project on employability that will provide the Hera Group with additional key resources to meet the challenges of the energy transition. The project will provide 80 hours of training per capita for operational profiles and 240 hours per capita for technical profiles.

Furthermore, in a collaboration with Emerson, an industrial partner operating in gas distribution, **training courses** will be developed with **certification of the skills acquired**, prolonging the Group's commitment in the area of employability and also supporting allied companies in their search for qualified resources, with particular reference to technical-operational profiles.

"Il Rifiutologo", the app for sorting waste (and more) gets smarter

"Il Rifiutologo" (The Wasteologist) is a **free app with many useful features** available online both on Hera's website and on App stores for smartphones and tablets. From its launch in 2011 to 31 December 2022, it has almost **960 thousand downloads** on Android and iOS operating systems. The municipalities in which Rifiutologo was most used were Bologna, with over 754 thousand total sessions and 96 thousand individual active users, and Ravenna, with 432 thousand sessions and 33 thousand users, followed by Padua with 337 thousand sessions and Modena with 29 thousand users.

Using the **Waste Search** function, users can check in real time where to take their waste and the door-to-door collections scheduled for their address, and even set a reminder alert for the day and time of each collection. The Waste Search is confirmed as the most used function, with over **2.7 million searches** carried out in the last year.

Using geolocalisation, Il Rifiutologo also shows the **nearest drop-off point**, with complete information on the waste types accepted, opening hours and any discounts offered by the municipality. It also provides additional information on **Points of Interest** for residents, i.e. special sorted waste collection, mobile collection points, material distribution points and underground drop-off points.

The **Environmental Reports** function makes it possible for residents to report problems related to, for example, abundant waste or damaged containers, sending photos in real time to Hera technicians. The App later informs the user when the problem has been solved, including through personalised push notifications. In 2022, reports concerning the **emptying of bins**, street cleaning and abandoned waste reached approximately **195,000, up 23%** compared to the previous year.

The **barcode scanner**, another popular feature of Il Rifiutologo, allows **materials to be recognised by means of product barcodes**, indicating how to correctly dispose of each package, even if it is made up of several types of materials; at 31 December 2022, the archive contained **1,740,000 barcodes** of the most widely used products. If a code is not recognised, or if a product is missing, residents can report this via the specific function, so that it can be added to the system. In 2022, partially thanks to the **reports** sent by residents, 50,000 codes were added to the barcode database, while the number of **requests**

made by scanning the barcode came to about **527,000**. At present, the database covers almost the entire circulation in Italy.

Il Rifiutologo can also **communicate with Alexa**, the artificial intelligence created by Amazon to give voice to the smart devices we all own. Anyone who opens the Alexa app can add the Rifiutologo skill, thus ensuring the availability of a friendly voice from whom to ask for fundamental information on the collection service provided by the Hera Group in their municipality, such as: **checking door-to-door calendars** and setting voice memos to remind them of the collection days scheduled in the calendar, the **dove lo butto (where can I throw it out)** function, with which the skill can be asked how to dispose of waste in the areas served by Hera, and lastly information on **drop-off points** and how to have bulky items **collected at home**.

In 2022, a highly useful new feature was introduced: it is now possible to **book a free home collection of bulky waste** directly from the app. To book a pick-up at one's own address, simply register and **with a few clicks** the items to be collected can be selected. The app will directly provide the date and time for the pick-up. In municipalities where the service is active, it is also possible to request home collection of **prunings** via the app. As of 31 December 2022, there were already **more than 10,000** collection bookings requested via the Il Rifiutologo app.

The information contained in Il Rifiutologo, the reports from customers and its use contribute to achieving **UN 2030 Agenda goals 11.3, 11.6, 12.2, 12.4, 12.5 and 12.8**, as well as – thanks to the involvement of residents – to achieving **goal 17.17**.

Digi and Lode, for more digital services and schools

For the Hera Group, innovation and digitalisation are fundamental, starting with its own services: development of online services, creation of interactive apps for customers and residents, and promotion of dedicated digital channels and services.

The **Digi e Lode** project, now in its **sixth year**, sees customers and the company working together to **digitise local schools** by promoting Hera's digital services, under the patronage of 113 local municipalities. Digi e Lode consolidates the contribution that the Group wishes to bring to the area served, in continuity with the corporate strategies that identify innovation, sustainable development of local areas and the **activation of partnerships** as the central drivers for increasing shared value, in line with the objectives set out in the UN 2030 Global Agenda.

As of the 2019/2020 edition, the project has been **extended** to the Marche and Abruzzo regions and as of the 2021/2022 school year to the Veneto, Friuli-Venezia Giulia, Lombardy and Apulia regions as well, where five Group companies operate (EstEnergy, Ascotrade, Ascopiave Energie, Amgas Blu and Blue Meta).

The project involves **all primary and secondary schools**, both public and private, in the areas in question located in Emilia-Romagna, Marche and Abruzzo, Veneto, Friuli-Venezia Giulia, Lombardy and Apulia. For the 2022/2023 school year, a total of 180,000 euro has been made available to fund digitisation projects, benefiting students in 72 schools. Since the project began in 2017, the Group has already donated **565 thousand euro to 226 schools**.

In order to participate, customers must activate one or more free digital services offered by Hera Group companies: by doing so, they donate points that can be distributed equally among the schools in their municipality or can be allocated to a specific school (in this case, they are multiplied by five): the Hera Group rewards the schools in the area that achieve the highest score.

The Digi e Lode project contributes to achieving **UN 2030 Agenda goals 4.a and 12.8**, as well as – thanks to the involvement of residents and schools - to achieving **goal 17.17**.

Economic growth and social inclusion

Making environmental and social sustainability go hand in hand

Hera continues to respect its commitment to initiatives dedicated to the support and social inclusion of people facing hardship and in difficult or disadvantaged conditions, through the following initiatives, which have proven to be effective.

The Manolibera (Hands Free) project was created in 2011 out of a collaboration between the Forlì prison, Hera and the Techne training institute, inspired by the idea of some artists who are particularly interested in respect for the environment, eco-sustainability and social rehabilitation. A large room within the Forlì prison was made available to create a workshop, in the form of an original artisan paper mill, where inmates work daily, for 20 hours a week, making greeting cards, Christmas cards, photo albums, photo frames, notebooks, large and small, and other paper artefacts having a high artistic value. The exclusive production methods – entirely handmade, following an ancient Arab-Chinese processing

technique – and the refined decorations make these products unique, refined and imbued with a remarkable artistic, social and ecological value that make them particularly appreciated in the wedding planning field. In 2022, the Cils Cooperative of Cesena was replaced by the social enterprise Altremani Srl, which has been entrusted with monitoring and verifying the activities carried out in the workshop, while the commercial part is managed in collaboration with the Berti bookbinding company, located in Forlì. The workshop is able to sustain its own operations and provide inmates with appropriate training. A collaboration with the national prison economy network “Freedhome”, the concept store dedicated to outstanding aspects of Italian prison economics, helps give the project considerable visibility. The workshop has developed a wide range of products for weddings and important events, including elegant invitations and refined thank-you cards, photo albums complete with boxes, precious wedding favours, frames and paintings. These products were presented at the main trade fairs and events in the “ceremonies sector” until 2019. The situation caused by the health emergency put considerable strain on the sector and the workshop’s production, which, however, has resumed as of 2022, with a total of five inmates involved in the activities, while more than 46 people have been involved since the start of the project.

The experience of the **RAEEincarcere** project continues. This project, launched in 2008, aims to promote social and employment inclusion of disadvantaged people undergoing criminal punishment, with the intention of assisting them in their progress back into legal conditions and the civil life of the community.

This project is currently active in the Bologna and Ferrara prisons, with the involvement of the national WEEE consortium Erion and the social cooperatives IT2 from Bologna and Il Germoglio from Ferrara, and also has the support of the Emilia-Romagna Region.

In appropriately equipped laboratories inside the prisons, inmates take turns in training and higher education activities, learning the skills and knowledge needed to disassemble large electrical and electronic equipment waste (WEEE R2 such as washing machines and dishwashers) coming from the collection managed by the Erion Consortium, which also include WEEE from Hera Group’s collection centres. Since its beginning, this project has enabled **38 ex-convicts** to be trained and prepared for work in companies operating in the respective geographical areas, while a total of 115 inmates have benefited in various ways from internships and training courses leading to professional integration. The environmental benefits obtained since the start of this project are also considerable: over the entire period, the workshops have processed **roughly 5,990 tonnes of electrical and electronic equipment waste**, breaking it down into small fractions that were sent separately and entirely for recovery.

The projects described in this case study contribute to achieving **UN 2030 Agenda goals 8.5, 12.2, 12.4, 12.5 and 17.17**.

Job creation and development of new skills

The TRED high school: new skills for young people

Since 2022, the Hera Group has been supporting, as a founding company, the creation of a **new four-year high school dedicated to the ecological and digital transition**, for a future-oriented education. The objective of this project, coordinated by ELIS, is to involve companies (along with the local areas in which they operate) in supporting an increase in young people’s awareness of the new transitions, through a combination of humanistic and technological elements, thus leading to the creation of a network dedicated to exchanges between schools, universities and companies.

The new high school, whose activities began in the 2022/2023 school year, **involves more than 500 male and female students from 24 TRED high schools** located throughout the country. As part of their educational programme, they will also take part in training sessions held by Hera Group experts on various topics related to the ecological transition: the integrated waste cycle, different types of waste treatment and recovery plants, the importance of relating to the local eco-system and representing in data the value generated by a quality sorted waste collection.

At the same time, the schools participated in a contest named **“Take a photo for the environment – TRED edition”**, through which they searched for information on the subject of sorted waste collection, also contributing to the development of the artificial intelligence of the “Il Rifiutologo” app to recognise the final destination of waste based on images.

“Take a photo for the environment”: the new ECOgames family game

The **Ecogames** platform, developed in 2021 to provide an amusing education on how to sort waste properly, was enhanced in 2022 with the new project **“Take a photo for the environment”** which, combining the principles of **edutainment** and **citizen science**, has made the students of two junior high schools in Modena and Ravenna the protagonists in creating a model of **artificial intelligence** that can recognise waste from a photo. This is both a game and a tool to collect data that will train an artificial

intelligence model, while at the same time educating in an entertaining way, providing general information on the environment through questions and answers in the form of a quiz.

The educational package offered in classrooms with the participation of the teaching staff, adequately trained on artificial intelligence topics, focused on citizen science to explain how citizen **engagement and participation** in data collection is a fundamental aspect of scientific progress, combined with training on proper sorted waste collection.

The first edition of this project, which was held between April and June 2022, involved **236 students** and **10 teachers** and led to excellent results, both in terms of participation, with a **98%** completion rate of the game sessions, and in terms of training the artificial intelligence model, which achieved an **82%** accuracy on image recognition.

The success of the project prompted the Hera Group to make plans for it to be extended in 2023 to other schools in the area, in order to define a reference format which, in the future, can be included in the La Grande Macchina del Mondo project.

The ECOgames project described contributes to achieving **UN 2030 Agenda goal 11.3**.

With Riciclandino, we help the environment and schools

Riciclandino has been helping our children move towards greater environmental awareness for over ten years. An environmental initiative dedicated to children and families, it involves all residents who have ties with schools, understood as institutions and communities of people. In this project, points are awarded for the sorted waste brought to drop-off stations, giving schools the opportunity to receive economic incentives. The students' families can use the Riciclandino card to take their waste to drop-off stations, obtaining a discount on their bills, as provided for by municipal regulations, and offering an incentive coming to the same amount to their child's school. The added value of this initiative consists in increasing interest towards the environment, and in a shared action that creates and strengthens the civic and social sense of the community. In the 2021-2022 school year, 17 municipalities in the Ravenna area joined the Riciclandino project, and 251 schools were involved, with a total of about 43,231 students. The participating schools were awarded a prize amounting to 49,424 euro for their activity. As part of the project, more than 401 tonnes of waste brought by students and their families were delivered to drop-off stations.

Students and families delivering sorted waste to drop-off stations contributes to achieving **UN 2030 Agenda goals 11.3, 11.6, 12.2, 12.4, 12.5 and 12.8**, as well as – thanks to the involvement of schools and residents – to achieving **goal 17.17**.

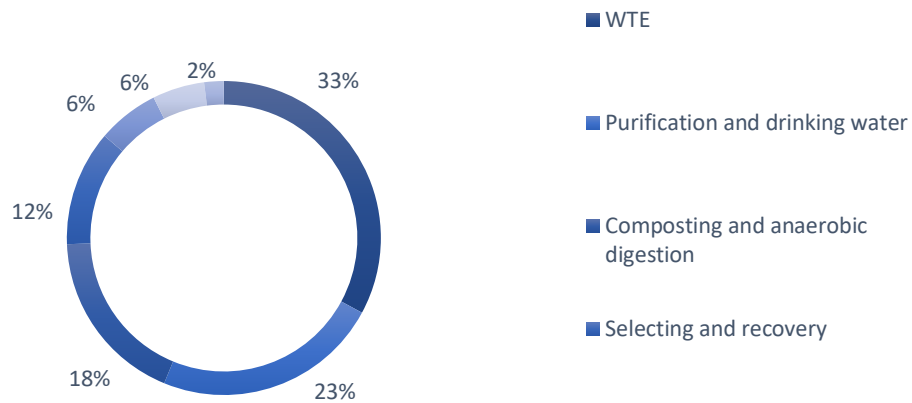
Plant visits for over eight thousand people

The Hera Group, through its subsidiary Herambiente Spa, offers **guided tours of its waste treatment and recovery plants** as a demonstration of its attention to environmental issues and an attempt to promote an **ecologically responsible mindset**. The guided tours, which can also be booked on-line through Herambiente's website, were created in order to provide information about a **set of plants that is among the most advanced in Europe** in terms of operating and quality standards, and to give interested parties the opportunity to learn about the operating and management methods of the plants, describing the methods adopted to ensure proper waste management with the utmost respect for local areas, using solutions with the lowest overall impact on the environment.

In 2022, **1,509 people visited** Herambiente Group plants, over **107 days**. The visits involved waste-to-energy plants (766 visitors), composting and anaerobic digestion plants (423), sorting and recovery plants (227 participants), industrial waste plants (47 people) and landfills (46 people). These figures were up compared to the previous year, due to the easing of restrictions caused by the health emergency. There were also 327 visits to AcegasApsAmga drinking water plants, and 493 visits to Marche Multiservizi plants.

In addition, for several years Hera has been offering schools the possibility of organising **“virtual” visits to the plants**. This made it possible to continue activities even after the health emergency in 2021, when it was no longer possible for those interested to learn about the plants in person. In this way, students can remotely follow an environmental educator who explains the different phases of plant operations. During 2022, there were **8,863 virtual visitors**, broken down as follows: 2,053 participants at waste-to-energy plants, 1,696 at sorting and recovery plants, 2,216 at drinking water plants, 173 at sewage treatment plants and 2,725 at cogeneration plants.

IN-PERSON VISITS BY TYPE OF PLANT



Plant visits contribute to achieving **UN 2030 Agenda goals 4.7, 6.b and 12.8**, as well as – through citizen involvement – to achieving **goal 17.17**.

Governance and creating value

Hera best multi-utility in the Dow Jones Sustainability Index

In 2022, for the third consecutive year, the Hera Group was confirmed as the leader in the Multi-Utility & Water section of the **Dow Jones Sustainability World Index** for sustainability performance regarding all three factors, Environmental, Social and Governance (ESG). As in past editions, this year Hera is included in both the world index (Dow Jones Sustainability World Index) and the European index (Dow Jones Sustainability Europe Index).

More specifically, Hera achieved an **overall score of 90/100**, the highest in the Multi-Utility & Water sector, against an industry average of 32/100. The ratings obtained were 89/100 in Environment, 91/100 in Social and 91/100 in Economic & Governance, gaining a leadership position in all three areas evaluated.

This recognition was made possible thanks to the **strategy** focused on sustainability and **creating shared value** that the Group has adopted for the last 20 years.

Listed since 2003 and included in the FTSE MIB since 2019, the Hera stock, which has been in the Dow Jones Sustainability Index since 2020, was also included in the MIB Esg Index in 2021, the first Italian blue-chip index dedicated to ESG best practices, launched by Euronext and Borsa Italiana.

Hera among the best multi-utilities in S&P Global Ratings' ESG ratings

Following its recent confirmation, for the third consecutive year, in the Dow Jones Sustainability Index, World and Europe, the Hera Group once again ranks internationally among the companies most attentive to sustainability and ESG aspects.

Hera's new ESG evaluation was published in 2022 by the Sustainable Finance analysts at **S&P Global Ratings**. This is a cross-industry assessment of the Group's ability to effectively manage its exposure to environmental, social and governance risks in the medium and long term, as well as to seize opportunities arising from changes in an evolving international environment.

This year, the Hera Group, among the first in Italy to have published its own ESG evaluation, as early as 2021, obtained an overall score of 81/100, making it **one of the best companies internationally** assessed by S&P Global Ratings. The score obtained (81) places it well above the international (72) and European (76) average.

In particular, in the ESG Evaluation, the Hera Group is considered by S&P Global Ratings as strongly prepared to implement its creating shared value strategy, contributing to the transition to a circular economy with low emissions.

Hera Luce becomes a Benefit Company

After amending Article 3 of its own Articles of Association, in June 2022 Hera Luce approved its transformation into an **SB Benefit Company** (pursuant to Law 208 of 28 December 2015). The purpose of "operating responsibly, sustainably and transparently towards people, the community, the local area and environment, cultural and social assets and activities, entities and associations and other stakeholders" was thus included in the Articles.

Hera Luce made this choice on a voluntary basis, one of the first in Italy in the public lighting sector to do so; thanks to this change in its Articles of Association, transparency and benefits for stakeholders have definitively become part of its corporate DNA. "Common benefit" refers to the pursuit of one or more positive effects (which can also be pursued by reducing negative effects) on people, communities, local areas and environment, cultural and social assets and activities, bodies and associations and other stakeholders. Benefit societies pursue these aims concerning a common benefit in a responsible, sustainable and transparent manner and their administration requires managers to balance the interests of shareholders and the community.

For Hera Luce, becoming a Benefit Company was the natural completion of the path undertaken in terms of attention to environmental sustainability, preservation of resources and the transformation of the cities served into "smart circular cities", promoting the transition to a circular economy. The actions pursued by Hera are able to provide stakeholders with tools to develop a sustainable and smart city, capable of leading to the transition towards circularity.

To this end, the company intends to pursue the following common-benefit purposes:

- **Contribute to the prosperity of the local communities** in which the company operates, by designing and implementing sustainable, resilient, and innovative models of urban development in its urban interventions (Hera Luce for a smart circular city/land);

- **Pursue carbon neutrality** through actions aimed at increasing energy efficiency and the transition to renewables;
- **Guiding the transition to a circular economy model** by means including measuring circularity from a life-cycle perspective.

Hera Luce intends to achieve these aims by ensuring **the best working conditions** for **its own employees** and those of its **suppliers**, while also promoting **public-private cooperation** with a multi-stakeholder approach.

The common benefits that Hera Luce intends to pursue are linked to an equal number of targets and indicators that bind it in terms of budgeting, financial obligations, reporting and transparency. The specific measures are related to the topics of the environment, energy efficiency and transition, and circular economy.

By becoming a Benefit Company, Hera Luce is committed to operating responsibly, sustainably and transparently towards all its stakeholders, balancing the interests of its shareholders, customers, suppliers, employees, local communities, and the environment itself.

People

Circularity, resilience and sustainability also at Hera Group premises

With the gradual return to normality following the pandemic and the regular presence of staff in the Group's offices, all routine maintenance and management activities of offices and supporting areas (changing rooms, canteens, common areas, etc.) resumed in 2022, following their normal cycle.

Nonetheless, all sanitation measures introduced during the pandemic were maintained, and some initiatives considered useful in improving the hygiene and cleanliness of the premises were either integrated into current activities or included in ordinary cyclical activities remunerated on a fee basis in the new global service contract, launched in its preliminary phase in late 2022 and fully operational as of 1 January 2023.

In this regard, note the maintenance of cyclic activities on cleaning filters in air conditioning systems, sanitising offices and an improvement in the hygiene of beverage distribution in cafeterias thanks to the use of contactless machines.

With regard to investment activities, note the following:

- the completion of the restructuring and subsequent relocation of the Heratech's Romagna laboratories, which occupy an area of approximately 2,800 square metres at the Ravenna site;
- the completion of the changing rooms at Imola Casalegno, covering an area of approximately 500 square metres;
- the construction and commissioning of the new cafeterias in Modena and Forlì, capable of supplying 300 and 150 meals per day respectively.

For all the interventions described above, disused or underused buildings were reused, thus contributing to limiting new constructions on virgin soil and keeping the sealed surface area of the Group's buildings unchanged.

Bearing this in mind, in 2022 the water redevelopment project for the entire Molino Rosso area in Imola was also completed, with the creation of new green areas for the headquarters and available to workers. Above all, a natural lamination basin was obtained by depressurising the ground, which guarantees the correct flow of water in the compartment without the use of additional sealed areas. This initiative, which came alongside the completion of the public car parks provided to the City of Imola in late 2022, has in fact concluded all the fulfilments envisaged by the program agreement existing with the City of Imola for the Molino Rosso compartment.

In terms of energy efficiency, the transformation of indoor lighting systems continued, with a changeover from incandescent bulbs to LED bulbs, as did the renewal of hydronic systems, replacing obsolete pumps with more modern and high-performance increased-efficiency pumps, leading to a final saving of 72 toe compared to 2021.

Work continued on the Bologna Berti Pichat training centre and on renovating the Giugnano site in Gaggio Montano (Bologna), which will be completed and operative in 2023.

535,000 euro raised by the fourth edition of HeraSolidale

HeraSolidale aims to promote solidarity and **support for social and environmental projects** with the **involvement of Hera Group employees, customers and the company itself**.

The fourth edition of the project, launched in 2020, came to an end in 2022. This latest edition saw the Group's employees choose, through a voting process, five of the 15 organisations selected by the company according to the following criteria: **reputation and transparency of activities, contribution to one or more of the goals on the UN's 2030 Agenda, and areas of intervention related to Hera's services** (accessory criterion).

A new feature of the fourth edition of HeraSolidale is the identification of **two organisations dealing with environmental sustainability**, in line with the Group's business offer and that of Hera Comm, a key partner in the success of HeraSolidale, which come alongside the five organisations voted for by workers, making a **total of seven**. Unlike previous editions, the fourth edition of HeraSolidale lasted three years.

By the end of the fourth edition of the project, **each of the seven organisations had collected donations corresponding to at least one of the goals** of the projects supported:

- **ADMO Non-Profit Organisation - "A donor for everyone". The first goal was achieved:** purchasing 5,000 saliva tests that the association uses to select potential bone marrow donors

and registering them with the Italian Register. Every year, many people need a transplant to combat diseases such as lymphoma and leukaemia.

- **ANT Italia Non-Profit Foundation - “Children in ANT”. The third goal was achieved:** free at-home medical care for 40 children with cancer and 14 months of psychological support for minors coping with the illness of a loved one; training in schools to involve children and young people and deal with the issue of mourning.
- **Don Bosco Mission Community - CMB: “An educational-schooling centre in Ghana”. The second goal was achieved and exceeded:** support for 38 months of a literacy school in Ghana by purchasing school material and helping with the costs of utilities and staff salaries.
- **Marevivo Non-Profit Organisation - “Let's save our seas from plastic”. Second goal achieved:** commitment to collect 1,000 kg of plastic in a year, to keep Italian seas clean and promote recycling. To achieve this goal, Marevivo decided to support the LifeGate PlasticLess® project which uses modern Seabin technology.
- **Theodora Non-Profit Organisation - “Dr. Dream’s special hospital visits”. Fourth goal achieved:** 18 months of “visits” by Dr. Dream to the children hospitalised at the Policlinico Sant’Orsola-Malpighi and the Bellaria Hospital in Bologna, making their hospitalisation a less traumatic experience.
- **Treedom Foundation Non-Profit Organisation - “Let’s green Madagascar!”. First goal achieved and exceeded:** creation of a tree nursery in Madagascar, with the production and distribution of 3,500 plants to 100 farming families, who will receive agro-forestry training.
- **UNHCR - “An education for the children of Chad”. Second goal achieved:** a year of schooling to roughly 2,000 refugee children in Chad aimed at improving teacher training, supplying teaching materials and promoting education for girls.

As was the case for the third edition of the project, in addition to Group **employees** who could take part either through a monthly donation directly deducted from their payslip, or through Hextra, the company’s integrated corporate welfare system, the project was also extended externally, as **new Hera customers** were able to choose to donate one euro to one of the seven organisations when signing a contract with Hera.

Furthermore, **the Hera Group will make an important contribution**, acting through the companies Hera Comm and Hera Comm Marche, which donated one euro for each new customer during the three years of the project.

This edition also saw two non-recurring initiatives: a fundraiser for the 2020 **Coronavirus emergency**, which collected 65,000 euro thanks to the donations made by Hera employees, and a fundraiser for the **conflict in Ukraine**, which so far has collected over 25,000 euro.

To support the HeraSolidale project, in 2021 the Group also decided to involve employees in donating a symbolic fee when individual employees decide to redeem company mobile phones and tablets for personal use.

From July 2020 until December 2022, **approximately 535,000 euro** were raised: roughly 210,000 euro were donated by employees through payroll deductions and Hextra, and over 325,000 euro were donated by Hera Comm and Hera Comm Marche.

In addition, the Hera Group, in parallel with the extraordinary editions of HeraSolidale, in **2020** donated **€550,000** to health services in Emilia-Romagna, Veneto, Friuli-Venezia Giulia, and Marche during the **covid-19 emergency**, and in **2022** donated **€200,000** to the Emilia-Romagna Agency **for Territorial Security and Civil Protection for the Ukrainian people** affected by the conflict

The **fifth edition of HeraSolidale** will begin in the summer of 2023, with four participating non-profit organisations selected by employees. Within March 2023, employees will choose the organisations from a list of 10 proposals, identified with the same criteria as the previous year, with the addition of an assessment of their position in the 5x1000 ranking.

The projects mentioned here, through partnerships with interested organisations and public administrations, contribute to achieving **UN 2030 Agenda goal 17.17**.

A digital identity for everyone

This initiative creates and assigns a **Group digital identity** to all employees. It changes the approach previously adopted, whereby specific digital services were only available if they were strictly related to work: with this project, a minimum set of digital services is identified, and thus implicitly also a digital identity that every employee belonging to the Group must possess **regardless of their work activity**. These services are: the internal corporate portal, corporate e-mail, the corporate collaboration systems of the Microsoft 365 package, and the corporate “SAM” services app.

The devices used for accessing digital identity were extensive, and at the end of the project included:

- individual company workstations;
- shared company workstations;
- personal PCs;
- company mobile phones or tablets;
- personal mobile phones or tablets;
- personal protection equipment totems.

In terms of **training**, a first-time access guide was handed out during distribution, including identity details (login name, e-mail, etc.). The guide then referred to the training provided for the use of the minimum services on the internal training portal (MyAcademy).

As regards **communication**, media coverage was given to this initiative, reaching all project participants both through articles in House Organ (the Group’s internal magazine) and through posters installed in all available offices. Lastly, the distribution process was adjusted to take account of new recruits.

During the initial recovery phase for employees who were without a digital identity, the project involved approximately 2,000 users. By 31 December 2022, **98.3%** of Hera Group employees had activated their digital identity and were using it in their ordinary work activities.

This project aimed to **bridge an initial gap in the digital divide**, namely the availability of services. The company is now focusing on strengthening the digital skills of its employees: the “**Digital Workplace**” programme aims at an increased adoption of **digital collaboration** tools and, for more experienced employees, the possibility of developing customised **productivity** and advanced **analysis** tools.

Digital identities contribute to achieving **UN 2030 Agenda goal 8.2**.

How does the initiative contribute to responsible digital transformation? The benefits achieved in terms of Corporate digital responsibility factors (see the section on “Corporate digital responsibility”)

Social		Delivering secure, privacy-compliant solutions that ensure the privacy of workers’ data. Distribution, training and multi-device availability of digital services to all workers to promote digital inclusion and overcome the digital divide. Extensive communication channels that use digitalisation as a tool to provide workers with all protective measures to ensure their health and safety.
Technological		Secure solutions delivered to the entire workforce to ensure IT security and a responsible use of technology, thus limiting exposure to external intrusions.

Suppliers

Supplier monitoring plan with a focus on social responsibility

Following the experience gained from numerous audits carried out, in 2022 a **new training campaign** was completed, aimed at an initial selection of contractual referents and works managers, to further increase awareness on supplier monitoring with a special focus on **corporate social responsibility**. The participants put themselves to the test by analysing **concrete, real-life** company cases, with the aim of identifying the correct behaviour to adopt and thus the contents of the corporate documents to which to make reference with respect to the Suppliers Monitoring Process, Model 231 and the Code of Ethics. This training campaign is currently being extended to all contract managers and works managers

Specific **on-the-job training** sessions were also carried out, aimed at a correct and consistent **compilation of on-site checklists**.

During 2022, **over 90 CSR assessment questionnaires** were received from suppliers considered critical in terms of activity and contract amount. The documents were examined and clarifications and additions were requested for incomplete or missing parts. Based on the documents collected in previous years as well, **11 audits with a focus on corporate social responsibility** were carried out, all at the suppliers' premises. In several cases, specific audits were necessary to verify that the improvement path agreed upon had begun and that corrective actions had been taken. These audits were carried out by **certified and referenced external personnel**, selected through private negotiations, to guarantee the transparent and independent process required by the Group.

Lastly, **36 additional audits** were carried out directly at Hera Group sites by Vendor Rating and Assurance, alongside the Quality, Safety and Environment Departments of Hera, Herambiente, AcegasApsAmga and Marche Multiservizi. These monitoring activities complement the periodic audits of the company contract contact persons, also concerning the proper management of subcontracts/subcontracts, if any. These checks were selected by focusing on the most critical situations in terms of impact on customers, risks for sustainability issues, and particularly negative ratings of certain economic operators.

The circular economy in the supply chain

Also in 2022, consistently with the "Resolve" model proposed by the **Ellen Mac Arthur Foundation**, the Hera Group applied the **four cardinal principles of circularity** (eco-efficiency, dematerialisation, renewability, recyclability) in its procurement, constantly seeking to reconcile them with the objectives of compliance with current regulations on procurement, equal treatment of suppliers, transparency, free competition and supplier rotation.

The principles of the circular economy were either translated into **technical reward criteria** within tenders using the most economically advantageous bid method, or were included in the technical specifications when planning requirements.

In 2022, a **reporting model** continued to be applied so as monitor the impact of the initiatives introduced. In particular, coherently with what had previously been done to monitor the use of sustainability criteria in contracting, **the technical criteria traceable to circular economy principles were mapped**.

As in previous years, **circularity criteria** were included in **over 82% of the most economically advantageous bid method tenders** in 2022, with an average score of 13.2. The value generated by circular elements stands at 13.8% of the value of 2022 tenders.

As of 2021, a **lowest-price circularity reporting methodology** has been progressively extended to all Hera Group purchases. Applying the new circularity reporting model, it is estimated that in tenders awarded in 2022 with the lowest price, the value generated by circular elements will amount to almost 10 million euro, or 4% of the total value.

Overall, considering both most economically advantageous bid method tenders and tenders with the lowest price, the value attributable to circularity elements stands at **10.4%** of the value of all tenders awarded in 2022.

The main tenders awarded at the **lowest price with elements of circularity** included in the technical specifications are as follows:

- in the open procedure relating to the sorting service for the recovery of residual waste from sorted waste collection in Padua, with a tender base amount of approximately 340,000 euro, in order to reduce the emission of pollutants into the atmosphere, special tender specifications require that at least 30% of the vehicles used by the contractor must have engines not less than Euro 5, or be electric, hybrid, or powered by methane or LPG. In addition, the waste collected must be sent for recovery to the supply chain consortia.

- in the open procedure relating to the service of initiating the recovery of bulky waste from the sorted waste collection in the local area of the City of Trieste, with a tender base amount of approximately 200,000 euro, special tender specifications required the contractor to provide a report on the traceability of the waste collected.
- for some pilot supplies, including the privately negotiated tender for supplying cast-iron manhole covers, in a tender amounting to approximately 140,000 euro, suppliers were asked to fill out a questionnaire on the material composition of the product and packaging in order to classify their supply from an environmental point of view and to verify whether they have environmental certifications, meet CAM requirements and comply with forthcoming European directives on the circular economy.

See the section of this document dedicated to the selection of suppliers for an account of the technical reward criteria set out in the invitation letter for the main tenders awarded with the most economically advantageous bid method.

GREENHOUSE GASES: METRICS AND TARGETS

Criteria for calculating greenhouse gas emissions

The Ministry of the Environment's coefficient (expressed in CO₂e) for natural gas consumption in stationary plants, and the Defra 2022 coefficients (expressed in CO₂e) for fuel consumption for industrial purposes (diesel, LPG) and in vehicles (diesel, petrol, methane, LPG) were used to estimate the Scope 1 emissions.

Greenhouse gas emissions from landfills have been estimated by considering the methane contained in the biogas leaving the landfills and the carbon dioxide resulting from the combustion of the captured biogas, subtracting the amounts corresponding to the presence of biodegradable matter. For waste-to-energy plants, the estimate included the carbon dioxide resulting from the combustion of the non-biodegradable part of the waste (estimated following ENEA's guidelines) and other fuels used in the plant. Leaks from the gas network were estimated and considered to be fully dispersed into the atmosphere.

The global warming potential (GWP) considered for methane is 28 (Source: IPCC Fifth Assessment Report).

To estimate electricity consumption emissions (Scope 2), Ispra's "National Inventory Report 2022" coefficients were applied to the location-based method and AIB's "European residual mixes, results for the calendar year 2021" to the market-based method (expressed in CO₂e).

To estimate Scope 3 emissions, the Defra 2022 coefficients were used (expressed in CO₂e), with the exception of emissions from sales of non-renewable electricity, for which the coefficients from Ispra's "National Inventory Report 2022" were used.

The entry "Sale of natural gas – downstream" considers emissions resulting from consumption by customers of the gas sold. The entry "sale of electricity" considers emissions resulting from the consumption of fuels for the generation of electricity sold to customers (net of the portion of renewable electricity). The entry "sale of natural gas - upstream" considers emissions from the production of gas sold to customers. The entry "emissions related to energy production and consumption" includes: (i) the production of gas consumed in industrial cogeneration plants installed at third-party premises; (ii) emissions produced by the joint venture plants of Tamarete, Teverola and Sparanise (downstream); (iii) electricity network losses (upstream); (iv) the production of fuels used to generate the electricity consumed internally (net of the portion of renewable electricity) (upstream); (v) the production of fuels consumed in Group vehicles (upstream). The entry "other indirect emissions" includes: (i) the use of vehicles by suppliers for waste collection (upstream); (ii) the use of vehicles by suppliers for waste transport (upstream); (iii) recycling operations for glass, plastic and paper sent for recovery and sold (downstream); (iv) bill printing (upstream).

With regard to greenhouse refrigerant gases, the companies Hera Spa, AcegasApsAmga, Hera Servizi Energia, Herambiente, HeraTech, InRete Distribuzione Energia, and Uniflotte provide for special monitoring and management methods by adopting specific operating instructions and procedures.

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INDIRECT GREENHOUSE GAS EMISSIONS

tonnes of CO ₂ e	2020	2021	2022
Emissions from the purchase of goods and services	169	173	205
Emissions related to fuel and energy consumption	4,996,684	4,332,535	4,575,924
Emissions from the use of leased assets	75,489	91,715	85,618
Total Scope 3 emissions – upstream	5,072,342	4,424,423	4,661,747
Emissions from treatment of products sold	341,213	409,862	451,680
Emissions from use of products and services sold	5,914,966	6,561,623	6,898,371
Emissions from investments made	284,494	327,561	239,345
Total Scope 3 emissions – downstream	6,540,672	7,299,047	7,589,396
Total indirect emissions – Scope 3	11,613,015	11,723,470	12,251,142

EMISSION INDICATORS

Indicator	2020	2021	2022	Target 2026	Target 2030
Direct emissions Purpose 1 (kt CO ₂ e)	986.2	981.8	936.6	952.3	814
Eu-Ets Scope 1 emissions (% of total Scope 1)	12.1%	15.1%	16.0%	n.a.	n.a.
Indirect Scope 2 emissions from electricity consumption (market-based) (kt CO ₂ e)	44.4	46.6	0.0	0,0	0
Scope 1+2 emissions (kt CO ₂ e)	1,030.6	1,028.4	936.6	952.3	814
Scope 1+2 emissions (% reduction vs. 2019)	-8.9%	-9.1%	-17.2%	-15.8%	-28%
Scope 3 indirect emissions from natural gas sales (downstream) (kt CO ₂ e)	5,915.0	6,373.8	6,112.9	5,311.7	4,385
Scope 3 indirect emissions from natural gas sales (downstream) (% reduction vs. 2019)	-5.6%	+1.8%	-2.4%	-15.2%	-30%
Scope 3 indirect emissions from electricity sales (kt CO ₂ e)	4,195.8	3,170.3	3,357.1	2,866.1	2,141
Scope 3 indirect emissions from electricity sales (% reduction vs. 2019)	-4.4%	-27.7%	-23.5%	-34.7%	-49%
Total emissions Scopes 1+2+3* (kt CO ₂ e) ²	11,141.3	10,572.5	10,406.6	9,130.0	7,422
Total emissions Scopes 1+2+3* (% reduction vs 2019)	-5.4%	-10.3%	-11.7%	-22.5%	-37%
Total avoided or offset emissions (kt CO ₂ e)	2,155.8	2,490.4	2,539.3	n.a.	n.a.
<i>of which: avoided emissions</i>	<i>1,898.2</i>	<i>1,907.6</i>	<i>1,774.1</i>	<i>n.a.</i>	<i>n.a.</i>
<i>of which: offset emissions</i>	<i>257.6</i>	<i>582.8</i>	<i>765.2</i>	<i>n.a.</i>	<i>n.a.</i>

*The Scope 3 value reported relates to the sale of natural gas (downstream) and the sale of electricity. The Scope 3 data relating to the sale of methane gas do not consider the transitory increases in volumes sold in last-resort services. The Scope 3 data relating to the sale of natural gas for 2021 have been aligned with the calculation methodology used for the 2022 data.

EMISSION INTENSITY INDICES

Indicator	2020	2021	2022	Target 2026	Target 2030
Carbon intensity index of electricity sales (t CO ₂ e from electricity sales / MWh electricity sold)	0.342	0.281	0.288	0.232	0.183
Carbon intensity index of electricity sales (t CO ₂ and from electricity sales/MWh electricity sold) (% reduction vs. 2019)	-6.3%	-23.2%	-21.0%	-36.5%	-50%
Carbon intensity index of production value (t CO ₂ and Scopes 1+2 / production value in mn€)	137	94	45	n.a.	n.a.
Ebitda carbon intensity index (t CO ₂ and Scopes 1+2 / Ebitda in mn€)	918	842	723	n.a.	n.a.
Carbon intensity index per resident served (t CO ₂ and Scopes 1+2 / k residents)	244	244	222	n.a.	n.a.
Carbon intensity index per customer (t CO ₂ and Scope 3 / k customers)	5.2	5.2	5.2	n.a.	n.a.

RISKS AND OPPORTUNITIES

Indicator	2020	2021	2022	Target 2026	Target 2030
Hera Ebitda aligned to EU Taxonomy (climate mitigation and adaptation) (% of eligible Ebitda)	-	-	88%	n.a.	n.a.
Hera revenues aligned to EU Taxonomy (climate mitigation and adaptation) (% of eligible revenues)	-	-	88%	n.a.	n.a.
Ebitda CSV Driver Energy (mn€)	136.6	225.1	216.0	n.a.	n.a.
Ebitda CSV Driver Waste management (mn€)	240.1	292.0	393.3	n.a.	n.a.

INVESTMENTS AND USE OF CAPITAL

Indicator	2020	2021	2022	Target 2026	Target 2030
Hera CapEx aligned to EU Taxonomy (climate mitigation and adaptation) (% of eligible CapEx)	-	-	90%	n.a.	n.a.
Hera OpEx aligned to EU Taxonomy (climate mitigation and adaptation) (% of eligible OpEx)	-	-	72%	n.a.	n.a.
CSV Driver Energy investments (mn€)	28.2	85.0	95.0	n.a.	n.a.
CSV Driver Environment investments (mn€)	110.3	164.3	259.8	n.a.	n.a.
CSV Driver Local areas (and businesses) investments – Resilience and adaptation (mn€)	n.a.	105.7	31.9	n.a.	n.a.

REMUNERATION

Indicator	2020	2021	2022	Target 2026	Target 2030
Portion of BSC premium linked to CSV Energy drivers (% of total variable remuneration)	4%	4%	7%	n.a.	n.a.
Portion of BSC premium linked to CSV Environment drivers (% of total variable remuneration)	11%	13%	9%	n.a.	n.a.

OTHER TCFD METRICS - ENERGY

Indicator	2020	2021	2022	Target 2026	Target 2030
ISO 50001 Energy saving measures (% reduction vs base year)	-6.2%	-6.8%	-6.9%	-8.6%	-10%
Internal consumption of grid electricity from renewable sources (%)	83.0%	82.3%	100%	100%	100%

Indicator	2020	2021	2022	Target 2026	Target 2030
Electricity and gas contracts at the end of the year with at least one energy-saving solution (% of total free market, protected and gradual protected household contracts)	19.3%	24.5%	27.1%	34%	37%
Electricity from renewable sources sold to free market customers (% of volumes sold)	36.8%	45.1%	41.1%	44%	>50%
Natural gas sold with CO ₂ offsetting on the free market (% of volumes sold)	5.0%	11.2%	14.2%	21%	27%
Photovoltaic power sold (progressive kW)	-	850	7,840	n.a.	n.a.
Energy production from renewable sources (GWh)	710.5	695.5	712.9	n.a.	n.a.
Biomethane production (Mm ³)	7.8	8.0	7.7	12	30
District heating energy mix from renewable, recovered or high efficiency sources (%)	61.4%	66.9%	68.8%	75%	n.a.
Housing unit equivalents served by district heating (no.)	90,415	91,410	96,825	n.a.	n.a.
NexMeter gas smart meters installed (thousands)	19.8	80.0	180.1	300	n.a.
Public and private charging points installed for electric transport (no.)	404	1,058	1,800	5,185	n.a.

OTHER TCFD METRICS - RESOURCES

Indicator	2020	2021	2022	Target 2026	Target 2030
Waste sent for material and energy recovery at Herambiente plants (t)	329,603	344,360	349,444	338,494	n.a.
Waste sent for material and energy recovery at Herambiente plants (%)	81.4%	80.8%	80.6%	81.8%	n.a.
Plastic recycled by Aliplast (k tonnes)	68.8	80.9	79.2	120.1	149
Reduction in internal water consumption (% vs 2017)	-11.9%	-16.6%	-20.5%	-22%	-25%
Water network leakage (mc/km/day)	9.6	9.5	-	9.3	n.a.
Reusable purified wastewater (%)	5.2%	6.0%	7.3%	13%	18%
Water contracts with Consumption Log (% of total residential customers)	20%	27%	35%	52%	n.a.

CORRELATION OF MATERIAL TOPICS AND RISKS IDENTIFIED BY ERM ANALYSIS

Material Topics	Risks						
	Natural - catastrophic and climate change events	Operational security and ICT	Security and development of individuals	Strategic	Operating-financial	Competitive and regulatory	Regulations and compliance
Climate change mitigation				✓	✓	✓	
Circular economy				✓		✓	✓
Service quality, safety, cost and continuity of services	✓	✓	✓	✓			
Innovation and digital transformation		✓	✓	✓			✓
Cost of waste collection and urban cleanliness	✓	✓		✓		✓	
Resilience and adaptation	✓	✓	✓	✓		✓	
Supply chain management				✓			
Customer relations	✓	✓		✓			
Energy efficiency and renewables				✓	✓	✓	✓
Air protection	✓	✓		✓			✓
Occupational health and safety	✓		✓				✓
Local development and social inclusion	✓	✓		✓		✓	
Diversity			✓	✓			
Training and professional development, remuneration and incentives			✓				
Anti-corruption activities			✓	✓			✓
Quality and consumption of network water	✓	✓		✓		✓	✓
Sustainable management of water resources	✓	✓		✓		✓	✓

TABLES CORRELATING SASB INDICATORS

WASTE MANAGEMENT - SUSTAINABILITY DISCLOSURE TOPICS & ACCOUNTING METRICS

Topic		Accounting metric	Unit of measure	Page
Greenhouse gas emissions	IF-WM-110a.1	(1) Gross global Scope 1 emissions, percentage covered under (2) emissions-limiting regulations, and (3) emissions-reporting regulations	Metric tons (t) CO ₂ e Percentage (%)	68
	IF-WM-110a.3	Discussion of long-term and short-term strategy or plan to manage Scope 1 and lifecycle emissions, emissions reduction targets, and an analysis of performance against those targets	-	60
Fleet fuel management	IF-WM-110b.1	(1) Fleet fuel consumed, (2) percentage natural gas, (3) percentage renewables	Gigajoules (GJ), Percentage (%)	129
	IF-WM-110b.2	Percentage of alternative fuel vehicles in fleet	Percentage (%)	129
Air quality	IF-WM-120a.1	Air emissions of the following pollutants: (1) NO _x (excluding N ₂ O), (2) SO _x , (3) volatile organic compounds (VOCs), and (4) hazardous air pollutants (HAPs)	Metric tons (t)	120
Management of leachate and hazardous waste	IF-WM-150a.1	(1) Total Toxic Release Inventory (TRI) releases, (2) percentage released to water	Metric tons (t), Percentage (%)	96
Labor practices	IF-WM-310a.1	Percentage of active workforce covered under collective bargaining agreements	Percentage (%)	274
	IF-WM-310a.2	(1) Number of work stoppages and (2) total days idle	Number, Days idle	277
Workforce health and safety	IF-WM-320a.1	(1) Total Recordable Incident Rate (TRIR), (2) fatality rate, and (3) Near Miss Frequency Rate (NMFR) for (a) direct employees and (b) contract employees	Rate	277
Recycling and resource recovery	IF-WM-420a.1	(1) Amount of waste incinerated, (2) percentage hazardous, (3) percentage used for energy recovery	Metric tons (t), Percentage (%)	101
	IF-WM-420a.2	Percentage of customers receiving (1) recycling and (2) composting services, by customer type	Percentage (%)	79
	IF-WM-420a.3	Amount of material (1) recycled, (2) composted, and (3) processed as waste-to-energy	Metric tons (t)	96
	IF-WM-420a.4	Amount of electronic waste collected, percentage recovered through recycling	Metric tons (t), Percentage (%)	79

WASTE MANAGEMENT - ACTIVITY METRICS

	Activity metric	Unit of measure	Page
IF-WM-000.B	Vehicle fleet size	Number	129
IF-WM-000.C	Number of: (1) landfills, (2) transfer stations, (3) recycling centres, (4) composting centres, (5) incinerators, and (6) all other facilities	Number	96

WATER UTILITIES AND SERVICES - SUSTAINABILITY DISCLOSURE TOPICS & ACCOUNTING METRICS

Topic		Accounting metric	Unit of measure	Page
Energy management	IF-WU-130a.1	(1) Total energy consumed, (2) percentage grid electricity, (3) percentage renewable	Gigajoules (GJ), Percentage (%)	40
Distribution network efficiency	IF-WU-140a.2	Volume of non-revenue real water losses	Thousand cubic metres (m) ³	101

Topic	Accounting metric	Unit of measure	Page
Water affordability and access	IF-WU-240a.2 Typical monthly water bill for residential customers for 10 CCF of water delivered per month	Reporting currency (€)	242
	IF-WU-240a.3 Number of residential customer water disconnections for non-payment, percentage reconnected within 30 days	Number, Percentage (%)	248
Drinking water quality	IF-WU-250a.1 Number of (1) acute health-based, (2) non-acute health-based, and (3) non-health-based drinking water violations	Number	111
	IF-WU-250a.2 Discussion of strategies to manage drinking water contaminants of emerging concern	-	111
End-use efficiency	IF-WU-420a.2 Customer water savings from efficiency measures, by market	Cubic metres (m) ³	110
Water supply resilience	IF-WU-440a.1 Total water sourced from regions with High or Extremely High Baseline Water Stress, percentage purchased from a third party	Thousand cubic metres (m) ³ , Percentage (%)	111
	IF-WU-440a.2 Volume of recycled water delivered to customers	Thousand cubic metres (m) ³	108
	IF-WU-440a.3 Discussion of strategies to manage risks associated with the quality and availability of water resources	-	111
Network resiliency and impacts of climate change	IF-WU-450a.4 Description of efforts to identify and manage risks and opportunities related to the impact of climate change on distribution and wastewater infrastructure	-	186

WATER UTILITIES AND SERVICES - ACTIVITY METRICS

Activity metric	Unit of measure	Page
IF-WU-000.B Total water sourced, percentage by source type	Cubic metres (m ³) Percentage (%)	111
IF-WU-000.E Length of (1) water mains and (2) sewer pipe	Kilometres (km)	114

GAS UTILITIES AND DISTRIBUTORS - SUSTAINABILITY DISCLOSURE TOPICS & ACCOUNTING METRICS

Topic	Accounting metric	Unit of measure	Page
Energy affordability	IF-GU-240a.2 Typical monthly gas bill for residential customers for (1) 50 MMBtu and (2) 100 MMBtu of gas delivered per year	Reporting currency (€)	240
	IF-GU-240a.3 Number of residential customer gas disconnections for non-payment, percentage reconnected within 30 days	Number, Percentage (%)	248
Integrity of gas delivery infrastructure	IF-GU-540a.3 Percentage of gas (1) transmission and (2) distribution pipelines inspected	Percentage (%) by length	251

GAS UTILITIES AND DISTRIBUTORS - ACTIVITY METRICS

Activity metric	Unit of measure	Page
IF-GU-000.C Length of gas (1) transmission and (2) distribution pipelines	Kilometres (km)	251

ELECTRIC UTILITIES AND POWER GENERATORS - SUSTAINABILITY DISCLOSURE TOPICS & ACCOUNTING METRICS

Topic		Accounting metric	Unit of measure	Page
Greenhouse gas emissions and energy resource planning	IF-EU-110a.1	(1) Gross global Scope 1 emissions, percentage covered under (2) emissions-limiting regulations, and (3) emissions-reporting regulations	Metric tons (t) CO ₂ e Percentage (%)	68
	IF-EU-110a.2	Greenhouse gas emissions associated with power deliveries	Metric tons (t) CO ₂ e	68
	IF-EU-110a.3	Discussion of long-term and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets	-	60
Air quality	IF-EU-120a.1	Air emissions of the following pollutants: (1) NO _x (excluding N ₂ O), (2) SO _x , (3) particulate matter (PM ₁₀), (4) lead (Pb), and (5) mercury (Hg); percentage of each in or near areas of dense population	Metric tons (t), Percentage (%)	125
Water management	IF-EU-140a.1	(1) Total water withdrawn, (2) total water consumed, percentage of each in regions with High or Extremely High Baseline Water Stress	Thousand cubic metres (m ³) Percentage (%)	125
Energy affordability	IF-EU-240a.2	Typical monthly electric bill for residential customers for (1) 500 kWh and (2) 1,000 kWh of electricity delivered per month	Reporting currency (€)	241
	IF-EU-240a.3	Number of residential customer electric disconnections for non-payment, percentage reconnected within 30 days	Number, Percentage (%)	248
Grid resiliency	IF-EU-550a.2	(1) System Average Interruption Duration Index (SAIDI), (2) System Average Interruption Frequency Index (SAIFI), and (3) Customer Average Interruption Duration Index (CAIDI), inclusive of major event days	Minutes, Number	254

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	Activity metric	Unit of measure	Page
IF-EU-000.C	Length of transmission and distribution lines	Kilometres (km)	254
IF-EU-000.D	Total electricity generated, percentage by major energy source, percentage in regulated markets	Megawatt hours (MWh), Percentage (%)	53
IF-EU-000.E	Total wholesale electricity purchased	Megawatt hours (MWh)	42