



2021 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**

Content

Letter to stakeholders	3
Methodological guide to the Report	4
Sustainable strategy and Shared value	16
About us	16
Hera Group for Planet, People and Prosperity	19
CSV and sustainability KPIs	34
The creation of shared value	36
Energy - Pursuing carbon neutrality	36
Objectives and performance	36
Promotion of energy efficiency	38
Energy transition and renewables	48
Climate change mitigation	57
Environment - Regenerating resources and closing the loop	70
Objectives and performance	70
Transition towards a circular economy	73
Sustainable management of water resources	102
Protection of air, land, and biodiversity	110
Local Area (and Business) – Enabling resilience and innovation	124
Objectives and performance	124
Innovation and digitalisation	127
Economic development and social inclusion	148
Job creation and development of new skills	158
Resilience and adjustment	171
With the drivers of change	175
Governance and creation of value	175
Objectives and performance	175
Sustainability and risk management	176
Economic value for the stakeholders	183
Shareholders and financial institutions	186
Dialogue with our stakeholders	193
Customers	207
Objectives and performance	207
Customers	208
Cost of services	210
Service quality	221
Safety and continuity of the service	224
Customer relations	229
People	234
Objectives and performance	234
Strategic planning of sought-after and future skills and roles	236
Management of skills and training	240
Development of the individuals	243
Welfare	247
Health and safety	248
Industrial relations	254
Suppliers	258
Objectives and performance	258
Suppliers	258
Qualification, selection and assessment of suppliers	259
Contract management	269
Supplier relations	271
Focus on shared value, area by area	272
Information concerning environmentally sustainable economic activities - Regulation (EU)	
2020/852	282
GRI contents index	289
Independent auditors' report	297
Annexes	301
Case study	301
Energy - Pursuing carbon neutrality	302
Environment - Regenerating resources and closing the loop	304
Local Area (and Business) – Enabling resilience and innovation	321
Governance and creation of value	328
People	330
Suppliers	334
Greenhouse gases: metrics and targets	336
Methods of management of material topics	340
Correlation of material issues and risks identified by ERM analysis	346
Tables linking SASB indicators	347

Letter to stakeholders

[102-14]

We significantly enriched our approach to sustainability reporting last year, and in so doing we were inspired by the three Ps: **Planet, People and Prosperity**. What we found in them was a perfect way to convey our purpose, covering both the importance of what we do and our urgent feeling that we must do it even better.

Adopting this outlook proved to be a very farsighted decision, all the more so within a global context in which, in the meantime, an energy crisis and a war in Ukraine have arisen alongside the climate crisis and the pandemic, further complicating the path of action to be taken under the Recovery Fund. Following up on this same choice, in 2021 we integrated our corporate purpose into the Hera Group's Articles of Association, crowning an evolution we pursued for years and leaving a mark that others, in the future, can take up and make their own.

To provide evidence of our commitment, this edition of our report offers a broad and detailed profile of our activities, which the reader may explore in greater depth using consolidated interpretational keys.

The most important of these undoubtedly lies in our **continuous creation of shared value**, corresponding to the amount of Ebitda deriving from business activities that also respond to the goals on the "Global Agenda" and the policies that are being increasingly implemented locally and across Europe. This indicator, which shows growth compared to 2020, **reached 571 million euro in 2021, corresponding to 47% of overall Ebitda**, supported by improvement in all target parameters in the three key areas of energy, the environment and local areas (and businesses).

Prolonging this trend is fundamental for us. By involving ever larger areas of our activities, it helps us face the growing complexity and the challenges of our time, first and foremost the ecological transition. In this area, at any rate, we can already report important results which – starting from the reduced emissions pursued through the **Science Based Targets initiative methodology** – project us with confidence into the next steps to be taken in the short, medium and long term. This will allow us to move towards even greater resilience in our assets and businesses, and in the communities served and the ecosystems involved.

At the same time, while carefully considering the concrete implementation of the PNRR, we believe it is important to reiterate that not all transitions are the same. The one we are working on, in particular, responds to the European principles of the so-called Just Transition and, as this report clearly shows, is achieved through an essential link between climate action and social inclusion, which are inextricably connected by the central and crucial role of people.

This is one of the reasons that S&P Global, which included us in the **Dow Jones Sustainability Index (DJSI)** for the second year in a row, recorded a further improvement in our ratings, confirming us as the world's best multi-utility in the Environment, Social and Governance (ESG) category. This recognition follows up on other international certifications that increase the strength of the long-standing call to action we have always addressed to all our stakeholders. Together with them, we will make all the difference that we must make, and we will continue to demonstrate this, ever better.

Tomaso Tommasi di Vignano
Executive Chairman

Stefano Venier
CEO

Methodological guide to the Report

[102-32]
[102-50]

This sustainability report represents the Non-Financial Statement (NFS) of Hera S.p.A. and its subsidiaries (the "Group") with reference to the year 2021 (from 1 January 2021 to 31 December 2021), drafted in compliance with articles 3 and 4 of Italian Legislative Decree 254/2016 (hereinafter also "Decree"), in implementation of Directive 2014/95/EU. The NFS reports the information relating to relevant environmental, social and personnel-related issues, as well as the respect for human rights and anti-corruption, helpful in ensuring an understanding of the activities carried out by the Group, its performance, its results and the impact generated by the latter. In order to define the aspects relevant to the Group and its stakeholders, a structured **materiality analysis** process was carried out which is described in the section "The materiality analysis and definition of contents" of this Methodological guide to the Report.

As established by Art. 5 of Italian Legislative Decree 254/2016, this document forms a separate report and is marked with specific wording in order to connect it to the Non-Financial Statement required by law.

Hera Group considers the NFS its sustainability report, a primary tool for managing and reporting its activities and results in the economic, environmental and social fields, as well as a fundamental tool for providing information to and engaging in dialogue with its stakeholders.

[102-51]
[102-52]

The Sustainability Report has been drawn up and published yearly since 2002. Since 2007, it has been **approved by the Board of Directors of Hera Spa** when the annual and consolidated financial statements are approved and has been submitted to the Shareholders' Meeting. The most recent sustainability report was published in April 2021. This edition was approved by the Board of Directors of Hera Spa on 23 March 2022. This aspect demonstrates the **central role** of sustainability and corporate social responsibility in Hera Group's planning and control system, which brought forward the obligations introduced by the European directive on non-financial reporting by more than ten years.

The document is widely disseminated to all of the Group's stakeholders through publication on the company's website and distribution and presentation to all Group workers.

In addition to the performances and goals achieved, the sustainability report provides the principles which guide Hera Group's actions, the future objectives, the results of its dialogue with stakeholders and its **existing** initiatives.

The structure of the sustainability report is the direct consequence of the **strategic approach** aimed at **creating shared value** that Hera Group has adopted since 2016 to respond more effectively to the challenges of sustainable economic development at global and local level, and to make the value generated through the local area more tangible.

The appendix to this report also contains some **case studies**, i.e. descriptions of projects that provide further evidence of the Group's commitment to sustainability, the creation of shared value and the relevant results achieved in said areas.

The scope of reporting
[102-5]
[102-45]

The scope of the **economic and financial** data and information is the same as Hera Group's consolidated financial statements as at 31 December 2021. The scope of the **social and environmental** data and information includes all the companies consolidated using the line-by-line method in the Group's consolidated financial statements, as reported below.

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	■ Amgas Blu Srl ■ Eco Gas Srl ■ Estenergy Spa – Ascopiave Energia Spa – Ascotrade Spa – Blue Meta Spa – Etra Energia Srl ■ Hera Comm Marche Srl ■ Wolmann Spa	■ Aliplast Spa – Aliplast France – Aliplast Iberia – Aliplast Polska ■ 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-Generazione 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

[102-10]

These changes were made to the 2020 scope:

- **Hera Comm Nordest Srl** was merged by incorporation in EstEnergy Spa on 29 March 2021, with accounting effects backdated to 1 January 2021;
- **Ares Trading EOOD**, which trades in natural gas, was established by Aresgas EAD on 28 June 2021 and fully consolidated from 30 November 2021;
- **Atlas Utilities EAD and its subsidiary Primagas AD**, which distribute and sell natural gas, joined the Group's scope of consolidation on 30 June 2021 and were fully consolidated, with the income statement and balance sheet effects backdated to 1 May 2021;
- **Eco Gas Srl**, gas and electricity sale company, was fully consolidated from 31 December 2021, with the income statement and balance sheet effects backdated to 1 July 2021;
- **Biorg Srl**, specialised in the design, performance and management of waste management services was fully consolidated from 30 September 2021;
- **Green Factory Srl**, a company operating in the waste collection, transport, storage, treatment, disposal and/or recovery business, was fully consolidated from December 2021, effective for income statement and balance sheet purposes as at 1 January 2021;
- **Vallortigara Servizi Ambientali Spa and its equity investments (Vallortigara Angelo Srl, Hydro Mud Srl and Vegri Scarl)**, which deal with both waste management and laboratory analysis for the waste management sector, were fully consolidated from December 2021;
- **Recycla Spa**, specialised in industrial waste management, joined the Group's scope of consolidation from 30 June 2021 and was fully consolidated, with income statement and balance sheet effects backdated to 1 January 2021.

Any changes to the scope indicated above are appropriately reported in the document and, where present, do not compromise the proper representation of the business activity.

Even if not included in the scope of consolidation, information relating to the company **Enomondo Srl** (in which Herambiente holds a 50% interest) which manages a biomass plant, has been reported. This information includes the aspects linked to atmospheric emissions and waste disposal.

In order to compare data over time and to assess the performance of the Group's activities, the comparative data relating to the two previous years has been included, if available. In addition, in order to correctly represent the performances and ensure the reliability of the data, limited use has been made of estimates, and where these have been used, are based on the best methods available and reported accordingly.

The reporting standards

[102-12]

[102-54]

This sustainability report/NFS has been drawn up in compliance with the “**Global Reporting Initiative Sustainability Reporting Standards**” defined by the Global Reporting Initiative (GRI) according to the “**In accordance**” – **Core option**.

For the definition of value added and its distribution to stakeholders the “**Standard GBS 2013 - Principles for drawing up sustainability reports**” defined by Gruppo di studio per il Bilancio Sociale (GBS) was also used.

Furthermore, as a result of the commitments undertaken by the Group in relation to the **Global Compact (United Nations)**, the report represents the yearly **Communication on Progress** that is submitted to this institution.



During 2020, the Hera Group aligned the NFS with the Recommendations of the Task Force on Climate-related Financial Disclosures (TCFD), published in 2017 by the Financial Stability Board, and the Guidelines of the European Union on the communication of information relating to the climate, published in June 2019 by the European Commission. The process of adhering to and aligning with the recommendations of the Task Force, approved by the Management Review Committee in 2020, saw the involvement of a designated interdepartmental team comprised of the Shared Value and Sustainability, Risk Management, Strategic Planning, Energy Management, and Administration, Finance and Control departments. The information in line with the Recommendations of the Task Force on Climate-related Financial Disclosures includes: an overview of the Group's greenhouse gas emissions by chain; a table with the main objectives and indicators in greenhouse gas in the appendix (updated in 2021 according to the document “Guidance on Metrics, Targets, and Transition Plans” published in October 2021 by the

Task Force; the description of the bonus system linked to climate objectives; the description of the governance processes regarding climate-related risk supervision and management; and lastly, some initiatives identified to reduce risks and anticipate the opportunities arising from climate change.

Finally, the Hera Group aligned its reporting with **EU Delegated Regulation 2021/2178 that supplements EU Regulation 2020/852**, which regulates the **taxonomy** of eco-sustainable activities. The paragraph dedicated to the "European taxonomy of eco-sustainable activities" includes the information required by the Regulation with some advances with respect to the obligations set forth for the 2021 NFS and some additional elements including the EBITDA taxonomy with an interpretation that makes it possible to compare it with the "shared value EBITDA" which the Group has reported since 2016.

The reporting process

In addition to the previously listed guidelines, the sustainability report was drawn up in compliance with a specific Group internal procedure issued in 2012, updated in 2015 and 2019. This procedure describes the activities required for planning, achieving, approving, disclosing and presenting the report, as well as the associated roles and responsibilities.

The **social and environmental sustainability** objectives set out in the sustainability report were defined with reference to the planning and control instruments used by the Group: 2021-2025 business plan, 2022 budget and 2022 balanced scorecard. These interconnected instruments 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 **collation** and the **consolidation** of the information and data presented in the sustainability report took place by means of the use of dedicated software: data and information were directly communicated via the software by the contact individuals and were subsequently validated by the designated managers in the internal procedure.

[102-48] Any **changes in calculations** compared to previous years are properly listed in the notes to the tables.

The
Management
Review
Committee and
the work group
[102-53]

The sustainability report was drawn up by the Shared Value and Sustainability Department of Hera Spa (bs@gruppohera.it), with the participation of numerous contact individuals, both in terms of data collection and for the descriptions and comments. The preparation and supervision of the work, as well as the approval of the improvement objectives 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 Chief Executive Officer and 16 Group directors.

Thanks to all the 326 persons involved in the preparation of this Sustainability Report.

Auditing of the
report
[102-56]

The Consolidated non-financial reporting is subject to a limited audit ("limited assurance engagement" in accordance with the criteria indicated by the ISAE standard 3000, Revised version) by the independent auditing firm Audirevi Spa; these activities concluded with the issue of the "Independent auditors' report" presented at the end of this document.

It should be noted that the quantitative information contained in the Non-Financial Statement, which does not refer to the indicators reported in the "GRI Contents reference table", has not been specifically examined by the independent auditing firm Audirevi Spa. This information has been presented voluntarily, also on the basis of the materiality analysis, to supplement that required by Italian Legislative Decree 254/2016 and by the reporting standards adopted by the Hera Group.

Hera's
stakeholders
[102-21]
[102-40]
[102-42]
[102-43]
[102-44]

The stakeholders and the materiality analysis

Hera Group's stakeholder map has been defined starting off from a survey of its stakeholders. Each category of stakeholders identified presents particular interests and priority topics and is listened to through specific dialogue and involvement initiatives. The infographic below provides a summary of the stakeholders identified and the main dialogue and consultation activities carried out during the year. For detailed information see the "Dialogue with our stakeholders" section (chapter "Governance and creation of value"). [Dialogo con i](#)



The materiality analysis and definition of the contents
[102-46]

Non-financial and sustainability reporting is preceded annually by the analysis and identification of material topics for the Hera Group and its stakeholders. Specifically, the relevant aspects are selected according to the size of the impacts (positive and negative) generated and the repercussion they may have on stakeholders' decisions. The process for defining the material topics is based on the analysis of internal and external documents which brings to light the most relevant topics related to the shared value and sustainability, which the reporting must focus on.

To identify the topics linked to the Hera Group's activities with an economic, social and environmental impact, reference has been made to the **business plan** and **risk analysis**. The two documents highlight the strategic priorities and the main risks monitored and how these can affect the shared value and sustainability dimension.

In order to understand the material topics for stakeholders, the **external scenario** relating to the three drivers of shared value, the main **regulatory changes**, the **press review**, the issues raised during the **HeraLABs** and the main issues arising from other **engagement activities** (including the internal climate survey and the customer satisfaction survey) were taken into account.

So the external context concerning the **three drivers identified for the creation of shared value** was then analysed: pursuing carbon neutrality, regenerating resources and closing the loop, enabling resilience and innovating. For each of the three drivers, global, European, national and local **policies** were analysed in-depth to define the priorities for change towards sustainability; this involved more than 100 policies, including the 2030 UN Agenda, in relation to which the commitments and the most significant quantitative targets for Hera's activities were considered.

Regarding the **press review**, the presence of information regarding the Hera Group was analysed in the leading national, regional and local newspapers by highlighting the topics that showed greater visibility in more than one local area (articles and topics with overall negative visibility index above one thousand points or positive visibility index above five thousand points were selected).

The **HeraLABs** were then considered, encounters with stakeholders which have the purpose of proposing initiatives for involving the reference area and improving the sustainability of the services offered, periodically checking their effectiveness. During the various LAB meetings, aspects of interest to the categories of stakeholders which take part in them are proposed and analysed, and improvement initiatives are identified which are jointly planned by Hera and the LAB itself.

Lastly, the **annual customer satisfaction survey** assesses the quality of services offered and customers' satisfaction with the Group, also highlighting the aspects that are of particular importance in determining customers' overall satisfaction. The biennial employee satisfaction survey and dialogue with consumer associations also contributed to the definition of relevant topics.

The material topics identified as a result of this analysis are submitted annually to the Management Review Committee, which approves selection so that they can then be added to the full list of the material topics.

[102-47]
[102-49]

The macro-topics emerging from all those involved in the materiality analysis are: circular economy, climate change and resilience. These are also the main topics that emerged in the shared value model of the Hera Group and to which the following three chapters, respectively, are dedicated: environment, energy and local area. There have been few changes with respect to the topics presented in the 2020 sustainability report. The themes relating to climate change have taken on more significance, also following approval of the European Fit for 55 policy, **and the cost of energy services**, due to the increase in the cost of energy carriers. Special attention has been focussed by stakeholders on **plant development** in three local areas: in Ferrara (in relation to the increase in the quantity of waste that can be disposed of in a waste-to-energy plant), in Padua (in relation to the construction of the fourth line of the waste-to-energy plant, replacing lines 1 and 2) and in Pesaro (in relation to the construction of a plant for the bio-digestion of organic waste aimed at the production of compost and biomethane). Account has been taken of these new aspects in drafting this report.

Breakdown of the information required by Italian Legislative Decree No. 254/2016 and relevant aspects
[103-1]

Each sphere of Italian Legislative Decree 254/2016 has been reported on within this report, in accordance with current legislation. The various material topics identified in the above-mentioned analysis are consistent with the Decree on the non-financial information.

The following table summarises the material topics, reported **in order of relevance**, and their relationship with the aspects of Italian Legislative Decree 254/2016 and the GRI Standards, used for the relevant reporting. By contrast, the link between the material topics and the policies/methods for managing them are shown in the appendix.

Description of material topic	GRI Standard	Areas of the decree
Transition to a circular economy The Hera Group's business model, for the businesses managed, is geared increasingly more towards the circular economy. In fact, Hera is committed to increasing recycling and recovery, reducing transfers to landfills, promoting waste prevention initiatives and improving internal circularity. This topic proved to be significant, based on the materiality analysis, for both the Group (business plan, risk analysis, scenario analysis, regulations) and for the reference stakeholders (press review, HeraLAB). <i>Internal impact:</i> Group <i>External impact:</i> Local community, customers	GRI 306: Waste 2020	Environmental topics: Art.3, paragraph 2, letter c

Description of material topic	GRI Standard	Areas of the decree
Reduction of greenhouse gas emissions (climate change) The Hera Group produces greenhouse gas emissions, both in managing its activities and (in particular) through activities carried out by customers and suppliers originating from the sale of its services (gas, electricity). The Group is committed to reducing these emissions and, for said purpose, has set targets in line with the SBTi method. This topic proved to be significant, based on the materiality analysis, for both the Group (business plan, scenario analysis, regulations) and for the reference stakeholders (HeraLAB). <i>Internal impact:</i> Group <i>External impact:</i> Local community, customers, suppliers	GRI 305: Emissions 2016	Environmental topics Art. 3, paragraph 2, letters a, b, c
Integration of climate change in the governance, the strategy and the analysis of the risks The Hera Group produces greenhouse gas emissions, both in managing its activities and (in particular) through activities carried out by customers and suppliers caused by the sale of its services (gas, electricity). The Group is committed to integrating greenhouse gas emission reduction targets in its governance, risk analysis and company strategy. In fact, this reporting is aligned with the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) and the European Union's Guidelines on reporting climate-related information. This topic proved to be significant, based on the materiality analysis, for both the Group (business plan, scenario analysis, regulations) and for the reference stakeholders (HeraLAB). <i>Internal impact:</i> Group <i>External impact:</i> Local community, customers, suppliers	-	Environmental topics Art. 3, paragraph 2, letters a, b, c
Resilience and adjustment As operator of water services and gas and electricity distribution services, the Hera Group has to handle the management of the water and energy networks following a rationale of resilience and adjustment to outside events. This topic proved to be significant, based on the materiality analysis, for both the Group (business plan, scenario analysis, regulations) and for the reference stakeholders (HeraLAB, ICS). <i>Internal impact:</i> Group <i>External impact:</i> Local community	-	Environmental topics: Art.3, paragraph 2, letters a, c
Quality, costs of waste collection and city integrity service The Hera Group manages municipal waste collection services in the area served and, in order to guarantee the quality of the service provided, commits itself to observing minimum standards. This topic proved to be significant, based on the materiality analysis, for both the Group (business plan, regulations) and for the reference stakeholders (press review, HeraLAB). <i>Internal impact:</i> Group <i>External impact:</i> Local community, Public Administration	GRI 306: Waste 2020 GRI 417: Marketing and labelling 2016	Social themes Art.3, paragraph 2, letters c, d

Description of material topic	GRI Standard	Areas of the decree
Promotion of energy efficiency and spreading renewable energy The Hera Group, as an energy services provider, offers solutions aimed at energy efficiency and decarbonisation. Hera also fosters more widespread use of renewable energy, which it produces mainly by exploiting the organic media of waste (e.g.: biomethane) and which it offers to its customers by means of dedicated offers. Hera is also committed to the in-house reduction of energy consumption and to using renewable energy. This topic proved to be significant, based on the materiality analysis, for both the Group (business plan, scenario analysis, regulations) and for the reference stakeholders (HeraLAB). <i>Internal impact:</i> Group <i>External impact:</i> Local community, customers	GRI 302: Energy 2016	Environmental topics: Art.3, paragraph 2, letters a, b, c
Innovation, digitalisation, data analytics, artificial intelligence, cyber security The Hera Group, through the Innovation Department, develops innovative projects within the context of digitalisation, data analytics and business intelligence, committed to innovating and digitalising internal processes and external services, in order to make its business more efficient, reliable, secure and circular. Within the Group, the company Acantho, which provides businesses and private customers with high-performance connectivity, telephony and data centre services, pays special attention to the issue of cyber security. This topic proved to be significant, based on the materiality analysis, for both the Group (risk analysis, business plan, scenario analysis, regulations) and for the reference stakeholders (HeraLAB, climate survey). <i>Internal impact:</i> Group, Employees <i>External impact:</i> Local community, customers	GRI 203: Indirect economic impacts 2016 GRI 418: Customer Privacy 2016	Social themes Art.3, paragraph 2, letter d
Safety, cost and continuity of the service provided to customers The Hera Group handles basic services for customers and the local community, such as the supply of water, gas and electricity, as well as waste collection. For this reason, it undertakes to guarantee a safe and reliable service, limiting interruptions. The Group is committed to ensuring the resilience of its electricity grids and water networks, with a view to adaptation to the climate change. This topic proved to be significant, based on the materiality analysis, for both the Group (risk analysis, business plan) and for the reference stakeholders (press review, HeraLAB, ICS). <i>Internal impact:</i> Group <i>External impact:</i> Local community, Customers	GRI 416: Consumer health and safety 2016	Social themes Art.3, paragraph 2, letter d

Description of material topic	GRI Standard	Areas of the decree
Sustainable management of water resources The Hera Group, being an operator of water services, undertakes to guarantee its customers the perfect quality of the water together with all the technical services indispensable for maintaining the continuity of the supply. Furthermore, Hera is involved in water management activities (for its own consumption and that of its customers), along with sewage and wastewater treatment sector upgrade and network resilience activities. This topic proved to be significant, based on the materiality analysis, for both the Group (business plan, scenario analysis, regulations) and for the reference stakeholders (HeraLAB, ICS). <i>Internal impact:</i> Group <i>External impact:</i> Local community, Customers	GRI 303: Water 2018	Environmental topics: Art.3, paragraph 2, letters a, c
Air and soil quality When managing energy production and waste-to-energy plants, the Hera Group commits itself to maintaining the air quality levels much higher than the legal limits. Also when managing the company vehicle fleet, the Group aims to promote the vehicles with a lower environmental impact. Furthermore, the Group is involved in the development of its own offers in the electric mobility field and in the increase in the efficiency of the district heating service. With regard to land protection, the Group assesses the design and planning of its plants and infrastructures seeking to limit consumption. This topic proved to be significant, based on the materiality analysis, for both the Group (risk analysis, scenario analysis, regulations) and for the reference stakeholders (HeraLAB). <i>Internal impact:</i> Group <i>External impact:</i> Local community, Customers	GRI 305: Emissions 2016	Environmental topics Art. 3, paragraph 2, letters b, c
Training and professional development, remuneration and incentives The Hera Group considers the training and professional development of its employees to be fundamental, and demonstrates this through the average per capita training hours for its employees, the numerous training activities organised at HerAcademy, the leadership model and the development process, which assesses over five thousand employees each year. Furthermore, Hera defines and applies a remuneration and incentive policy aimed at attracting, motivating and retaining its human resources. This topic proved to be significant, based on the materiality analysis, for both the Group (business plan, regulations) and for the reference stakeholders (climate survey). <i>Internal impact:</i> Employees <i>External impact:</i> -	GRI 404: Professional training 2016	Aspects regarding HR management Art.3, paragraph 2, letter d

Description of material topic	GRI Standard	Areas of the decree
Local development of the area, indirect economic impacts and social inclusion The activities managed by the Hera Group (water, waste management and energy services) generate significant indirect impacts on the reference area. These include the distribution of value added to the various categories of stakeholders in the local area, the lead-on employment of the suppliers, social responsibility in tenders with the social clause. This topic proved to be significant, based on the materiality analysis, for both the Group (regulations) and for the reference stakeholders (HeraLAB, ICS and Consumer Associations). <i>Internal impact:</i> Group <i>External impact:</i> Suppliers, Shareholders, Local community, Public Administration	GRI 201: Economic performance 2016 GRI 203: Indirect economic impacts 2016 GRI 204: Approach to supplies 2016 GRI 401: Employment 2016 GRI 404: Professional training 2016 GRI 413: Local communities 2016	Social themes Art.3, paragraph 2, letter d
Quality and consumption of the mains water The Hera Group manages water services and has wastewater treatment and purification plants. Therefore, it is committed to ensuring high levels of wastewater treatment and purification, including through the planning of improvement measures for plants and networks. This topic proved to be significant, based on the materiality analysis, for both the Group (scenario analysis) and for the reference stakeholders (HeraLAB, ICS). <i>Internal impact:</i> Group <i>External impact:</i> Local community, Customers	GRI 416: Consumer health and safety 2016 GRI 417: Marketing and labelling 2016	Social themes Art.3, paragraph 2, letter d
Occupational Health and Safety The Hera Group safeguards a healthy and safe work environment, committing itself to measures to reconcile the work-life balance, as well as to maintaining a consistently low lost time injury rate. Furthermore, Hera considers possession of the Iso 45001 certification to be a social criteria in the process for the identification, selection and monitoring of suppliers, and monitors the main lost time injury indexes for the main suppliers of goods and services. This topic proved to be significant, based on the materiality analysis, for both the Group (risk analysis) and for the reference stakeholders (press review). <i>Internal impact:</i> Employees <i>External impact:</i> Suppliers	GRI 403: Occupational Health and Safety 2018	Aspects regarding HR management Art.3, paragraph 2, letters c, d
Diversity The Hera Group protects the rights of all the employees, undertaking to guarantee equal opportunities and to value diversity. In 2009 Hera signed the Equal Opportunities Charter and in 2011 established a Diversity manager who, together with a work group, defines projects, activities and initiatives concerning diversity and inclusion. This topic proved to be particularly significant for the Group, based on the materiality analysis (scenario analysis, regulations). <i>Internal impact:</i> Employees <i>External impact:</i> -	GRI 401: Employment 2016 GRI 405: Diversity and equal opportunities 2016	Aspects regarding HR management Art.3, paragraph 2, letter d

Description of material topic	GRI Standard	Areas of the decree
Environmental impact of waste treatment plants (NIMBY syndrome) When managing the waste treatment plants also close to urban contexts, the Hera Group is particularly careful not to create inconveniences for the reference community. Hera carries out environmental impact assessment and screening procedures aimed at assessing the effects of the works (both at construction site level and in the project stage), on the environment and on human health and well-being. In addition, every waste-to-energy plant of the Hera Group possesses plant standards which help keep atmospheric emissions well below the legal and authorisation limits. This topic proved to be significant for the reference stakeholders in particular (press review, HeraLAB), based on the materiality analysis. The main critical issues at local press review level concern: the increased scope of the Ferrara waste-to-energy plant, the replacement of lines 1 and 2 of the Padua waste-to-energy plant with the construction of the 4th line and the construction of the bio-digester in Pesaro. <i>Internal impact:</i> Group <i>External impact:</i> Local community	GRI 305: Emissions 2016	Environmental topics Art. 3, paragraph 2, letters b, c
Compliance with environmental and social regulations When handling the services provided and managing its plants, the Hera Group observes the environmental and social legislation, also in the event of outsourced activities. From an environmental standpoint (emission limits and water quality), Hera sets itself more challenging objectives than those envisaged by the law, carrying out periodic checks care of its plants. This topic proved to be significant, based on the materiality analysis, for both the Group (regulations) and for the reference stakeholders (HeraLAB, Climate survey). <i>Internal impact:</i> Group, Employees <i>External impact:</i> Local community	GRI 307: Respect for environmental regulations 2016 GRI 419: Respect for regulations governing social issues 2016	Environmental topics: Art.3, paragraph 2, letters a, b, c
Management of the supply chain The Hera Group also manages its business by outsourcing some activities relating to the services provided, generating significant indirect impacts on the reference territory. This topic proved to be significant for the Group in particular (risk analysis), based on the materiality analysis. <i>Internal impact:</i> Group <i>External impact:</i> Suppliers	GRI 204: Approach to supplies 2016 GRI 307: Respect for environmental regulations 2016 GRI 308: Supplier environmental assessment 2016 GRI 414: Supplier social assessment 2016 GRI 419: Respect for regulations governing social issues 2016	Social themes Art.3, paragraph 2, letter d

Description of material topic	GRI Standard	Areas of the decree
Commercial relations with customers through branches, call centres and the web The Hera Group manages essential services for customers and the local community, and believes it is fundamental to ensure a quality service, also with regard to assistance via physical and web channels. In fact, Hera is constantly committed to reducing the waiting time at branches and call centres. This topic proved to be significant for the reference stakeholders in particular (HeraLAB, Consumer associations), based on the materiality analysis. <i>Internal impact:</i> Group <i>External impact:</i> Local community, Customers	-	Social themes Art.3, paragraph 2, letter d
Economic value for the stakeholders The activities managed (water, waste management and energy services) generate economic value which the Hera Group distributes to the reference stakeholders. The main stakeholder categories affected are: suppliers (local supplies), employees (remuneration), shareholders (dividend distribution), local community (sponsorship and donations) and the Public Administration (taxes, levies, fees). This topic proved to be significant for the Group in particular (business plan), based on the materiality analysis. <i>Internal impact:</i> Group, Employees <i>External impact:</i> Suppliers, Shareholders, Local community, Public Administration	GRI 201: Economic performance 2016 GRI 415: Public Policy 2016	Social themes Art.3, paragraph 2, letter d
Anti-corruption activities The topic is transversal to all the businesses managed and is material especially in the purchasing and tenders sphere and in the dealings with the institutions; the majority of Hera Group's supplies are in fact handled by means of tenders, important supply contracts and the like. <i>Internal impact:</i> Group <i>External impact:</i> Suppliers	GRI 205: Anti-corruption 2016	Fight against corruption Art.3, paragraph 2, letter f

*Some material topics are not reported with specific GRI indicators, but are covered by the general information (GRI 102) and other indicators and information related to them, in particular in the following paragraphs: "Resilience and adjustment", "Customer relations" and "Risk management".

The issue of respect for human rights (Italian Legislative Decree 254/16: Art.3.2, paragraph e) is not regarded as material because the Group's operational offices are located mainly in Italy or in countries in which a significant risk from this point of view has not been noted. This assessment also takes into account the aspects indicated in the chapter "Innovation and contribution to development" (section: "The impact of supplies on the areas") where the origin of foreign supplies is highlighted. Supplier audits on social responsibility did not reveal any critical issues in this sphere (see chapter "Suppliers").

[102-12]

The main **management models** (Art. 3.1, letter a) of Italian Legislative Decree 254/2016) adopted by the Group, relating to the aspects of Italian Legislative Decree 254/2016, are:

- Organisational model for corporate crime prevention (Italian Legislative Decree No. 231/2001)
- Management system for corporate social responsibility or supplier audit system which is based on criteria similar to that of the Sa 8000
- Environmental management system ISO 14001
- Quality management system ISO 9001
- Energy efficiency management system ISO 50001
- Occupational safety management system ISO 45001
- System for managing the prevention of corruption ISO 37001.

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

- [Code of Ethics](#) and related implementing systems (Ethics and Sustainability Committee and its functioning regulations)
- [Quality and sustainability policy](#)
- [Data protection policy](#)
- [Remuneration policy](#)
- Corruption prevention model. <https://www.gruppohera.it/documents/688182/3627323/Modello+per+la+prevenzione+della+corruzione.pdf/c3d9721e-a7b7-0636-62b7-9bf70fbacaf5?t=1594192409160>

The Hera Group has also signed the following commitment declarations:

- WBCSD's CEO guide to human rights
- Charter for equal opportunities and equality in the workplace (furthered by the Italian Ministry of Employment and the Italian Ministry for Equal Opportunities, Sodalitas Foundation, Impronta Etica, AIDAF, AIDDA and UCID)
- Manifesto Valore D, for female employment
- Patto Utilitalia for inclusion in the company
- CEOs call of Csr Europe "a New Deal for Europe"
- Women's Empowerment Principles (WEPPs) of UN Global Compact and UN Women
- UN CEO Water Mandate
- New Plastics Economy Global Commitment of the Ellen MacArthur Foundation
- European strategy for plastics - voluntary pledges

it complies with the following organisations/programmes of international importance:

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

and supports the Task force on Climate-related Financial Disclosure (TCFD) set up by the Financial Stability Board.

Hera's **risk management model** (Art. 3.1, letter b) of Italian Legislative Decree 254/2016) is also supplemented by environmental and social topics, as described in the section "Sustainability and risk management". [Gestione della sostenibilità](#)

The appendix to this report includes two summaries which connect the material topics to the management policies/methods and to the risks identified by the ERM analysis.

1 SUSTAINABLE STRATEGY AND SHARED VALUE

1.01 About us

[102-1] The Hera Group is one of the major multi-utility companies in Italy. It offers sustainable management of several public services to **over 4.2 million citizens in 312 municipalities** spread over five Italian regions (Emilia-Romagna, Veneto, Friuli-Venezia Giulia, Marche, and Tuscany). Aresgas, an AcegasApsAmga subsidiary, deals with natural gas distribution and sale services to around 27 thousand customers in Bulgaria. The Group also operates in other European countries through its subsidiary Aliplast with its own plastic recycling plants.

[102-2] The Hera Group provides **energy** (distribution and sale of gas and electricity), **water** (aqueduct, sewage and depuration) and **waste management** (collection, recycling and waste treatment) services to citizens and Group enterprises.

The Group's strengths lie in:

- the balance of its services, comprised of services managed according to free market criteria (gas and electricity sale and waste recycling and treatment) and regulated services (gas and electricity distribution, integrated water services and waste collection, recycling and treatment);
- strong roots in the territories in which it operates and deep focus on sustainability;
- a widespread shareholding structure with around 24 thousand shareholders.

Hera confirmed among the top performers in all sectors in Italy

The **Hera Group** confirmed its leading position in Italy in all businesses in which it operates and obtained the following ranking, compared to other listed companies:

1st operator in the environmental sector as for treated waste

2nd operator in the water cycle sector as for volumes of water supplied

3rd operator in the sale of gas and electricity as for number of customers

4th operator in the distribution of gas as for volumes supplied

4th operator in the public lighting sector as for number of light points managed

5th operator in the electricity distribution sector as for volumes distributed.

Internal elaborations on 2020 data

Services provided

[102-6] Hera's growth has developed with a strong focus on the aspects of sustainability regarding regulated services (distribution of gas and electricity, water service, and waste collection) and services managed according to free market criteria (hazardous waste disposal, sale of gas and electricity). Development has been balanced across the sectors, creating shared value for the local area and placing sustainability and quality at the core of the services managed.

	Energy services	Integrated water service	Waste management services
	Sale and distribution of gas and electricity, district heating, heat management, and public lighting	Civil and industrial aqueduct, sewage and wastewater treatment	Collection, recovery, treatment and disposal of municipal and special waste
Customers	Gas: 2.1 million Electricity: 1.4 million District heating: 13 thousand	Water: 1.5 million	
Municipalities served	Gas distribution: 222 Electricity distribution: 26 District heating: 16 Public lighting: 184	Aqueduct: 226 Sewage and wastewater treatment: 227	Waste collection: 189
Residents served	3.4 million	3.6 million	3.2 million

	Energy services	Integrated water service	Waste management services
Volumes	Gas sold: 16.2 billion cubic metres Electricity sold: 11.7 TWh	Water sold: 291.5 million cubic metres	Waste collected: 2.2 million tonnes Waste treated: 6.8 million tonnes

CUSTOMERS AND MUNICIPALITIES SERVED IN THE LOCAL AREAS (REGULATED SERVICES)

Local area	Group company	Energy services	Water services	Waste management services	At least one service
Bologna	Hera	826 thousand (94%)	862 thousand (98%)	771 thousand (87%)	862 thousand (98%)
Ferrara	Hera	289 thousand (84%)	247 thousand (72%)	132 thousand (38%)	301 thousand (88%)
Forlì-Cesena	Hera	323 thousand (82%)	393 thousand (100%)	213 thousand (54%)	393 thousand (100%)
Imola-Faenza	Hera	193 thousand (76%)	255 thousand (100%)	255 thousand (100%)	255 thousand (100%)
Modena	Hera	477 thousand (68%)	469 thousand (67%)	500 thousand (71%)	500 thousand (71%)
Padua	AcegasApsAmga	210 thousand (22%)	300 thousand (32%)	291 thousand (31%)	361 thousand (39%)
Pesaro-Urbino	Marche Multiservizi	241 thousand (61%)	274 thousand (69%)	263 thousand (66%)	319 thousand (80%)
Ravenna	Hera	237 thousand (87%)	273 thousand (100%)	273 thousand (100%)	273 thousand (100%)
Rimini	Hera	35 thousand (10%)	337 thousand (100%)	321 thousand (95%)	337 thousand (100%)
Trieste	AcegasApsAmga	218 thousand (94%)	228 thousand (99%)	201 thousand (87%)	231 thousand (100%)
Udine and Gorizia	AcegasApsAmga	392 thousand (60%)	-	-	392 thousand (60%)
Hera Group		3.4 million (64%), 226 municipalities	3.6 million (68%), 227 municipalities	3.2 million (59%), 189 municipalities	4.2 million (78%), 312 municipalities

Number of municipalities, residents and percentage compared to total residents in the province or in the reference area (as at 1 January 2021, source: Istat) in which Hera Group manages at least one energy service (distribution of gas, electricity or district heating), water service (aqueduct, sewage or wastewater treatment) and waste management service (separate or non-separate waste collection, and sweeping). The local area of Imola-Faenza includes three municipalities belonging to the Province of Florence in which Hera manages energy, water and waste management services. The Padua area includes one municipality from the Province of Venice in which AcegasApsAmga manages water services. The area of Pesaro-Urbino includes six municipalities belonging to the Province of Ancona in which Marche Multiservizi manages the waste management services through its subsidiary company Marche Multiservizi Falconara.

The Mission [102-16]

Hera's goal is to be the best multi-utility in Italy for its customers, workforce, and shareholders. It aims to achieve this through further development of an original corporate model capable of innovation and of forging strong links with the territories in which it operates by respecting the local environment.

For Hera, being the best means inspiring the pride and trust of:

- **customers** who receive quality services that satisfy their expectations thanks to Hera's responsiveness to their needs;
- **women and men** who work at Hera, whose skills, engagement and passion are the foundation of the company's success;
- **shareholders**, confident that the economic value of the company will continue to be generated in full respect of the principles of social responsibility;
- **reference area**, where economic, social and environmental wealth represent the promise of a sustainable future;
- **suppliers**, key elements in the value chain and partners for growth.

The values

Integrity, proud to belong to a Group of people known for their honest and upright conduct

Transparency, sincere and clear messages for all stakeholders

Personal responsibility, shared commitment to the good of the Company

Consistency, living up to our Mission and Values.

The Company's operational principles

Creation of value and social and environmental responsibility: to be a company that is built to last, improving society and the environment for future generations

Service quality and excellence: putting customers first as a trustworthy provider of services and safety

Efficiency: promoting the value of available resources, never wasting them

Innovation and ongoing improvement: feeling you are part of a team that generates ideas and improvement

Engagement and optimisation of personnel: sharing knowledge for self-improvement and improvement

Empowerment to choose: selecting the optimal solution for growth.

The Company's Mission, Charter of Values and Operational Principles have been created with the participation of the Hera Group's entire workforce and were approved by the Board of Directors of Hera Spa. They are set forth and detailed on the Group's website, on the corporate intranet, and in the Code of Ethics which is reviewed every three years and has been updated in 2019.

The "purpose" is introduced in the Articles of Association

On 28 April 2021, the Shareholders' Meeting approved the introduction of the **concept of "purpose" focused on the creation of shared value** in Hera's Articles of Association (among the first companies to do so in Italy). In particular, an additional paragraph has been added to Article 3 to explain the **corporate purpose**, i.e. the objectives that the multi-utility aims to achieve in carrying out its business activity, and thus reaffirm its **commitment to sustainability**, which has characterised it since its formation.

The new paragraph reads as follows: "The Company's business model aims at creating long-term value for its shareholders through the creation of a shared value 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 services system managed for the benefit of its customers, the ecosystem of its territory, and future generations (Hera for the Planet, for People and for Prosperity)".

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

Main awards in 2021

The Hera Group's process of expansion is also marked by the awards received. Among the most recent awards, the main ones are:

- **Dow Jones Sustainability Index (DJSI)**: Hera is the world's best multi-utility in Environmental, Social and Governance (ESG) dimensions by S&P Global which selects the companies to be included in the Dow Jones Sustainability Index every year;
- Hera ranks 5th internationally among the Utility Networks assessed by the Sustainable Finance analysts of **S&P Global Ratings**;
- **Included in the Bloomberg's MIB ESG index**: Italy's first blue-chip index that awards the integration of financial strategies and attention to sustainability by combining the measurement of economic performance with ESG assessments in line with the principles of the UN Global Compact;
- **Top Utility 2022**: Hera received the Top Utility Absolute award with the following reason: "for the excellent results achieved in all the areas analysed, with particular reference to stakeholder relations, attention to transparency, and communication. Hera was also confirmed as being at the forefront in the digitalisation of business processes and in the sustainability of operations";

- **Integrated Governance Index 2021:** Hera ranked first among Italian companies for its full and conscious integration of sustainability policies within its business strategies;
- Hera among the best global companies in the **Diversity&Inclusion Index of Refinitiv**;
- **Webranking 2021:** for the eleventh consecutive year, Hera is in the "5 stars" category, among the top 10 Italian companies, with a score of 82.6/100.
- **Top Employers 2022** award (second in Italy among 1,600 companies analysed) for Hera's strategy focused on people, with investments in welfare, training and diversity, with an organisation promoting agility in work and digitalisation.

1.02 Hera Group for Planet, People and Prosperity

Giving a world to numbers

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

Each of these P's shapes a dimension that enters into a dynamic and circular relationship with the Group, representing at the same time a goal and a tool, and as this goal is gradually achieved, it becomes strategic to the company.

Exactly by taking care of the planet and 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, where possible, their regeneration.

It is exactly by focusing on people and promoting their rights, dignity, knowledge and prospects, that the Group can strengthen a wide range of motivated stakeholders, making them play 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 social and economic context that will also be favourable to the medium- and long-term growth and development of its businesses, in a perspective geared towards the creation of shared value.

Already at the heart of the agenda of the G20 chaired by Italy, the requests underlying "planet, people and prosperity" well respond to the **demands that have globally emerged from crises of various kinds**, definitively dismissing the possibility of planning the well-being of society in 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, issues **broadly anticipated by Hera**. For this reason, Hera is today able to include in these three P's the many results it has attained over the years, the historical evolution of its **approach to sustainability**, its **mission** and, ultimately, its very **purpose**. In 2021, these values became an integral part of the company's articles of association.

The **balanced scorecard system**, which has been virtuously 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, the purpose of this document is to reaffirm and update the strategic and cultural horizon based on which the **business plan** is drawn up each year. It is therefore no coincidence that the 2025 plan outlines an extensive range of measures for energy transition, the circular economy and technological evolution, with practical and innovative projects capable of seizing the funding opportunities of the National Recovery and Resilience Plan (PNRR).

Combined together, these elements outline the framework within which Hera has been undertaking for some time now **clear public commitments in various fields**, and has indeed already embarked on the **road to climate neutrality by 2050 mapped out by the European Union**. Yet there is more: the Group's operations are fully in line with the transition designed by the **sustainable development goals that the United Nations Agenda sets for 2030**: seven of these particularly involve business planning and management, but Hera also contributes - more indirectly - to four further targets.

These range from the reduction of climate-changing emissions to the promotion of renewable energies, from the sustainable use of water resources and the development of a circular economy and recycling of plastics, through to protocols on human rights, diversity and inclusion. Very different challenges, which are however linked to each other by the common thread of a commitment that runs through them all: leaving a mark, not a footprint.

The **reporting of the shared value** generated by Hera through its businesses - introduced in 2016 to achieve a step change in the **integration of sustainability in the Group's strategy** and which has become even more relevant with the continual occurrence of systemic crises - fits into a broader perspective and is described in the section "With the drivers of change". The very mechanism based on which shared value is created is both essential and delicate, and needs to be shared by all the players involved.

And so, in maintaining focus on the drivers for the creation of shared value, which were updated in 2020, this report also gives an account of the **stakeholder company** that Hera has never ceased to be, further confirming its business model based on values and operating principles that the fifth and most recent edition of the **Code of Ethics** brings together in an accomplished manner. What emerges is a heritage made up of assets but also of relationships, which are both essential for overcoming the many challenges of a transition that will continue to have meaning inasmuch as it takes on a human and fair dimension.

Some acknowledgements in this respect confirm the correct road embarked on by the Group: the first Italian multi-utility to be included in the Dow Jones Sustainability Index (DJSI). The DJSI is one of the world's most authoritative stock indices for assessing the social responsibility of listed companies. In 2021, Hera was again recognised as the best multi-utility in the ESG (environment, social, governance) dimension, with a further increase on the excellent score already achieved in 2020.

How we do what we do

[102-26]

In order to achieve the many targets that the three P's entail, Hera unfolds all its potential, enhancing the economic, social and environmental impact of the primary services it provides, according to an approach that combines the positive effects produced by stakeholder relations with those generated by the creation of shared value. For this reason, Hera constantly analyses the external context, with which it continues to map the shifting links between "Global Agenda", European goals and corporate strategy, essential aspects for identifying the most effective guidelines on which to focus ideas, investments, people and actions.

All this takes place while steering towards a change that the Group is pursuing in full consistency with the European principles of **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 indeed well ahead of the Brussels guidelines and has always strongly focused on a real philosophy of inclusion, embracing all types of stakeholders and involving them in a dual strategy: distribution of the value created and, at the same time, creation of the value to be distributed. Above all, this value, is enriched year after year with new aspects, which are not solely financial (however important this may be) and whose intangible capital of "hard" and "soft" skills is 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 of the drivers of change with which Hera creates shared value act directly in the interests of an increasingly hot planet, whose climate balance has been affected and natural resources have been compromised by development models that are taking too much time to move away from the linear paradigm. For Hera, this translates into a multi-faceted commitment.

This includes, for example, the many actions engaged in by the Group aimed at "**pursuing carbon neutrality**" along all its value chains, with actions ranging from the promotion of energy efficiency to energy transition and renewable energy.

Hera is also committed to "**regenerating resources and closing the loop**", by involving all its businesses in the protection and regeneration of the planet's natural capital and by developing partnerships to increase the circularity rate of the broader social and economic system.

Hera is committed to "**enabling resilience and innovating**". The objective is to encourage the adaptation of the areas served through increasingly smart and resilient infrastructure so as to ensure the continuity and sustainability of essential supplies. A further aim is to promote the ongoing consistency of the innovation processes so that, especially in digital terms, they may be accompanied by adequate management of their economic, environmental and social impacts.

People

Hera also believes in the core value of people and uses its range of action to promote an active role for individuals, both inside and outside the company. A part of its business activities, linked to **economic development and social inclusion**, but also to the **development of employment and new skills**,

directly contributes to the generation of shared value EBITDA, filling the driver of change dedicated to "local area (and business)" with further content.

Hera's commitment to managing relations with two special categories is fundamental: **workforce** and **suppliers**. Crucial players for winning key challenges, these stakeholders are involved by the Group in many projects aimed at promoting, on the one hand, health, safety and diversity enhancement, and on the other, transparency, quality and sustainability of partner companies, public tenders and contracts awarded. 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 will not only involve new generations but will also entail the reskilling of previous generations, whose jobs are rapidly evolving.

Another important category are customers. Hera seeks to involve them in many big battles on recycling, saving and efficient use of resources, in a society where 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 the logic of profit only for the few and contribute in various ways to fair and widespread prosperity, addressing the parties that interact with the company and also the interests of future generations. In other words, Hera is committed to the sustainable, balanced and lasting growth of its businesses and the social and economic fabric surrounding it. Year after year, it has consolidated a governance model that in 2021 alone was able to transfer a **wealth of Euro 1,764 million** to its stakeholders.

Our commitment for Just Transition

Steered by the principles of Planet, People and Prosperity, 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 strives towards a change in the system which combines the chance of success with the harmony with which such change is pursued. The Hera Group believes that whatever step forward is made, especially if involving groundbreaking technological innovations, can never 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 carried out by Hera to actively contribute to the "Just Transition" EU goal, that is, transition capable of merging climate action and social inclusion.

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

Workforce

In this context, workers play an essential role, and it is no wonder that Hera regards its people as the key cornerstone of its Code of Ethics: a document that stems from listening within the company. The attention paid to human resources is also reflected in the periodic climate surveys involving all company staff, the results of which form the basis for implementing new improvements.

The Group continues to guarantee high levels of employment stability, without the need to use social shock absorbers, with 96.5% of workers employed on a permanent basis and a flexible company welfare system tailored to the needs and choices of individual workers. Yet there is more: given that transition is first and foremost a human operation, since 2006, Hera has linked its bonus systems to sustainability goals and, since 2016, to the creation of shared value, developing new skills, continuing to invest in safety and, not least, strengthening gender balance, diversity protection and inclusion policies. Central to this is reskilling, which Hera works on in the belief that the many professions of its different businesses are and will be subject to a changes that need to be anticipated and governed, also 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 prevent 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 - 75% 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 performances 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 teamwork logics also run through the broader relationship with local communities. Hera contributes to their transition with its services, continuing to invest in the innovation of 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 focusing on the environment, social inclusion and digitalisation, thus reinforcing the overall resilience of its socio-economic system, in line with the UN's 17th Sustainable Development Goal on partnerships. These projects are detailed in a specific report ("Building the future together") and are a further addition to the HeraLabs, real listening tools aimed at involving community stakeholders in the definition of new improvement actions.

Customers

Hera is committed to ensuring that its supplies are also accessible to the more vulnerable groups in society. It offers safeguards in addition to those provided for by law, and specific protocols set up together with local authorities to avoid arrears and disconnections, even due to high energy prices. Hera strives to turn all of its customers into the key players of transition, fostering responsible and informed consumption behaviour and driving families and companies towards energy efficiency, renewable energy sources and the circular economy.

Policy and partnership

In cooperation with its trade association Utilitalia and with the academic world, Hera is committed to increasing the quality of public debate on transition issues. It draws on practical experience and scientific evidence, and makes its know-how available to legislators, allowing them to 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 reported in the previous editions of the Non-Financial Statements, from this year, the topic of Just Transition is now reported and detailed. It specifically embraces the entire section "With the drivers of change" and is taken into account in some impact areas of the driver for the creation of Shared Value dedicated to "Enabling resilience and innovating", with particular reference to the development of employment and of new skills and social inclusion. What emerges is a more or less hidden narrative that runs through most of the report. It is not an additional topic but rather a cross-cutting interpretation which expresses Hera Group's overall commitment to transition, as shown in the diagram below

WHERE JUST TRANSITION IS EXPRESSED FOR HERA

	CREATING SHARED VALUE			ALONGSIDE THE PROTAGONISTS OF CHANGE			
	PURSuing CARBON NEUTRALITY	REGENERATING RESOURCES AND CLOSING THE CIRCLE	ENABLING RESILIENCE AND INNOVATING	GOVERNANCE AND CREATING VALUE	CLIENTS	PEOPLE	SUPPLIERS
PLANET 	✓	✓	✓	✓			✓
PEOPLE 			✓	✓	✓	✓	✓
PROSPERITY 	✓	✓	✓	✓	✓	✓	✓

Just Transition

Shared value

Objectives and performance

What we said we would do	What we have done	SDGs	Progress*
Euro 1,568 million of shared value investments in the 2021–2024 period (62.5% of the total).	Euro 452.7 million in investments in 2021 alone (68.0% of the total)		●
50% of the total, shared value EBITDA of over Euro 648 million by 2024 (around Euro +256 million compared to 2019).	Shared value EBITDA of Euro 570.6 million in 2021, equal to 46.6% of the total.		●

* ● Result achieved or in line with plans. ● Result with moderate deviation from planning.

What we will do

SDGs

Euro 2,093 million of shared value investments in the 2022–2025 period (65% of the total).	All*
55% of the total, shared value EBITDA of around Euro 780 million by 2025 (around Euro +323 million compared to 2020).	All*

*the goal is transversal to 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, the creation of shared value is the result of all those business activities and projects that generate operating margins and meet the Global Agenda drivers, i.e. those **calls to action for change in the direction of sustainability** and for Hera's spheres of competence, specified by global, European, national and local policies and by megatrends.

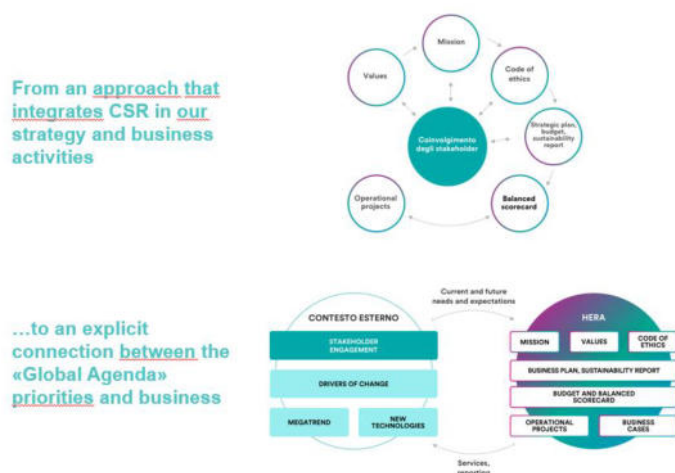
This definition of Creating shared value (CSV) is the result of the path inspired by the indications of Porter and Kramer set out in the well-known article "The big idea: Creating shared value". Started in 2016, it led to the identification of Hera's approach to the creation of shared value as **a new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

This approach also led to **renewing the Sustainability Report** and to enriching it with new views and perspectives, among which - since 2016 - quantification of **EBITDA generated by "shared value" activities and projects (CSV EBITDA)**, and of investments made in this area stands out.

The value added to EBITDA is the portion of industrial income attributable to activities that **meet the need to change direction and steer towards sustainability** as specified in the "Global Agenda". These activities, therefore, 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**. A study of all the activities managed by the Hera Group identifies the activities that are consistent with the Drivers as well as the Impact Areas for creating shared value. Starting from 2019, CSV EBITDA started to be **audited by an external company**. For more detailed information on the method, see the specific report available at bs.gruppohera.it and the related audit certificate issued by the auditing firm.

HERA'S APPROACH TO CORPORATE SOCIAL RESPONSIBILITY (CSR) AND SUSTAINABILITY: CONFIRMATIONS AND NEW OPPORTUNITIES



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 merged the CSV prospect with the integration of sustainability (already envisaged since the Group's establishment) into its strategy and business activities.

Ever since 2016, the Hera Group's approach to sustainability has **combined CSR with a CSV perspective**, resulting in activities and projects that:

- improve its environmental and social sustainability performances mainly related to the businesses it manages (also, but not exclusively, in relation to the law and sector regulations) (CSR);
- generates the shared value by overlapping business and "Global Agenda" priorities (CSV).

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

How we identify the "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 **direct the strategy and operating processes towards addressing change, thus contributing to the Company's competitiveness**.

The framework is reviewed and updated every three years, in relation to new emerging global challenges. The most recent review that brought the framework to its current state took place in 2020, while the process of analysing the "Global Agenda" and any needs for making changes to it continued in 2021 through an in-depth analysis of global, European, national and local policies.

In 2021, additional policies were added to the previous set of approximately 100 policies analysed since 2016; the additional policies increased and enriched the sustainability scenario. The main aspects detected during the analysis are listed below:

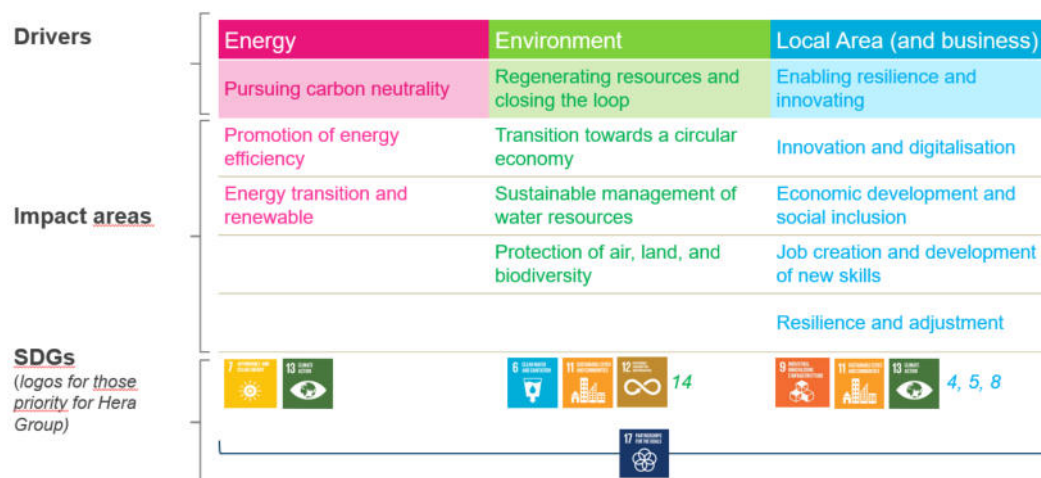
- climate neutrality and energy transition relaunched by the "Fit for 55 package" of laws (COM (2021) 550) and the agreements reached during COP 26;
- the circular economy and environmentally friendly production promoted by the Action Plan for the Circular Economy definitively approved by the European Parliament (2020/2077(INI));
- the reduction of pollution, relaunched by the Action Plan for Zero Pollution of Air, Water and Soil (COM (2021) 400);
- greater energy efficiency in buildings, which Europe will seek to achieve by 2030. For this purpose, the Council endorsed the strategy "A renovation wave for Europe: greening our buildings, creating jobs and improving lives" (8923/21)
- the digitalisation of infrastructure, skills, businesses and public services with regard to which the Union presented its vision and future scenarios in "Digital Compass 2030" (COM (2021) 118);
- gender equality and equal pay, which is one of the cornerstones of the future European society, and in respect of which the Commission proposed a directive to strengthen the application of the principle of equal pay for equal work or work of equal value between men and women (COM(2021) 93).

The CSV framework is made up of three drivers of change and nine impact areas, in turn linked to the 11 UN Agenda goals to which the Group contributes, seven of which are identified as priorities, and which include the 53 "What we will do" (objectives for the future) detailed in this Report.

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**. Details of the priority SDGs are as follows: goal 6, clean water and sanitation services; goal 7, clean and accessible energy; goal 9, companies, innovation and infrastructure; goal 11, sustainable cities and communities; goal 12, accountable consumption and production; goal 13, combating climate change. Goal 17 is one of the priority SDGs, since **partnerships are essential** to achieve the important sustainability goals set.

The **other four SDGs of 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. protection of vulnerable users). Details of the other important SDGs are as follows: goal 4, quality education; goal 5, gender equality; goal 8, decent work and economic growth and goal 14, life under water.

THE AREAS FOR CREATION OF SHARED VALUE FOR HERA: THE DRIVERS OF CHANGE, THE IMPACT AREAS AND THE UN'S 2030 AGENDA GOALS OF INTEREST TO HERA



“Shared value” EBITDA (CSV EBITDA)

In view of the entry into force of Regulation 852/2020, which introduced the European taxonomy of environmentally-friendly activities, for the purposes of quantifying shared value EBITDA, **eligible** business activities were considered and **aligned** with the technical screening criteria defined in EU Regulation 2021/2139. For some activities already considered in the quantification of shared value EBITDA, the **accounting methods were updated**. Specifically, the main changes introduced with an impact on the quantification of shared value EBITDA were as follows:

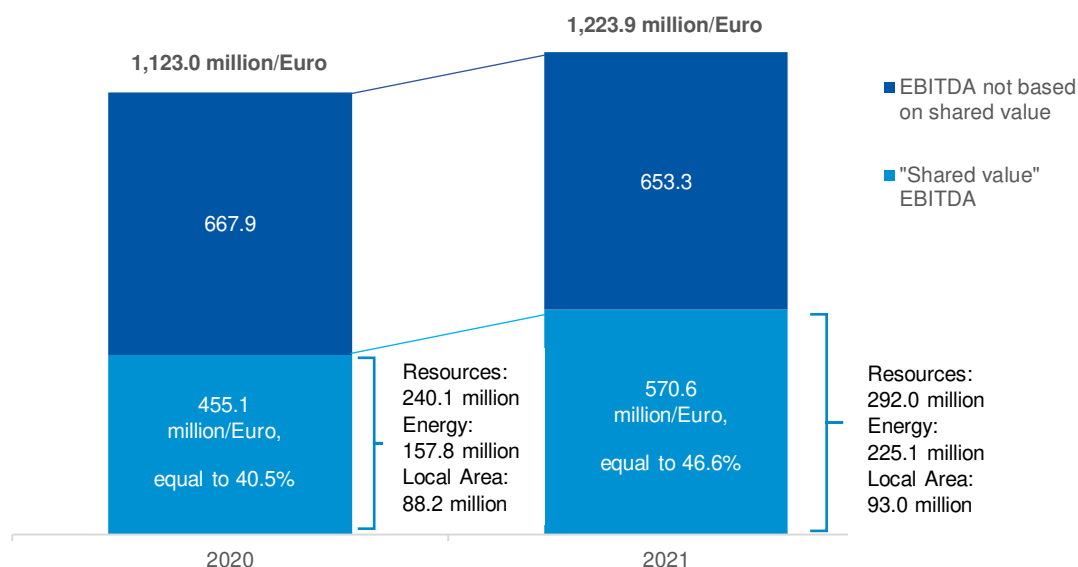
- the inclusion of margins from electricity distribution activities;
- the inclusion of margins from energy efficiency through turbo-expansion systems;
- the inclusion of margins deriving from the installation of digital gas metering systems (Smart meter and NexMeter);
- the new method of recording margins from Hera Servizi Energia and AcegasApsAmga Servizi Energetici business activities, for which only the component from energy efficiency measures was considered.

These new features were initially introduced in the quantification of CSV EBITDA in the 2021-2025 Business Plan and then in the final calculation of CSV EBITDA for this report. For better comparability, 2020 CSV EBITDA was re-calculated in both the Business Plan and the Sustainability Report, taking into account the latest updates and additions.

CSV EBITDA for 2021 amounted to Euro 570.6 million (46.6% of the Group's total EBITDA), a 25% increase compared to 2020 CSV EBITDA. This result is in line with the trajectory defined by the 2021-2025 business plan, which is set up so as to make CSV EBITDA 55% of the total.

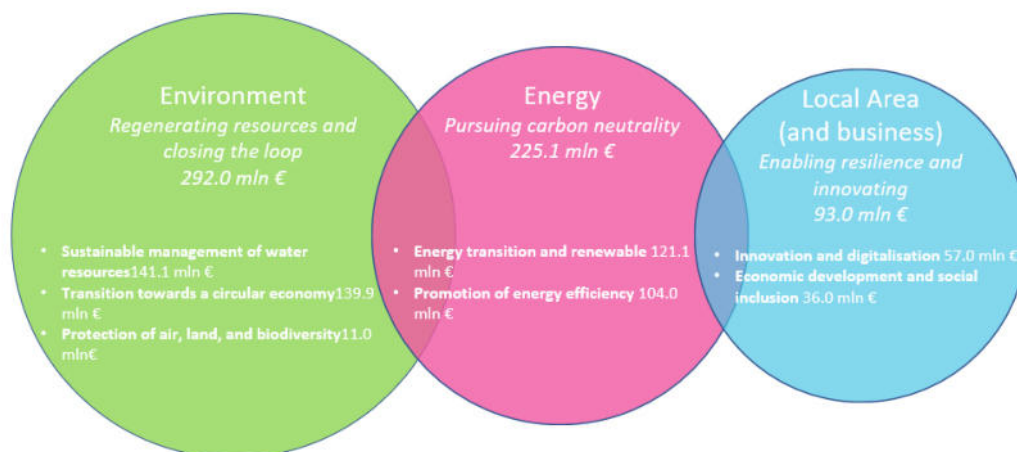
A roughly 25% increase in “shared value” EBITDA is recorded against a 9% increase in the Group's overall EBITDA (equal to Euro 1,223.9 million) compared to the previous year. It is clear, therefore, that the growth in EBITDA resulting from CSV components is greater than that determined by non-CSV components.

SHARED VALUE EBITDA COMPARED TO TOTAL EBITDA



The total shared value EBITDA does not correspond to the sum of the single drivers, due to activities that affect several components. 2020 CSV EBITDA was aligned to the calculation criteria used in 2021.

The prevailing contribution derives from activities and projects related to the Environment driver aimed at "regenerating resources and closing the loop" (Euro 292.0 million), followed by those related to the Energy driver which instead aim at "pursuing carbon neutrality" (approximately Euro 225.1 million). The projects and activities related to the Local Area (and Business) driver aim at "enabling resilience and innovating", accounting for Euro 93.0 million in 2021.



The total shared value EBITDA does not correspond to the sum of EBITDA of the single drivers, due to activities that affect several components.

As pointed out in the diagram, the "shared value" EBITDA generated in 2021 is mainly the result of activities and projects that meet the "calls to action" of the "Global Agenda" for the Energy driver and are aimed at **"regenerating resources and closing the loop"** (around 51% of total "shared value" EBITDA). As regards "Impact Area", the key role played by the Group in creating value with activities related to the **sustainable management of water resources** (49%) and to the **transition to a circular economy** (47%) emerges. In the area of **"air and soil protection"**, (4%) the most significant share of CSV EBITDA comes from the district heating service (for the share of heat generated by co-generation and by energy recovery from the combustion of municipal and industrial waste).

Approximately 37% of "shared value" EBITDA is instead achieved through activities in the areas aimed at **"pursuing carbon neutrality"**. 51% of this share of EBITDA comes from activities related to **energy transition and renewables**. In this area, the margins are calculated from: (i) the sale of renewable electricity with Guarantee of Origin (GO) and natural gas with CO₂ emission offsetting service, (ii) distribution of electricity (eligible activity and aligned to the EU taxonomy), (iii) district heating (for the

share of heat generated from geothermal sources), (iv) the generation of renewable electricity from biogas deriving from the anaerobic digestion of waste and from landfills, (iv) biomethane production. While 49% of this share of EBITDA is the result of measures aimed at **promoting energy efficiency**, through (i) commercial offers to energy customers including services and tools to make consumption more efficient, (ii) energy efficiency services for the Public Administration, businesses and condominiums, (iii) industrial co-generation, (iv) gradual energy efficiency of the public lighting service (particularly the extension of the number of municipalities in which only electricity from renewable sources is used, where electricity consumption per inhabitant equivalent is less than 50 kWh/inhabitant and where all light points are LED).

Finally, the Hera Group generates about 12% CSV EBITDA through activities in areas aimed at **"enabling resilience and innovating"**. In the area of **"spreading innovation and digitalisation"** (84%) the "shared value" EBITDA is pursued through the sale of telecommunication services, by means of Acantho, and through the development of projects and investments aimed at digitalising operational processes, services offered and cities. In the area of **"economic development and social inclusion"** (16%) a share of CSV EBITDA is achieved thanks to the outsourcing of municipal waste collection services to social cooperatives which employ disadvantaged people with ensuing economic benefits for the Public Administration (lower welfare costs).

CSV EBITDA GROWTH IN 2021: EURO +115.5 MILLION (+25%) COMPARED TO 2020 PROFORMA

CSV Drivers	Impact Area	2021 main results and changes with respect to 2020
ENERGY Pursuing decarbonisation: Euro +62.7 million	Promotion of energy efficiency: Euro +29.0 million	■ Increase in gas and electricity contracts with energy efficiency services and solutions (23% in 2021 compared to 20% in 2020) ■ Increase in volumes of activity related to energy efficiency for public administration, condominiums and businesses; ■ Increase in the number of municipalities where only electricity from renewable sources is used (43.8% compared to 41.9% in 2020)
	Energy transition and renewables: Euro +33.7 million	■ Increase in volumes of gas sold with CO₂ emission offsetting (9.1% against 4.4% in 2020) and electricity from renewable sources with GO (40.1% against 32.9% in 2020) ■ Growth in margins from electricity distribution services; ■ Extension of district heating service with geothermal heat production (13.6% against 8.4% in 2020)
ENVIRONMENT Regenerating resources and closing the loop: Euro +51.9 million	Transition to a circular economy: Euro +29.1 million	■ Increase in volumes of plastics recycled and sold (+17.5% compared to 2020) due to economic recovery from the health emergency ■ Increase in the volumes of industrial waste sent for material and energy recovery also as a result of the acquisitions of Vallortigara and Recycla ■ Extension of agreements for the use of reusable wastewater resulting in increased potential volumes (6.0% against 5.2% in 2020)

CSV Drivers	Impact Area	2021 main results and changes with respect to 2020
LOCAL AREA (AND BUSINESS) Enabling resilience and innovating: Euro +0.8 million	Sustainable management of water resources Euro +20.0 million	- Technical completion of additional water safety management plans for users of the aqueduct service (22.6% of inhabitants covered by the plans compared to 12.8% in 2020) - Progress in the adjustment process in urban areas >2000 p.e. adjusted to sewage and wastewater treatment regulations (rising from 97.6% in 2020 to 99.6% in 2021 in terms of p.e.)
	Protection of air, land, and biodiversity Euro +2.8 million	Increased margins from the sale of thermal energy for district heating
	Economic development and social inclusion: Euro -5.5 million	Drop in the number of instalments requested by customers (-14.1% compared to 2020) and consequently in the number of customers with at least one instalment.
	Innovation and digitalisation: Euro +6.3 million	- Investments of Euro 82 million in innovation in 2021; increase in electronic gas meters installed at the end of 2021 (78.2% compared to 64.7% in 2020) - Increase in margins from telecommunication and digitalisation services provided by Acantho (+1.6% compared to 2020)

The comparison was made by aligning the 2020 CSV EBITDA to the calculation criteria used in 2021.

**“Shared value”
EBITDA growth
in the 2021-2025
business plan**

The 2021-2025 Group Business Plan targets a 2025 “shared value” EBITDA reaching Euro 778 million, with a +71% increase compared to 2020, equal to around 55% of the Group's overall EBITDA (70% in 2030).

The growth in shared value EBITDA during the time interval of the plan period compared to 2020 (323 million, a small part of which resulting from M&A transactions aimed at increasing shared value) is higher than the growth of the Group's overall margins (276 million) thanks to the significant contribution generated by the development of activities in the CSV drivers: “pursuing carbon neutrality” (Euro +134 million), “regenerating resources and closing the loop” (Euro +165 million) and “enabling resilience and innovating” (Euro +24 million).

CSV Drivers

Main actions and targets

Pursuing carbon neutrality: Euro +134 million	- Further development of offers for customers with energy efficiency services (customers joining this offer: around 26.8% in 2025) - Further development of commercial offers with energy efficiency solutions for electricity customers (customers joining these offers: 29.4% by 2025); - Increase in gas volumes sold with CO₂ offsetting: 21% of total volumes by 2025; - Increase in volumes of electricity from renewable sources: 41% of total volumes by 2025 - Further development of energy efficiency business (industrial co-generation, heat management etc.) for Public Administrations, companies and condominiums; - Further increase in public lighting sustainability. Gradual increase in municipalities where: only electricity from renewable sources is used (46% by 2025); electricity consumption per inhabitant equivalent is less than 50 kWh/inhabitant (37.5% by 2025); all lighting points managed are LED (9.7% by 2025). - Increase in the production of biomethane from the biodigestion of organic waste (17 million cubic metres by 2025).

CSV Drivers

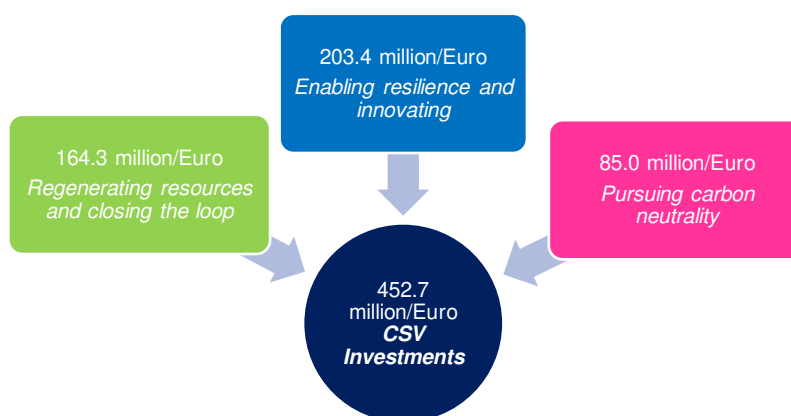
Main actions and targets

Regenerating resources and closing the loop: Euro +165 million	- Gradual increase in users served in areas with Water Safety Plans: 57% by 2025; - Increase in the volumes of waste sent for energy and material recovery at HASI (37% by 2025), Vallortigara (42% by 2025), Recycla (85% by 2025) and SEA (20% by 2025) plants; - Development of Aliplast activity (+125% recycled plastic sold in 2025 compared to 2017); - Completion of process for the adjustment of urban areas >2,000 p.e. in the local area served in line with EU directives (100% urban area >2,000 p.e. adjusted by 2023); - Development of district heating and increase in volume served (+21% by 2025); - Gradual increase of reusable wastewater volumes compared to total treated volumes (around 9% by 2025).
Enabling resilience and innovating: Euro +24 million	- Innovation and digitalisation: investments in digital transformation with a view to optimising operational processes and management; gradual rollout of electronic gas meters (98% by 2025); - Innovation and digitalisation: Acantho business development (telecommunications and connectivity).

"Shared value" investments [203-1]

In 2021, the Hera Group invested around **Euro 452.7 million** in initiatives and projects aimed at creating shared value. These investments represent **68.0% of the total investments** made by the Hera Group. "Shared-value" investments grew significantly (+53%) compared to 2020.

The graph below shows these investments divided by change driver:



Part of the shared-value investments relating to the "Regenerating resources and closing the loop" driver and part of the investments relating to the integrated water service, are also related to the "Enabling resilience and innovating" driver since aimed at improving the resilience of the service.

In 2021, the list of shared-value investments was supplemented in line with the analysis of the EU Regulation on the taxonomy of environmentally sustainable activities mentioned above. New investment items were included which had not been previously considered, relating to electricity distribution, energy efficiency, waste-to-energy plants, the acquisition of new energy customers, innovation and digitalisation, and electric mobility.

The main investments in 2021 for "pursuing carbon neutrality" regarded:

- the acquisition of new energy customers (around Euro 27.5 million) - "Energy transition and renewables" impact area;
- upgrading of public lighting and energy efficiency systems in the Public Administration buildings as well as energy efficiency measures in condominiums and enterprises, also through the implementation of industrial co-generation plants. These projects were carried out by Hera Luce, Hera Servizi Energia and AcegasApsAmga Servizi Energetici (around Euro 18.8 million - "Promoting energy efficiency" impact area);

- investments in energy efficiency regarding the construction of new interconnections, new substations, new networks and other energy efficiency projects related to the network (around Euro 8.4 million) - "Promoting energy efficiency" impact area;
- investments aimed at improving the performance of the Group's composting and biodigestion plants (approximately Euro 5.1 million) - "Energy transition and renewables" impact area.

With regard to **"regenerating resources and closing the loop"**, the main investment items concerned:

- maintenance and reclamation works on the distribution networks of the aqueduct service (approximately Euro 90.9 million) - "Sustainable management of water resources" impact area. It should be noted that a significant part of the investments related to the aqueduct service are also related to the "Resilience and adaptation" impact area and therefore included in the driver "enabling resilience and innovating";
- adjustment operations in the sewage and wastewater treatment sector in order to ensure higher quality standards for water resources in municipal and rural areas (around Euro 73.3 million) - "Sustainable management of water resources" impact area. It should be noted that a significant part of the investments related to adjustments in the sewerage and wastewater treatment sector are also related to the "Resilience and adaptation" impact area and therefore included in the driver "enabling resilience and innovating";
- investments to improve the efficiency of energy recovery from the Group's waste-to-energy plants (approximately Euro 24.6 million) - "Transition to a circular economy" impact area;
- investments for the development of waste recovery and recycling activities, carried out by Aliplast, Hasi and by the Herambiente selecting plants (approximately Euro 19.4 million) - "Transition to a circular economy" impact area;
- interventions for the development of the district heating service and for the purchase of electric vehicles with a lower environmental impact (approximately Euro 15 million) - "Air, soil and biodiversity protection" impact area;
- investments in assets for the municipal sanitation service, specifically for the purchase of new-generation containers, bins and bell-shaped containers for separate waste collection (Euro 14.2 million) - "Transition to a circular economy" impact area.

Lastly, as regards 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 hydrogeological instability or connected to the effects of climate change (around Euro 105 million) - "Resilience and adaptation" impact area. Of note is that these investments are only one of the components regarding business continuity resilience that are reported in the business plan, since they are only aimed at mitigating physical risks and/or climate change-related risks;
- disseminating innovative technologies related to energy transition, the circular economy and digital transformation (about Euro 82.4 million) - "Innovation and digitalisation" impact area.

Investments aimed at creating shared value outlined in the 2021-2025 business plan amount to a total of approximately Euro 2.5 billion, accounting for 66% of the total (taking into account financial investments and corporate acquisitions). Instead, average annual investments in the 2021-2025 business plan are around +72% higher than the average of the last three years (2018-2020). More than Euro 1 billion investments regard interventions associated with the "Enabling resilience and innovating" driver (Euro 1.05 billion, of which 550 million for resilience from physical and climate change-related risks) and interventions in the "Regenerating resources and closing the loop" area (Euro 1.02 billion), while the remainder (Euro 458 million) are related to investments in "pursuing carbon neutrality".

Integrating sustainability in the Group strategy

The 2021-2025 business plan approved by the Group defines the strategic references drawn up on the basis of the economic, political and social context, and ensures strict compliance by the Group's strategy with **European and national policies and with the goals of the UN's 2030 Agenda**.

The external context continues to feature several macro-trends that can be divided into three major categories.

"Climate and environment": this category includes trends linked to climate issues and, therefore, rightfully encompasses energy transition, promoting the circular economy, and the resilience of activities and services required to mitigate climate change-related risks.

"Economy and society": this area includes all social and economic aspects, namely, the initiatives that will be developed to promote the well-being and prosperity of the Group's territorial ecosystem. A very

useful reporting tool for this purpose is shared value, a reference that has now become a cornerstone of Hera Group's reporting.

"Innovation and Skills": this area supports technological development in a broad sense, taking into account both digital (internet of things, artificial intelligence, data analysis, etc.) and technological (new technological and chemical applications for our supply chains) elements. This area also includes the digital skills of human resources that are required - today and in the years to come - to change their skills consistently and synchronously with the evolution of digital technology.

Financially, the business plan is expected to reach a **gross operating margin of Euro 1,400 million** by 2025, rising by Euro 277 million compared to the 2020 final figure. This evolution will be determined by a balanced increase between organic and external components, in line with Hera's history, which will celebrate its 20th year in 2022. Growth will also be fuelled by **significant investments totalling Euro 3.8 billion** over the plan period, almost 60% higher than the average of the last five years and 20% higher than the value allocated in the previous plan. Despite this significant financial commitment, the ratio of net financial debt to EBITDA will remain constantly below the target threshold of 3x.

Again with regard to investments over the five-year period, it is worth highlighting how these investments steer external and policy trends: more than 31% of investments are aimed at increasing the resilience of Hera Group's activities and infrastructures, roughly 25% are dedicated to innovative initiatives that will allow the Group's assets and business models to evolve, and around 66% fuel initiatives that generate shared-value EBITDA.

Furthermore, for the first time, the proportion of direct investments that fall within and meet the **European taxonomy for sustainable investments** was estimated: about 58% of the investments in the business plan are "aligned" to the taxonomy.

Lastly, the 2025 business plan confirms Hera Group's path towards the **2030 business targets** regarding carbon neutrality and circular economy, already communicated to the market a year ago.

With regard to pursuing **carbon neutrality** by 2025, the business plan envisages that approximately 41% of electricity sold will be renewable and that the Group's internal energy consumption will be -8% lower than the 2013 baseline. This topic also includes the reduction in the Group's carbon footprint calculated according to the criteria of the Science Based Targets initiative which, based on simulations, will lead to reducing carbon dioxide emissions into the atmosphere by -26% (compared to 2019).

Regarding the **circular economy**, Hera expects to achieve important targets by 2025, among which: 125% increase in the amount of plastic recycled by Aliplast (compared to 2017); increase of up to 9% of reused wastewater out of total reusable water; and 20% reduction in water consumption within the business (compared to 2017).

Please refer to paragraph 1.03 for details and for a full overview of the 2025 and 2030 targets.

As reported in the table below, **Hera's contribution by number of "What we will do..."** (goals for the future) contained in this report and consistent with the 2021-2025 Business Plan (considering the SDGs affected by ten or more targets), is predominant in seven goals: Clean and accessible energy; Decent work and economic growth; Companies, innovation and infrastructure; Sustainable cities and communities; Accountable consumption and production; Combating climate change; Partnership for the goals.

"WHAT WE WILL DO"... UN'S 2030 AGENDA TARGETS

	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				7	1	4	3	1	8		
Regenerating resources and closing the loop			7	2	5		6	5	1	4	4
Enabling resilience and innovating	1	1			5	3	3	2	1		2
Governance and creation of value					2		1				1
Customers						2		1			
People	2				2	1					1
Suppliers					4			3			



Total	5	3	9	11	21	12	15	14	12	6	10

Sustainability integrated into the management bonus 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 innovation of this approach consists of considering the achievement of objectives of social and environmental sustainability as a condition for the achievement of the economic and financial objectives over the medium and long term.

What is the balanced scorecard?

The balanced scorecard is a strategic control system which is based on the connection between strategy and the day-to-day running of the company. It was devised in the early Nineties by the American academics R. Kaplan and D. Norton. It has generated an immense following among leading corporations in the USA and is now being taken up by major European players.

The **Strategic Map** is updated every year 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 2021 budget process, **31 priority projects** were defined to achieve the **28 strategic objectives** set out in the 2021-2024 Strategic Map aimed at creating long-term value for the company and the stakeholders. Out of the 31 priority projects assigned during the year to the members of the Management Review Committee, 25 belonged to areas regarding the **creation of shared value** for the company, according to the CSV drivers defined in 2020. Specifically, eight projects belonged to the **Regenerating resources and closing the loop** area, three projects to the **Pursuing decarbonisation** area, eight projects to the **Enabling resilience and innovating** area, and six projects which were not connected to the three CSV drivers but contributed indirectly to the creation of shared value.

All of the projects planned within the 2021 balanced scorecard system were assigned to a manager and included in the bonus system for Group managers and middle managers.

Each project identified:

- the process and result indicators with goals in line with the budget of the Group and the corporate departments responsible for their achievement
- the key action plan for achievement of the project objectives in terms of time and cost.

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

The definition of **objective projects** and the relevant **quarterly monitoring system** of the project elements are a significant management instrument that ensures:

- integration of the several perspectives for the evaluation of corporate performance, in addition to traditional economic and financial measurements;
- integration of business plan objectives into the daily management of managers and middle managers
- implementation of a continuous improvement process for strategic objectives and the relative projects and indicators
- formalisation and tracking of both actions and sub-objectives required to achieve the targeted results
- highlighting and analysis of critical situations and the definition of speedy corrective actions.

The commitments to stakeholders listed in this report (“What we will do...”) are contained in the Hera balanced scorecard. This guarantees consistency among the various instruments used for managing and achieving the Group strategy: business plan, sustainability report, management reporting, bonus system.

Our commitment to sustainability in national and international networks

[102-13]

Hera's commitment to sustainability has taken shape over the past years by joining leading international networks.

The Hera Group was the second Italian company to become a *member* of the **Ellen MacArthur Foundation**, a world reference in circular economy, which aims to promote awareness of aspects related to this issue, exchange experiences, initiate projects in partnerships and cooperate in the field of research and development. 2021 was the third consecutive year of reporting on the **New Plastics Economy Global Commitment**, an initiative set up by the Foundation to make the plastic sector more circular, and joined by the Group in 2018 with challenging goals. Furthermore, in August 2021, the Hera Group - through Hera Luce - provided a submission to "**Circulytics V.2**", a digital tool developed for measuring circularity.

In 2021, Hera was one of the 70 companies to support the second **Business Call for a UN Treaty on Plastic Pollution** promoted by the World Wide Fund for Nature (WWF) and the Ellen MacArthur Foundation. This call to action is designed to provide a coordinated global response in the form of a UN treaty to help governments and businesses tackle plastic pollution.

Hera is also among the promoters of the **Circular Economy Network (CEN)**, a project promoted by the **Sustainable Development Foundation** and by a group of companies and associations involved in the transition to a new model of circular economy. Again at national level, Hera is a member of **ICESP** (Italian Circular Economy Stakeholder Platform), the Italian platform coordinated by ENEA that groups the main national players in the circular economy.

Since 2020, Hera Group has been a member of the **Alliance for the Circular Economy**, a network made up of 18 Italian companies aimed at promoting circularity in business strategies. During 2021, the Group took part in the drafting of two in-depth analysis documents relating to the measurement of circularity and the role of the circular economy in mitigating climate change.

Moreover, since its foundation, Hera has been a member of the **Italian Circular Economy Stakeholder Platform (ICESP)**, created in 2018 as a mirror of the European Circular Economy Stakeholder Platform – ECESP initiative, which promotes the Italian way for circular economy, by involving Italian stakeholders committed to the issue. During the third Annual ICESP Conference, held on line by ENEA on 11 December 2020, priorities for post-emergency recovery were identified based on the circular economy as a lever for effective actions within a resilience process and in a recovery perspective.

The Hera Group joined the Global Compact in 2004, and in July 2017 it was included in the **Global Compact Network Italia Foundation**, the Italian network set up in 2013 which has currently been joined by 476 members, 402 of which are businesses.

Also within the Global Compact, Hera joined the **CEO Water Mandate**, the United Nations Global Compact initiative promoted to re-launch commitment by companies in the sustainable management of water resources.

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

1.03 CSV and sustainability KPIs

	2005	2019	2020	2021	2025	2030
The creation of shared value						
Shared value EBITDA (millions of Euro)	-	391.7	455.1 ¹	570.6	778.6	-
Shared value EBITDA (% of total)	-	36.1%	40.5% ¹	46.6%	55.6%	70%
Shared value investments (millions of Euro)	-	296.6	297.4	452.7	523.2 ²	-
Shared value investments (% of total)	-	58.3%	55.5%	68.0%	65.8% ²	-
Creation of shared value: Pursuing carbon neutrality						
Iso 50001 energy saving measures (% of savings compared to 2013 consumption) ³	-	5.1%	6.2%	6.8%	8%	10%
Contracts at year-end with energy efficiency solutions (% of total contracts excluding safeguard, default and last resort contracts)	0%	20.1%	20.2%	23.0%	28%	34%
Electricity from renewable sources sold to free market customers (% of volume sold)	-	30.0%	32.9%	40.1%	41%	>50%
Natural gas sold with CO ₂ offsetting (% of volumes sold excluding wholesalers, default service and last resort supply)	0%	0.8%	4.4%	9.1%	21%	27%
Biomethane produced by FORSU (million m ³)	-	6.5	7.8	8.0	17	>30
Reduction in CO ₂ emissions compared to 2019 with SBTi calculation method (%) ⁴	-	-	-5.4%	-11.6%	-26%	-37%
Creation of shared value: Regenerating resources and closing the loop						
Separate waste collection (%)	28.9%	64.6%	65.3%	65.3%	76%	80%
Plastic recycled by Aliplast (thousands of tonnes)	-	72.8	68.8	80.9	134	152
Reusable treated waste water (% of total treated waste water) ⁵	-	3.4%	5.2%	6.0%	8.5%	15%
Non-invoiced water (physical and administrative losses from the domestic aqueduct) (m ³ /km of network/day)	-	10.2	9.9	-	10	9.4
Reduction rate of internal water consumption compared to 2017 (%) ⁶	-	-5.5%	-11.9%	-16.6%	-20%	-25%
Aqueduct users served in areas with a Water Safety Plan (% of total aqueduct users)	-	11.5%	12.8%	22.6%	57%	100%
Urban areas >2,000 population equivalents adjusted to wastewater treatment regulations (% of population equivalents)	-	97.3%	97.6%	99.6%	100%	100%
Waste-to-energy plant emission levels vs. regulatory limits (real concentrations vs. regulatory limits: optimal value <100%)	22.4%	14.1%	13.8%	13.8%	<20%	<20%
Land reuse in infrastructure construction (%) ⁷	-	73%	79%	78%	>70%	>80%
Creation of shared value: Enabling resilience and innovating						
Value of supplies from local suppliers (% of total)	62% ⁸	69%	65%	67%	-	-
Open-ended contract employees (average annual % of total workforce)	95.5%	96.6%	96.6%	96.5%	98%	98%
Women holding roles of responsibility (%) ⁹	19.9%	29.9%	29.9%	30.5%	>31%	>33%
Employees with Digital proficiency (% of total employees)	-	44%	44%	49%	65%	90%

2005	2019	2020	2021	2025	2030

With the drivers of change

Value added distributed to stakeholders (millions of Euro)	722.1	1,734.5	1,670.0	1,764.4	-2.000	-
Average training hours per capita (number)	18.5	28.6	26.0	30.3	>25	>25
Lost time injury frequency index (number of lost time injuries/hours worked x 1,000,000)	49.6	14.1	12.6	10.3	10.2	<10
Internal climate index (score 0-100)	50	68	-	71	≥70	≥70
Index of customer satisfaction for residential customers (score 0-100) ¹⁰	67	73	73	73	≥73%	≥73%
Tender awards adopting the most economically advantageous bid method: sustainability score (% of total)	-	34	41	38	~35	~35

¹ Aligned to the new calculation criteria introduced in 2021

² Average years 2022-2025

³ Figures refer to Hera Spa, Inrete, AcegasApsAmga and Marche Multiservizi

⁴ Scope 1+2+3 sale of electricity and gas downstream

⁵ Figure refers to Hera Spa and, since 2021, AcegasApsAmga

⁶ Figure refers to the consumption of water from the domestic and industrial water networks in the Group's most "water-hungry" business units served by Hera Spa in Emilia-Romagna

⁷ Progressive figures from 2018

⁸ 2007 figure

⁹ Managers and middle managers

¹⁰ Excluding Marche Multiservizi

The creation of shared value

2. ENERGY - PURSUING CARBON NEUTRALITY

2.01 Objectives and performance

What we said we would do	What we have done	SDGs	Progress*
Promotion of energy efficiency			
Reduce the Group's energy consumption by 7% by 2024 and by 10% by 2030 compared to 2013.	6.8% reduction in energy consumption at end 2021 (compared to 2013) thanks to measures adopted by Hera Spa, Inrete, AcegasApsAmga and Marche Multiservizi (see page 40).	7, 13	●
Achieve 42% of customers by 2024 and 45% by 2030 with gas, electricity and district heating offers, with energy efficiency services or that use the Consumption Diary (excluding Estenergy and subsidiaries).	23% Hera Group customers who have signed up for energy efficiency offers or receive the Consumption Diary by 2021 (20.2% in 2020) (including Estenergy and subsidiaries).	7, 13	●
Continue to promote energy efficiency solutions for condominiums.	The offer of energy efficiency solutions in condominiums continued in 2021 (see page 43).		
Continue to implement energy-saving measures in public lighting, including replacing luminaires with LED lamps (>65% by 2024).	Energy efficiency measures in public lighting continued in 2021: 39.4% of luminaires are LED (34.9% in 2020) (see page 45).	7, 13	●
Energy transition and renewables			
>40% of energy from renewable sources in 2030 (excluding safeguard).	40.1% of renewable electricity sold on the free market in 2021 (it was 32.9% in 2020).		
>20% methane gas sold with CO ₂ emissions offset by 2030 (excluding wholesalers, last resort supply and default service).	9.1% of methane gas sold with CO ₂ offsetting (excluding wholesalers, default and last resort supply) (it was 4.4% in 2020) (see page 54).	7, 9, 13	●
Launch initiatives to develop hydrogen as an energy vector, including:	Four initiatives launched:		
- Experimental injection into the gas distribution network of a mixture of hydrogen and methane - Identification of possible technological solutions for energy intensive industries - Construction of a power-to-gas plant in Bologna (start of permitting phase in 2021) - Assessment of the technological, economic and regulatory feasibility of "green" hydrogen production in Ferrara, partnering with Yara.	- Adjunct and preparatory activities for the introduction of hydrogen into the distribution network have been carried out in Castelfranco Emilia (MO) - Development opportunities in public transport ambit and "hard-to-abate" sectors were assessed - The authorisation process for the construction of a power-to-gas plant in Bologna was started - The Partnership with Yara was started. (see pages 53 and 302).	7, 9, 13, 17	●
Produce >15 million cubic metres of biomethane by 2024 and >30 million cubic metres by 2030 through new anaerobic digestion plants of the organic fraction of separately collected waste.	8 million cubic metres of biomethane production from organic waste in 2021. The authorisation procedures for the construction of two new plants have been completed, one of which is already under construction (see page 52).	7, 8, 9, 11, 12, 13	●
Supplement our commercial offers with the sales and installation of photovoltaic panels and further develop commercial offers with energy efficiency improvement solutions (air conditioners with heat pumps, efficient boilers, etc.).	Four new offers launched in 2021; Hera Fotovoltaico, Hera Clima, Hera Caldaia, Hera Scaldacqua. (see pages 43 and 54).	7, 9, 13	●

Climate change mitigation

What we said we would do	What we have done	SDGs	Progress*
28% reduction in greenhouse gas emissions (Scope 1+2) and 37% (Scope 3 from downstream electricity and gas sales) by 2030 using SBTi method compared to 2019 emissions.	9.1% reduction in greenhouse gas emissions Scope 1+2 and 11.6% Scope 1+2+3 from downstream electricity and gas sales in 2021 with SBTi method compared to 2019 emissions (see page 64).	11, 13	
*  Result achieved or in line with plans.  Result with moderate deviation from planning.			
What we will do		SDGs	
Promotion of energy efficiency			
8% reduction in Group energy consumption by 2025 and 10% by 2030 compared to 2013		7, 13	
28% customers in 2025 and 34% in 2030 with gas, electricity and district heating offers with energy efficiency services or with Consumption Diary (23.0% in 2021) (including Estenergy and subsidiaries). Continue to promote energy efficiency solutions for condominiums.		7, 13	
Continue to implement energy-saving measures in public lighting, including replacing luminaires with LED lamps (57% by 2025).		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 emissions offset in 2025 and 27% in 2030 (excluding wholesalers, supply of last resort and default) (9.1% in 2021).		7, 9, 13	
Launch initiatives to develop hydrogen as an energy vector, including:			
■ Experimental injection into the gas distribution network of a mixture of hydrogen and methane in Modena		7, 9, 11, 13	
■ Implementation of a power-to-gas plant in Bologna.			
Feasibility study of a Hydrogen Valley in Modena, consisting of two main components: the electrolysis system at the WTE and/or landfill and the Energy Park			
16.8 million cubic metres of biomethane produced by 2025 and >30 million cubic metres by 2030 through new anaerobic digestion plants of the organic fraction from separate waste collection (8.0 million cubic metres in 2021).		7, 8, 9, 11, 12, 13	
Internal and external development of photovoltaics:			
■ capacity of 68 MW for new photovoltaic panels installed at the Group's sites by 2025 (depleted landfills and water service plants);		7, 9, 13	
■ More than 3.5 thousand photovoltaic panels sold to the Group's customers by 2025.			
Climate change mitigation			
Reduction of the Group's greenhouse gas emissions in 2030 using the SBTi method compared to 2019 emissions:			
■ -28% Scope 1 and Scope 2;		11, 13	
■ -30% Scope 3 from the downstream sale of gas;			
■ -50% carbon intensity index of electricity sales.			
■ 100% electricity from renewable sources for domestic consumption (by 2023)			

2.02 Promotion of energy efficiency

Primary energy consumption of the Hera Group

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

- **cogeneration plants** which produce thermal and electrical energy for sales for internal consumption but above all to serve district heating requirements;
- **waste-to-energy plants** that dispose of waste with energy recovery;
- **turboexpanders** that take advantage of pressure differentials in the natural gas distribution stations in the local networks it operates;
- **low enthalpy geothermal heat recovery systems** in the Ferrara district heating plant.

Thanks to constant measures, Hera pursues a policy aimed at increasing energy efficiency throughout its operations. As part of the implementation of this energy policy we have obtained **ISO 50001 energy certification** for the Group companies with the highest energy consumption (96% of the Group's energy consumption is for companies with ISO 50001 energy certification).

PRIMARY ENERGY CONSUMPTION, BY TYPE

toe	2019	2020	2021
Energy carriers for production (methane, biogas, geothermal energy, others)	217,776	187,247	198,806
Waste-to-energy treatment	319,389	322,159	299,432
Energy consumed in energy production plants	537,165	509,406	498,238
Electricity excluding public lighting	111,118	107,205	110,607
Electricity for public lighting	29,514	30,158	27,265
Natural gas and other energy carriers for heating our offices	2,852	2,775	2,966
Fuel for vehicles	9,377	9,899	10,194
Energy consumed for uses other than the production of energy	152,861	150,037	151,032
Total	690,026	659,443	649,270

The data does not include the companies: Tri-Generazione; Recycla; Vallortigara. The figures for electricity concern the tonnes of oil equivalent used to produce the electricity we consumed. The conversion coefficients set out in the MISE Circular 18 December 2014 were used for all energy carriers except for waste, for which the calorific value was estimated.

In 2021, **primary energy consumption** will amount to 649,270 toe, **down 1.5%** from 2020 levels, mainly due to lower volumes of waste disposed of in waste-to-energy plants (-7.1%) and lower electricity consumption in public lighting (-9.6%) as a result of the reduction in the number of lighting points operated and energy efficiency measures. On the other hand, consumption of energy carriers for production purposes (+6.2%) and for heating the premises (+6.9%) as well as electricity for internal use (+3.2%) increased as a result of the recovery in consumption compared to the health emergency period of 2020 and less plant downtime (and consequent maintenance) compared to the previous year. Lastly, fuel consumption for transport equipment also increased slightly (+3.0%).

[302-1]

The table below shows the **organisation's internal energy consumption** calculated in terajoules in compliance with the Global Reporting Initiative Sustainability Reporting Standard. The figures are from data gathered mainly from meters and based on the calculation and conversion methods defined for application of the regulatory provisions of Italian Law 10/1991 (MISE Circular of 18 December 2014).

The following items were taken into account in the calculation:

- energy consumption from non-renewable sources and fuels (diesel, petrol, LPG, natural gas and the 49% non-renewable share of waste-to-energy);
- energy consumption from renewable fuels and sources (renewable share of 51% of waste-to-energy);
- consumption of purchased energy carriers (grid electricity and solar thermal energy);
- self-produced energy not through consumption of other energy sources (biogas from landfills, digesters and water treatment, biomethane from organic waste, thermal energy from geothermal energy, electricity from photovoltaics, thermal energy from solar thermal energy).

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

ENERGY CONSUMPTION WITHIN THE ORGANISATION

terajoule	2019	2020	2021
Waste (49% non-renewable share)	6,551	6,608	6,338
Natural gas	6,673	5,790	6,216
Diesel	73	62	89
LPG	2	3	4
Diesel fuel for motor vehicles	359	382	390
Methane for motor vehicles	13	13	15
Petrol for motor vehicles	11	12	14
LPG for motor vehicles	8	7	8
Fuels from non renewable sources purchased for consumption	(+) 13,692	(+) 12,877	(+) 13,073
Waste (51% renewables share)	6,818	6,878	6,196
Fuels from renewable sources purchased for consumption	(+) 6,818	(+) 6,878	(+) 6,196
Electricity from grid	5,880	5,752	5,738
Thermal energy from solar thermal	2	2	2
Energy carriers purchased for consumption	(+) 5,882	(+) 5,754	(+) 5,740
Biogas from water treatment plants, digesters and landfills	1,441	1,297	1,216
Thermal energy from geothermal plants	291	206	370
Biomethane from organic waste	214	254	261
Electricity from photovoltaic	17	15	16
Thermal energy from solar thermal	1	1	0
Self-produced energy not through consumption of other energy sources	(+) 1,964	(+) 1,773	(+) 1,865
Electricity sold to the grid	8,483	7,743	7,769
Thermal energy sold	2,581	2,347	2,719
Biomethane from organic waste sold	214	254	261
Biogas sold to third parties	0	179	176
Self-produced energy sold/sold to third parties	(-) 11,278	(-) 10,523	(-) 10,926
Total energy consumption within the organisation	17,078	16,759	15,948

The data does not include the companies: Tri-Generazione; Recycla; Vallortigara. Renewable energy consumed within the organization in 2021 is 55% of the total energy consumed within the organization. The energy consumed within the organization from renewable sources in 2021 is equal to 55% of the total energy consumed within the organization.

The energy consumed within the organisation in 2021 is **15,948 terajoules, down 5%** from the previous year. This reduction stems from a decrease in waste incineration in waste-to-energy plants (-7% between renewable and non-renewable shares) and an increase in the share of energy sold or transferred to third parties (+4%), especially thermal energy (+10%). In 2021, district heating plants saw their production increase, which is reflected in a greater use of methane gas (+7%) and greater use of geothermal energy (+80%). The amount of biogas produced also fell (-6%). There was also an increase in the production of biomethane (+3%) from the Sant'Agata Bolognese plant; this energy vector is generated from the organic fraction of separately collected waste and then completely sold as automotive fuel.

[302-2]

Considering the energy consumption that occurs outside the organisation but related to the products or services provided by the Group, we can quantify the **energy consumed outside the organisation**. This calculation includes the consumption of natural gas and electricity by customers, public lighting and services offered by ASE, the consumption of fuel in vehicles used for waste collection and transport and the consumption of fuel in power plants in which the Group has a minority stake.

Energy consumed outside the organisation in 2021 amounted to 195,862 terajoules (stable compared to the previous year) and consists of 96% of energy consumed by customers as natural gas and electricity sold by the Group.

Energy efficiency within the Hera Group

Energy intensity indices

The Group's energy performance can be represented by several indicators that express its development and prospective targets and illustrate the company's savings strategies. Comparing energy consumption with certain production and operating indicators can provide **consumption intensity indices** that reflect the improvements achieved by efficiency improvement measures and by corporate energy management.

[302-3]

CONSUMPTION INTENSITY AND ENERGY EFFICIENCY INDICES

	2019	2020	2021
Water network: energy consumption (kWh)/volume of water fed into the network (m3)	0.44	0.44	0.46
Water treatment: energy consumption (kWh) / volume of water purified (m3)	0.41	0.42	0.40
District heating: primary energy consumption (toe) / equivalent energy produced (toe)	0.87	0.88	0.87
Waste-to-energy plant: primary energy consumption (toe) / equivalent energy produced (toe)	2.8	2.7	2.3
Office management: primary energy consumption (toe) / (site volumes x degree days) (m3)	4.0	3.8	3.7
Public lighting: energy consumption (kWh)/light points (qty.)	303.8	297.7	272.3
Company fleet: fuel consumption (ktoe eq)/fleet journeys (km driven)	0.15	0.13	0.13

The data refer to the consumption of electricity, natural gas, diesel fuel, LPG, petrol, and waste. For district heating we used the conversion coefficients set out in the MISE Circular of 18 December 2014.

The indicators for the **water sector** remain largely stable compared to previous years. There was a slight increase in the energy intensity index of the aqueduct where, especially in the Modena area, while there was a slight decrease in the volume of water introduced into the networks, there was a greater consumption of electricity due to the greater use of groundwater.

The **district heating** sector has an energy intensity in line with that of previous years.

Similarly, the indicators for **waste-to-energy** plants are in line with 2019, even though the volume of waste treated has decreased.

The indicator relating to **offices** refers to the ratio of total energy consumption to volume and climate, expressed in degree days; in 2021 the indicator improved slightly compared to the previous year due to several energy efficiency measures and despite the colder climate and less use of remote work.

Public lighting shows a steadily improving indicator (-8.5% from 2020 to 2021) thanks to the constant energy efficiency measures carried out on the lighting points managed: -9.8% of consumption against a very slight drop in the number of lighting points managed (-1.4%).

Lastly, fuel consumption per km travelled by the **corporate fleet** remains stable.

Energy improvement plans

[302-4]

The Group's focus on energy efficiency is demonstrated by the **Iso 50001** certification of energy management systems for **11 Group companies**: Hera Spa, AcegasApsAmga, AcegasApsAmga Servizi Energetici, Aresgas, Frullo Energia Ambiente (obtained in 2021), Hera Luce, Hera Servizi Energia, Herambiente, Hestambiente (obtained in 2021), Inrete Distribuzione Energia, and Marche Multiservizi. Overall, **ISO 50001-certified companies consumed 96% of the Group's total primary energy in 2021** (76% in 2020).

The energy improvement plans drawn up since 2014 as part of **ISO 50001 energy management systems** envisaged reducing energy consumption by 3% (compared to 2013 consumption) by 2017. As a consequence of the positive results it has achieved, Hera has set increasingly challenging targets: the Group's business plan envisages that **by 2030, we will implement measures that enable us to achieve savings equal to 10% of our 2013 consumption** (8% by 2025). The objective is calculated as the average of the objectives that Hera Spa companies, Inrete Distribuzione Energia, AcegasApsAmga, and Marche Multiservizi have defined within their certification schemes.

To date, we have achieved significant energy savings in the **water cycle**, testifying to the Group's great attention to the sector. In several cases this involves optimisation of the depuration plants, which have been the target of considerable investment in recent years. Inrete Distribuzione's savings are mainly concentrated in the **distribution of natural gas**, and are due to both technological measures (turboexpanders, innovative control devices) and behavioural measures. Hera Luce and Marche Multiservizi, on the other hand, have focused on **public lighting**, replacing many light points and traffic lights with lamps and technologies that consume less energy and are more efficient. In **district heating**, the focus is on maximising heat recovery from existing cogenerators, including innovative solutions such as the installation of heat pumps. Concerning the efficiency of the **company's offices**, over the last two years, we have implemented several measures to replace the lighting fixtures in outdoor areas, leading to saving over 370 megawatt hours per year.

ENERGY IMPROVEMENT PLANS ISO 50001 OF HERA SPA, INRETE DISTRIBUZIONE ENERGIA, ACEGASAPSAMGA AND MARCHE MULTISERVIZI (2014–2020)

Type of measure	Measures implemented and planned (qty.)	Savings per year due to measures implemented and planned (toe)	Of which measures implemented by end 2021 (qty.)	Of which savings achieved by end 2021 (toe)	Company
Integrated water service	245	8,537	221	7,900	H-A-M
District heating	55	4,488	52	4,132	H
Energy networks	26	739	23	730	H-A-M
Vehicles and waste management services	22	713	20	675	H-A-M
Offices	76	673	72	571	H-A-M
Public lighting	24	1,050	21	1,028	A-M
Total	448	16,200	409	15,036	
	7.3% of 2013 consumption (106% of the reduction target of 6.9% by 2021)		6.8% of 2013 consumption (106% of the reduction target of 6.4% by 2021)		

For AcegasApsAmga the baseline refers to the consumption for the year 2014.

The **409 interventions** carried out by the end of 2021 and included in the Energy Improvement Plan since 2014 have enabled **savings of over 15 thousand toe**, equal to 6.8% of 2013 consumption, **far exceeding the 6.4% target set for 2021**. The more than 448 total interventions identified by 31 December 2021 and which make up the improvement plans of Hera Spa, AcegasApsAmga, Inrete Distribuzione and Marche Multiservizi will allow a reduction in energy consumption of 16,200 toe. The measures identified in the action plan focus mainly on the water cycle where more than half the measures are planned, to achieve more than 53% of overall energy saving.

In addition to the initiatives of the Iso 50001 Energy Improvement Plan, we must also consider more energy efficiency measures planned by **Herambiente**, **AcegasApsAmga Servizi Energetici**, **Hera Servizi Energia** and **Hera Luce** on waste disposal plants, condominiums or other buildings, for cogeneration plants and public lighting systems. In particular, in several cases, Herambiente's interventions concern its waste-to-energy plants, which are a fundamental part of the Group's plant fleet, and consist of solutions and measures to maximise heat recovery and increase the plants' energy production.

ENERGY EFFICIENCY MEASURES BY ACEGASAPSAMGA SERVIZI ENERGETICI, HERA SERVIZI ENERGIA, HERA LUCE, AND HERAMBIENTE

Type of measure	Measures implemented and planned (qty.)	Savings per year due to measures implemented and planned (toe)	Of which measures implemented by end 2021 (qty.)	Of which savings achieved by end 2021 (toe)
Measures on waste-to-energy plants and landfills	37	3,017	34	2,453
Measures on businesses, condominiums and other buildings	476	9,356	369	7,737
Measures on public lighting systems	73	12,235	38	5,188
Total	586	24,608	441	15,378

The 586 planned interventions (of which 441 had already been carried out by 2021 and others are in progress) will generate **annual savings of 24,608 toe** (of which more than 15,000 have already been achieved).

The following table shows an overall summary of the number of actions taken and the savings achieved as a result of the ISO 50001 improvement plans, and additional energy-saving initiatives.

TOTAL ENERGY EFFICIENCY MEASURES IN THE HERA GROUP

	2019	2020	2021
Total measures implemented and planned (qty.)	643	892	1,034
<i>of which implemented by year-end (qty.)</i>	<i>431</i>	<i>631</i>	<i>850</i>
Total savings per year due to measures implemented and planned (toe)	35,615	38,204	40,808
<i>of which achieved by year-end (toe)</i>	<i>24,920</i>	<i>25,996</i>	<i>30,414</i>

Overall, the Group's energy efficiency measures implemented from 2013 to date have resulted in **850 measures carried out**, which have led to a **saving of approximately 30 thousand toe per year**; considering also the measures planned but not yet implemented, the saving rises to over 40 thousand toe with 1,034 measures, equal to the consumption of over 52 million cubic metres of natural gas or electricity by over 80 thousand households.

White certificates

The Energy Efficiency Credits (EEC) or **White certificates** mechanism was created in Italy in 2005 as an incentive tool for energy efficiency. It is based on the concept of tradable emission permits to which an economic value and a market are attributed. These certificates are obtained by implementing measures that provide **certified and measurable energy savings**. The system envisages a supply and demand mechanism with savings obligations for gas and electricity distributors, who are assigned annual targets to achieve. Ministerial Decree 11/01/2017, as last amended by Ministerial Decree 21/05/2021, sets out the obligations of distributors until 2024. In the period 2021-2024, there are reduced obligations compared to previous years, as well as a 60% reduction in the previously defined 2020 obligation. In relation to the difficulties in generating sufficient shares to meet the targets, their market value over time has increased to the maximum limits set by the regulations (250-260 €/Tee) for the contribution granted to distributors to cover the costs incurred in meeting their obligations.

In order to fulfil its obligations, Inrete Distribuzione Energia relies on Hera Spa as an **Energy saving company (Esco)**, which has been supplying white certificates for fifteen years. In 2021, Hera Spa submitted to the Energy Services Manager (GSE) **sixteen new dossiers relating to energy efficiency measures**, mainly located in the areas served by the Group. The Group's own initiatives include efficiency upgrades on district heating systems and at wastewater treatment plants; lastly, as regards public lighting, AcegasApsAmga is active in presenting final projects concerning upgrading works implemented by Hera Luce in the municipalities where it operates.

WHITE CERTIFICATE OBJECTIVES

toe	2019	2020	2021
Gas distribution	355,199	163,979	56,990
Electricity distribution	37,018	17,209	5,256
Total	392,217	181,188	62,246

In 2021, the Hera Group submitted to the GSE projects for energy efficiency certificates amounting to 15,144 toe. In the same year, the GSE approved projects submitted by the Group totalling 14,529 toe.

As part of its **energy efficiency promotion initiatives**, Hera Spa has continued the cooperation started in 2019 with a team of researchers from the **Politecnico di Milano**, made up of experts in behavioural psychology and statistical sciences which has the skills necessary to develop scientifically valid programs to measure and verify savings. The collaboration provides for the **validation of energy savings obtained as a result of optimisation** measures in homes, industrial plants, the tertiary sector and public administration, due to the **induction of virtuous behaviour** obtained using methodologies based on behavioural sciences. Specifically among the initiatives designed to increase customer awareness of the energy impact of their behaviour, 2020 was the first year of implementation of Hera Comm's **Diario dei consumi (Consumption Diary)** service, free of charge for electricity, gas, and district heating customers who choose to join. The savings results were **certified by the Energy Services Manager**, who evaluated a dedicated project submitted by the Group. This project, eligible for the White Certificates mechanism, has made it possible to certify in 2021 some **960 toe of energy savings linked to user behaviour**, generated during the previous year. Please refer to the case study "Diario dei consumi (Consumption Diary)" for more details.

Energy efficiency for families

In 2021, Hera Comm group confirmed its commitment to energy efficiency by offering various value-added services that enabled household customers to **monitor and reduce their consumption**.

All free-market customers can request **free** activation of the **Diario dei consumi (Consumption Diary)**, a digital service that sends them **personalised reports** to help them compare their consumption not only with that of the previous year but also with that of a similar households in terms of size, type of house, province, and energy use. All the data is also accessible on the platform and in the dedicated section of the MyHera app. Please refer to the case study "Diario dei consumi (Consumption Diary)" for more details.

The **Hera Led** option can be combined with many of Hera Comm's free market offers, for both new and existing customers, and offers customers up to **two sets of ten LED bulbs** each per contract at a 30% discount on their market value. Replacing an incandescent bulb with a high-efficiency LED bulb can **save up to 80% of the energy used**. The technical specifications of the products show that a 9 W LED bulb can replace a 60 W incandescent bulb. So if we consider an average daily use of 4 hours, a LED bulb consumes about 13 kWh/year compared to the 88 kWh/year of an equivalent incandescent bulb, clearly reducing one's bill and benefiting the environment.

The **Hera Thermo** option lets customers **control the gas consumption** by installing a smart, remotely controllable thermostat. Using it leads to greater attention to how the gas is used: in fact, the mobile app makes it easy to check the temperature set in the house and check the operation of the boiler at any time. This ease of control increases awareness and reduces waste, such as by decreasing the temperature set during certain time ranges and by optimising the system's on/off cycles. Research shows that a 1 °C temperature reduction in a house leads to saving **5–10%** of gas during the winter season (Source: Enea).

Hera ContaWatt is an option that helps residential and business customers **monitor electricity consumption**: the easy-to-install device connects to the electricity meter via a sensor so that users can check their electricity consumption through a dedicated app on a mobile device or on a PC. A **summary of the consumption details** is also sent by email every week. The ContaWatt device independently connects to a data transfer platform, can **send real-time anomaly alerts** to the app or via email, and installation does not require specialists.

In the final months of 2020, the energy efficiency solutions **Hera Caldaia** and **Hera Scaldacqua** were also launched, providing for the sale and "turnkey" installation of products such as **high-efficiency condensing boilers** (with access to tax deductions thanks to invoice discounts) and **high-efficiency gas and electric water heaters**. With regard to condensing boilers, a range of indoor and outdoor boilers in different capacities is offered, with different power ratings, in order to address our customers' diverse

system requirements, which will include expert installation fitting thermostatic valves and a smart thermostat to maximise energy savings.

Lastly, in mid-2021, the range of energy efficiency products was enhanced with the **Hera Clima** option, which allows customers to purchase **high-efficiency heat pump air conditioners** installed in a workmanlike manner which, thanks to the discount on the invoice, qualify for the tax deductions envisaged, through a "turnkey" service that begins with the technical inspection and ends with the management of administrative and tax procedures.

CONTRACTS AT YEAR-END WITH ENERGY EFFICIENCY SOLUTIONS

Number	2019	2020	2021
Electricity contracts at year-end with electricity energy efficiency solutions (% of total gas contracts, excluding contracts with safeguard clauses)	23.1%	26.1%	28.4%
Gas contracts at year-end with energy efficiency solutions (% of total gas contracts, excluding default and last resort contracts)	17.7%	16.5%	19.4%
Contracts at year-end with energy efficiency solutions (% of total contracts excluding safeguard, default and last resort contracts)	20.1%	20.2%	23.0%

The 2019 figure includes data on Estenergy, Amgas Blu, Ascotrade, Ascopiave Energia, Blue Meta, and Etra Energia which merged into Hera as at 31/12/2019. The 2021 figure does not include data on the company Eco Gas.

At the end of 2021, there were 757,089 energy efficiency service contracts, **representing 23.0% of the total, an increase of more than 18% compared to 2020** (641,199). Specifically, energy efficiency services linked to electricity contracts account for 28.4% (377,955 contracts, +19%), while those linked to gas contracts account for 19.4% (379,134 contracts, +17%). Energy efficiency contracts are those in which the Electricity Consumption Diary, the Gas Consumption Diary and the Hera Led, Hera Led business, Hera Contawatt and Hera Thermo offers are active.

The indicator was calculated excluding safeguard, default and last resort contracts since, by their very nature, it is not possible to market offers in line with the Group's commercial strategy in these markets. Including contracts in the safeguard, default and last resort markets, 22.3% of energy contracts include energy efficiency solutions (28.1% of electricity contracts and 28.5% of gas contracts).

In the coming years, we will continue to offer energy efficiency solutions to customers by extending these options to commercial companies that do not yet offer them. Excluding these companies, the percentage of contracts with energy efficiency solutions active in 2021 is 28.5% (31.5% electricity to 26.1% gas).

Energy efficiency for condominiums

Through its subsidiaries **Hera Servizi Energia (HSE)** and **AcegasApsAmga Servizi Energetici (ASE)**, the Hera Group operates actively in the energy efficiency sector providing a broad range of services, targeting mainly condominiums, large industrial customers, and public administration bodies.

HSE and ASE take care of and develop **temperature control and individual heat metering systems in portfolio condominiums**, so that the relevant consumption is transparently and unambiguously allocated to each individual user. The fuel **savings** achievable by installing these systems in buildings is on average **8.3%**.

HSE is **also replacing old central heating boilers** with high efficiency models that, combined with the temperature control systems, significantly reduce gas consumption for condominiums. These condominiums can also access a complete **heat management service** under the "Servizio Energia" contract. At the end of 2021, there are 214 condominiums with an active energy service (32 with HSE and 182 with ASE, up from 183 in 2020) and the estimated savings from this integrated intervention are **over 20% of total gas consumption**.

Condominiums that carried out several energy refurbishment measures at the same time, individual metering and a heating plant upgrade, achieved **savings of 20% to 40% of their consumption**. Moreover, by assigning state incentive credit to the contractor and entering into a contract for energy provision, the measures did not involve any disbursement for the customers at the end of the work. The commercial solutions, in fact, are **combined with assigning the state incentive credit to the contractor** for the 110% ecobonus, energy efficiency and seismic upgrade tax incentives for buildings, letting condo owners independently choose the one that best suits their available funds. Customers can choose whether to bear the cost of the work done and later deduct the amount on their tax return, or assign the tax deduction and pay the excess at the end of the work, or choose the solution that requires

no disbursement at the end of the work adding to the state incentive credit the financing of the remaining portion, even combined with an energy supply service that ensures energy savings and thus reduces heating costs.

The professionalism and experience of HSE and ASE allowed the management of a total portfolio of **approximately 1,200 condominiums** during 2021, divided between energy service and redevelopment works, confirming the **growing trend** compared to previous years (971 in 2020 and 912 in 2019). Of these, about 470 are carrying out energy efficiency upgrades (so-called 110% ecobonus).

Energy efficiency for companies

Hera offers multi-year energy supply contracts through the construction and operation of **industrial cogeneration plants** for the **combined production of electricity and heat** dedicated to guaranteeing all customers' primary energy needs. **Cogeneration** and **trigeneration** can produce electricity and heating/cooling energy in a single plant, saving primary energy compared to traditional consumption methods, reducing emissions, achieving a greater energy efficiency, and reducing supply costs. Examples of industries where this service is offered are plastics, food, pharmaceuticals, ceramics and large service industries (condominiums, museums, shopping centres, spa complexes).

Hera Servizi Energia (HSE) offers a full range of all energy carriers, making it easy for customers to manage and less expensive. According to the customer's energy requirements, HSE identifies the characteristics of the technological plant required, handles the preparation of all the permitting documents, and operates and manages the plant.

At the end of 2021, **22 cogeneration plants run by HSE** were operational, of which 6 are trigeneration plants. The **environmental benefits** achieved by these plants in 2021 are quantifiable in **lower emissions of around 16,000 tonnes of CO₂** and **primary energy savings of 6,785 toe** (equivalent to the average annual electricity consumption of over 13,000 households).

Furthermore, Hera Spa has entered into **agreements with trade associations** in the areas it serves, collaborating with companies within the scope of the requirements of Legislative Decree 102/2014 on Energy Audits.

Energy efficiency for the public administration

Hera Servizi Energia (HSE) and AcegasApsAmga Servizi Energetici (ASE) use concessions or public-private partnership instruments in the public administration customer market. Also for this particular type of contract, the Group companies propose significant investments both for **heat generation** by installing new condensing boilers and heat pumps, and **insulating building envelopes** by installing thermal insulation and replacing windows and doors with better-performing types. A modern **energy management service** completes the offer, provided under an "Energy Service" contract. Under this service, energy efficiency measures can be financed with the energy savings provided by those same measures, and if possible, without increasing the current expense level of the recipient of the measures.

ASE and HSE are also dedicated to public administration tenders in the areas of energy services, facility management and operation and maintenance, and as a result of the tenders they won, they made **investments in energy efficiency of over nine million euros in 2021**.

Implementing several measures can achieve **savings of 6 to 49%**, depending on consumption and previous measures on the envelopes and can be combined with the seismic upgrading of the buildings. The environmental benefits achieved in 2021 for the main energy upgrades carried out on recently signed contracts can be quantified in **lower emissions of around 476 tonnes of CO₂**.

Energy efficiency in public lighting

Two Hera Group companies, **Hera Luce** and **Marche Multiservizi**, operate more than **560 thousand light points** (-1.5% compared to 2020), ensuring the proper operation of the public lighting service in **184 municipalities** in 11 regions: Emilia-Romagna, Umbria, Lombardy, Marche, Lazio, Tuscany, Piedmont, Veneto, Friuli-Venezia Giulia, Abruzzo, and Sardinia. In some areas they also manage a total of about **10.400 traffic lights**.

LIGHT POINTS AND TRAFFIC LIGHTS OPERATED

Number	2019	2020	2021
Municipalities served (no.)	181	188	184

Number	2019	2020	2021
Light points at 31/12 (qty.)	549,009	571,264	562,775
<i>of which low-power (%)</i>	<i>32.9%</i>	<i>37.7%</i>	<i>51.0%</i>
<i>of which LED (%)</i>	<i>27.5%</i>	<i>34.9%</i>	<i>39.4%</i>
<i>of which fitted with consumption optimisation systems (%)</i>	<i>53.3%</i>	<i>54.2%</i>	<i>80.2%</i>
Traffic lights (qty.)	10,496	10,454	10,402
<i>of which LED (%)</i>	<i>62.1%</i>	<i>66.5%</i>	<i>65.6%</i>

Also during 2021, Hera Luce's commercial efforts were aimed at consolidating its service area and expanding its area of influence, offering potential customers smart solutions for their respective cities. Among these proposals, the commitment to energy efficiency achieved by installing **low-consumption systems** and, above all, **latest-technology LEDs**, is particularly notable.

Around **80%** of the lighting points managed by the two companies have **management systems in place to optimise consumption** (reduction in intensity, partial switch-off, etc.), which have increased sharply compared to the previous year (+26 percentage points) as a result of redevelopment work and the acquisition of new orders. In addition, 39% of the lighting points managed use **LED lamps**, an increase of more than 5 percentage points. Lastly, 51% of the lighting points managed use **low energy consumption lamps** (i.e. non-mercury vapour lamps, class G according to the application of the energy qualification system developed by Hera Luce on the basis of the Minimum Environmental Criteria), a number that has increased by 13 percentage points.

Taking into consideration only the 179 municipalities managed by Hera Luce in 2021:

- 92 municipalities **only use electricity from renewable sources**; electricity consumption in these municipalities is 43.8% of total consumption;
- in 74 municipalities, the electricity consumption is **less than 50 kWh/inhabitant equivalent** (calculated considering residents and tourists). These municipalities account for 33.8% of the total electricity consumed;
- in 32 municipalities **all the lighting points we operate use LED lamps** (6.5% of total consumption).

In total, 116 of the municipalities feature one or more of these three good environmental practices (use of renewable sources, low electricity consumption, LED lamps) with a consumption of 64.8% of the total.

Moreover, in 2021 Hera Luce worked on finalising several public private partnership projects using the Project Finance provisions of Art. 183(15) of Italian Legislative Decree No. 50/2016. The projects submitted involve **reducing the energy consumption** and **improving the safety** of public lighting installations, to comply with the Minimum Environmental Criteria (MEC) **for lighting equipment** which came into force in 2017 and with those **for public lighting services** that came into force in 2018). Among the criteria used to award the contracts, **references to the circular economy and to presenting the material balance are increasingly frequent**. Hera Luce has put forward project financing proposals for which it has been appointed promoter in 27 municipalities.

During 2021, Hera Luce and Marche Multiservizi completed work in 13 municipalities and started work in another 10. Overall, the work carried out by Hera Luce in 2021 will lead to an annual saving of **11,716 MWh of electricity**, corresponding to 2,190 toe. Considering as 2,700 kWh per year the average electricity consumption of a household of four people, the amount of energy that can be saved each year with the measures implemented by Hera Luce in 2021 is equal to the annual consumption of 4,340 households. Lower electricity consumption results in **over 4.700 tonnes of carbon dioxide emissions being avoided each year**.

Hera Luce and Marche Multiservizi have started the assignment and management of works to improve the efficiency of public lighting systems in 20 municipalities. The energy savings estimated by the interventions planned for 2022 by Hera Luce amount to over 2,200 toe.

Particular attention was also paid to the **energy requalification of the Hera Group offices**, including those in Viale Berti Pichat in Bologna, Via Cesare Diana in Ferrara, Via Casalegno in Imola and Marche Multiservizi in Pesaro.

Hera Luce continues the **development work** on several actions and partnerships launched in previous years:

- update of the Minimum Environmental Criteria (MEC) for public lighting and definition of the new MEC for lighting services, as a member of the specific workgroup created by the Italian Ministry for the Environment, Land and Sea Protection;
- dissemination of the culture of light;
- lighting device performance monitoring system in line with the Minimum Environmental Criteria, together with the Ministry for the Environment, Land and Sea Protection;
- the development of models designed to provide local authorities with tools that enable them to understand the process of analysing and assessing energy efficiency improvement activities, obtain information on the activities to undertake for an energy renovation programme, and attain an initial estimate of the costs of the measures and the benefits that can be obtained;
- analysis of new lighting technologies, assessing costs/benefits and future development options, in association with several universities;
- the creation of projects designed to advance public lighting towards the development of smart cities using the public lighting infrastructure;
- development of the circular economy project, by studying a practical case applied to a public lighting system, drafting the material balance for the projects presented in the tender, using a tool that measures the circularity of materials (see the case studies "Hera measures "circularity" with Circulytics" and "The evaluation and measurement of circularity in Hera Luce" in the Appendix to the report for further details).

2.03 Energy transition and renewables

Renewable energy production plants and total production

The Herambiente Group produces heat and electricity from **burning waste**, in its nine waste-to-energy plants with an overall installed electrical capacity of 127 MW. Eight of these waste-to-energy plants are used for municipal waste and as described in greater detail below, the energy they produce is considered to be **51% from renewable sources** (the biodegradable share of the waste used). Three of these waste-to-energy plants, moreover, recover thermal energy to supply nearby **district heating** networks (in Ferrara, Forlì and Granarolo dell'Emilia).

The Ferrara district heating plant is thermally joined by **geothermal wells** located in the Casaglia district, equating to a potential of approximately 14 MW, thanks to which heat is drawn from underground: in this case, geothermal energy is the primary source of the district heating system, in addition to that provided by a waste-to-energy plant.

The Herambiente Group is also the owner of the **Sant'Agata Bolognese anaerobic digestion plant** dedicated to the production of biomethane from the organic fraction coming from separate waste collection (10 MW) and the **biodigesters** in Rimini, Lugo and Cesena, where there are **biogas cogeneration plants** with a total electrical power of 2.5 MW. In addition, some the biogas exploitation plants at 11 landfills are still active (total of 27 MW), as is the biomass plant operated in Faenza by Enomondo, in which Herambiente has a 50% stake.

As part of the integrated water system, approximately 3 MW of electricity are installed in **cogeneration plants** located at five wastewater **water treatment plants** operated by the Group (Bologna, Cesena, Forlì, Modena and Savignano sul Rubicone), where the **biogas** produced by the treatment of wastewater treatment sludge is used to produce electricity (typically for self-consumption at the sites)

In the gas distribution field, Inrete Distribuzione Energia and AcegasApsAmga operate seven **turboexpanders**, located in Bologna, Ferrara, Forlì, Padua, Ravenna and Trieste which generate electricity by exploiting the gas pressure differentials in the distribution network thanks to the 10 MW installed.

In addition to this power, there are **photovoltaic systems** installed at the headquarters and plants of Hera, Herambiente and AcegasApsAmga with a total power of about 2 MW.

In addition to the above-mentioned renewable energy production plants, the Hera Group also operates plants that produce energy efficiently, including the **Imola cogeneration plant** (82 MW of electricity) and another 31 smaller **cogeneration plants** (around 54 MW of electricity in total) installed to serve both some district heating islands and industrial customers.

Overall, the installed **electrical power** in renewable sources, cogeneration and turboexpansion is **242.8 MW, 79% of the total**, and the thermal power is 182.8 MW.

HERA GROUP'S ENERGY PRODUCTION PLANTS BY AREA (2021)

Province	Biogas and biomethane	Photovoltaic	Geothermal power	Waste-to-energy	Turboexpander	Co-generation
Bologna	7 plants* (24.7 MW)	4 plants (222 kW)	-	1 plant (26.5 MW)	2 plants (1.6 MW)	11 plants (103.3 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 (19 kW)	-	1 plant (10.9 MW)	1 plant (1.4 MW)	10 plants (13.4 MW)
Modena	2 plants (1.8 MW)	1 plant (6 kW)	-	1 plant (18.9 MW)	-	4 plants (5.8 MW)
Padua	-	-	-	1 plant (14.0 MW)	1 plant (2.3 MW)	1 plant (0.5 MW)
Pesaro-Urbino	-	-	-	-	-	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)	3 plants (2.7 MW)
Rimini	1 plant (1.0 MW)	2 plants (195 kW)	-	1 plant (10.9 MW)	-	-
Trieste	-	1 plant (87 kW)	-	1 plant (14.0 MW)	1 plant (1.5 MW)	-

Province	Biogas and biomethane	Photovoltaic	Geothermal power	Waste-to-energy	Turboexpander	Co-generation
Other provinces**	1 plant (1.3 MW)	2 plants (500 kW)	-	1 plant (13.4 MW)	-	2 plants (9.7 MW)
Total	20 plants (42.5 MW)	17 plants (1.9 MW)	1 plant (14.0 MW)	9 plants (126.6 MW)	7 plants (9.9 MW)	32 plants (136.3 MW)

* of which one biomethane plant (10.0 MW)

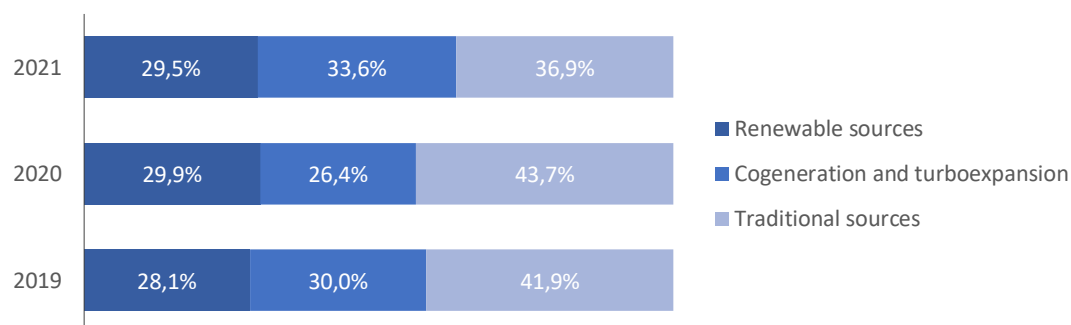
** Florence, Isernia, L'Aquila, Piacenza, Treviso

TOTAL ENERGY PRODUCED

GWh	2019	2020	2021
Waste-to-energy (51% renewables share)	490.9	505.5	453.5
Geothermal power	67.4	47.7	85.7
Biomethane	59.2	71.1	73.1
Combustion of landfill biogas	51.6	44.5	39.1
Combustion of digester biogas	24.4	25.3	25.5
Combustion of depuration plant biogas	12.8	14.0	16.5
Photovoltaic	2.1	2.4	2.2
Total renewable sources	708.4	710.5	695.5
Cogeneration	506.1	374.1	514.1
Industrial cogeneration at third party facilities	239.5	246.2	268.2
Turboexpansion	9.0	6.2	8.3
Total cogeneration and turboexpansion	754.6	626.5	790.7
Waste-to-energy (49% non-renewables share)	492.4	506.3	455.8
Thermoelectric power stations	563.7	529.9	414.7
Total traditional sources	1,056.1	1,036.2	870.5
Total electricity and thermal energy produced	2,519.1	2,373.2	2,356.7

The total energy generated by the Group's plants in 2021 was **2,356.7 GWh**, down slightly from the previous year (-1%). **63% comes from renewable sources and from cogeneration and turboexpansion plants** (in 2020 this was 56%).

TOTAL ENERGY PRODUCED



In detail, **the energy generated from renewable sources** in 2021 was 695.6 GWh, accounting for 29.5% of the total. This production decreased by 2% compared to the previous year, mainly due to less energy produced by the combustion of waste in waste-to-energy plants (-10%) and biogas from landfills,

digesters and water treatment plants (-3%); on the other hand, **production from geothermal energy** (+80%) and **biomethane** (+3%) increased.

The share of energy produced by **cogeneration and turboexpansion plants** is 33.6%, up 26% due to the higher energy demand compared to the 2020 health emergency period and the fewer technical problems (and consequent plant downtime for maintenance) that have occurred.

In future years, we expect to improve the sustainability profile of the Group's energy production, mainly by building **additional plants that produce biomethane** from the organic fraction of waste and from separately collected mowing and pruning waste (experimental plant)

Electricity generation

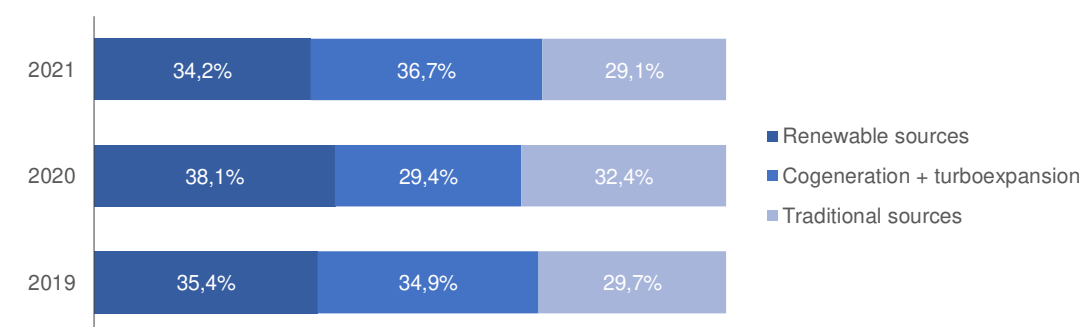
The following table shows the **gross electricity production** of the Group's plants, which also considers the energy needed to satisfy the consumption functional to the production itself (auxiliary consumption).

ELECTRICITY PRODUCED

GWh	2019	2020	2021	Installed power (2021, MW)
Waste-to-energy (51% renewables share)	415.6	425.9	386.3	62.0
Combustion of landfill biogas	51.6	44.5	39.1	13.4
Combustion of digester biogas	24.4	25.3	25.5	3.0
Combustion of depuration plant biogas	6.2	7.1	7.6	3.5
Photovoltaic	2.1	2.4	2.2	2.1
Total renewable sources	499.9	505.2	460.6	84.0
Cogeneration	337.7	233.2	322.2	112.2
Industrial cogeneration at third party facilities	146.7	150.8	163.2	27.2
Turboexpansion	9.0	6.2	8.3	8.5
Total cogeneration and turboexpansion	493.4	390.2	493.8	147.9
Waste-to-energy (49% non-renewables share)	420.0	429.8	391.2	64.6
Total traditional sources	420.0	429.8	391.2	64.6
Total electricity produced	1,413.3	1,325.2	1,345.6	296.4

The **total gross electricity** generated by the Group's plants in 2021 is **1,345.6 GWh**, slightly up on the previous year (+2%). **71% comes from renewables and cogeneration and turboexpansion plants** (in 2020 this was about 68%).

ELECTRICITY PRODUCED



In particular, the production of **electricity from renewable sources** in 2021 is 460.6 GWh (down 9%), accounting for **34.2% of the total** generated: in detail, the energy produced by waste-to-energy plants decreases by 9%, that from the combustion of biogas by 6%, and that from photovoltaics by 8%. **Electricity production from cogeneration and turboexpansion** increased by 27% to 36.7% of the

total. Lastly, electricity produced from traditional sources fell by 9%, accounting for 29.1% of the total generated in 2021. However, this production is **highly environmentally sustainable** since it comes from the waste-to-energy process for the share exceeding 51% (considered biodegradable) and is therefore classified as energy from recovery processes.

Incentives to generate electricity using green certificates are awarded to plants fuelled by renewable sources which started operating by 31 December 2012 and to cogeneration plants combined with district heating networks which started operating by 31 December 2009. In both cases, the amount of incentivised energy is the same as the net electricity produced. For plants that started operations after 2007, multiplication coefficients are applied that take into account the plant's technology: for example, if landfill biogas is used, the recognition awarded is calculated by multiplying the energy generated by 0.8. For non-agricultural biomass with a short supply chain, the factor is 1.3. In the second case, the incentive is proportional to the sales of cogenerated useful heat to district heating network users. Since 2016, any remaining right to the issue of green certificates has been converted into a tariff ("GRIN" tariff), as required by the Italian Ministerial Decree of 6 July 2012.

For waste-derived electricity, the energy recognised for earning incentives, and to which the above-mentioned factors apply, is limited to the biodegradable portion, since it is considered a renewable source by European and Italian regulations. The Italian Ministerial Decree of 6 July 2012 defines the criteria for evaluating this portion on a flat rate basis, set at 51% for waste-to-energy plants that use municipal waste downstream from separate waste collection. In calculating the share of energy produced from renewable sources, a figure of 51% was considered for both electricity and thermal energy produced from waste-to-energy plants, applying the flat-rate criteria. This percentage was assumed as applied to all waste disposed of in waste-to-energy plants (municipal and special) and for all the three years considered, in order to have consistent terms of comparison defined in accordance with the regulations in force. The one exception is the special-waste waste-to-energy plant in Ravenna, whose production is given a biodegradability coefficient of nearly zero since the waste it treats is considered totally non-renewable, because it comes from industrial processes.

For cogeneration plants, the Italian Ministerial Decree of 4 August 2011, implementing Italian Legislative Decree No. 20/2007, establishes the methods to calculate cogeneration production and the performance level the cogeneration process must achieve to qualify as high-performance cogeneration. The subsequent decree of the Italian Ministry of Economic Development of 5 September 2011 determines a new support regime for cogeneration. The incentive is based on white certificates and is recognised by the Energy Services Manager, after attributing the qualification of cogeneration, according to the actual primary energy savings achieved. This incentive is valid for 10 years, 15 years if the plants are combined with district heating networks. In 2021, there are still three plants covered by the support mechanism (Barca, San Biagio, Bufalini), as the remaining plants have reached the end of their incentive period.

Thermal power generation

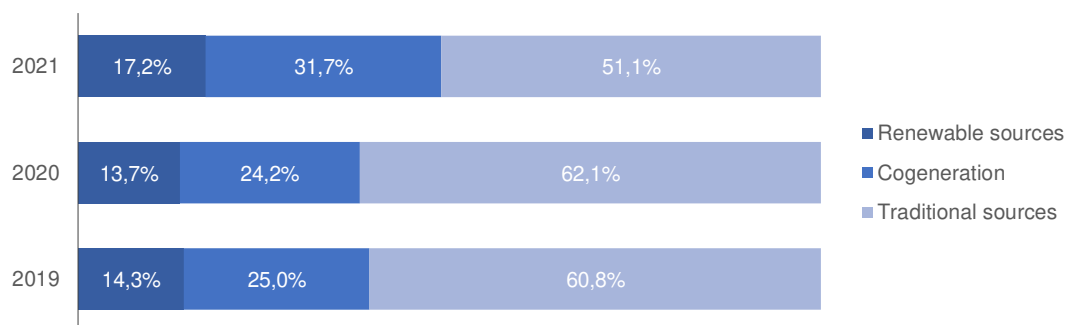
The table below outlines the **thermal energy production** of the Group's plants.

THERMAL ENERGY GENERATED

GWh	2019	2020	2021	Installed power (2021, MW)
Waste-to-energy (51% renewables share)	75.3	79.6	67.2	38.7
Geothermal power	67.4	47.7	85.7	14.0
Combustion of depuration plant biogas	6.6	6.9	8.9	1.7
Total renewable sources	149.3	134.2	161.8	54.4
Cogeneration	168.4	140.9	191.9	101.9
Industrial cogeneration at third party facilities	92.8	95.4	105.0	28.3
Total cogeneration	261.2	236.3	296.9	130.2
Thermoelectric power stations	563.7	529.9	414.7	1,206.8
Waste-to-energy (49% non-renewables share)	72.4	76.5	64.6	37.2
Total traditional sources	636.1	606.4	479.3	1,244.0
Total thermal energy generated	1,046.6	976.9	938.0	1,428.6

The total **thermal energy** generated by the Group's plants in 2021 was **938 GWh**, down 4% from the previous year. **49% comes from renewable sources and from cogeneration plants** (in 2020 this was approximately 38%).

THERMAL ENERGY GENERATED



In particular, the production of **thermal energy from renewable sources** in 2021 is 161.8 GWh (up **21%**), accounting for **17.2% of the total** generated: in detail, energy produced by geothermal energy (+80%) and energy from the combustion of biogas (+29%) increased considerably, while generation from waste-to-energy plants decreased (-16%). Thermal production **from cogeneration**, accounting for 31.7% of the total, increased by 26%. Lastly, electricity produced from traditional sources fell by 21%, accounting for 51.1% of the total generated in 2021. However, 13.5% of this production is highly environmentally sustainable since it comes from the waste-to-energy process for the share exceeding 51% (considered biodegradable) and is therefore classified as energy from recovery processes.

The development of biomethane

The excellent performance results of the **biomethane production plant in Sant'Agata Bolognese**, which started up at the end of 2018, were also confirmed in 2021. In 2021, the plant generated **more than 8 million cubic metres** of biomethane from approximately 130,000 tonnes of organic waste and lignocellulosic waste treated, improving by 3% the result for 2020 (7.8 million), which had already exceeded the best project expectations by 5%. It was also possible to produce 23,000 tonnes of quality compost. The biomethane produced in 2021 was fed into the grid and **destined for automotive** use through seven distributors (six of which are in Emilia-Romagna and one in Umbria), identified by signs and specific graphics with the "Biometano Gruppo Hera" logo. These distributors can be used by the public with methane-powered vehicles.

The Group is preparing **two further projects for the production of biomethane**, converting the two existing plants located in Spilamberto (Mo) and Voltana di Lugo (Ra). The two projects have started the necessary permitting processes which were completed successfully in 2021.

The **Spilamberto** project is being developed by the subsidiary **Biorg** (set up as a joint venture with the Cremonini Group's Inalca company for this very purpose), which in November 2021 began construction work and awarded contracts for the main supplies for the plant within the same year. The Spilamberto plant is expected to be completed and started up by the end of 2022, with the biomethane produced being fed into the distribution network for automotive use. Expected annual production will be **3.7 million cubic metres** of biomethane, thanks to the separate collection of organic waste and the exploitation of waste from the agri-food industry. In addition to energy recovery, the operation will also allow the **recovery of material**: the waste from the anaerobic digestion process will be further recovered through its transfer to the composting plant in Nonantola (Mo) (currently owned by Sara, another Cremonini Group company, but which will be transferred to Biorg) to produce approximately 18,000 tonnes of compost per year, which can be used as a bio-fertiliser in agriculture.

The **Voltana** project, although authorised, is awaiting the issuing of the new biomethane incentive decree that will replace the 2018 Ministerial Decree. Even if the new decree no longer incentivises projects for the conversion of existing plants (from electricity production to biomethane), as emerged from the drafts available for consultation, the proposal to revamp the Voltana plant to biomethane has already been submitted to the NRP calls for tender. The expected production of biomethane from this plant is approximately 2 million cubic metres per year. The project is expected to take about 18 months, in addition to the time needed for the previous procurement activity.

Lastly, by 2023 we will build a new anaerobic biodigester of mowing, pruning and organic waste in the **Pesaro-Urbino** province. It will be designed to treat approximately 105,000 tonnes per year of mowing, pruning and organic waste, from which it will be possible to generate **5.3 million cubic metres of**

biomethane and 28,000 tonnes of high-quality compost per year. This is a strategic operation that is even more important in view of the fact that this type of plant is not self-sufficient in the Marche region, with significant positive repercussions on the environmental and employment front.

Overall, the Group's target for **2025** is to **produce more than 16.8 million cubic metres per year of biomethane** from organic waste (more than doubling the current amount achieved). The 2030 target is even more ambitious, with an annual production of more than 30 million cubic metres.

The development of hydrogen

Hera Group's hydrogen strategy envisages moving in multiple directions, leveraging its multi-service expertise.

With regard to the **introduction of hydrogen into gas distribution networks**, the impact on roadside leak detection tools and methane odourisation are being assessed. These are the first results of the expertise developed on *blending projects* as a result of the experiments undertaken. This will enable the Group to test the behaviour of materials and relative network accessories. See the case study "Hydrogen in the gas distribution network in **Modena**" in the Appendix for more details on this specific issue.

The Group also places great emphasis on **production from renewable sources**, given the considerable amount of energy that can be obtained, for example, from the anaerobic digestion processes of sludge from urban wastewater treatment and from other biomass exploitation activities.

New business opportunities have been assessed in the **public transport** and **hard-to-abate sectors**, also in partnership with other important economic operators and with various realities of the areas served, in order to verify the cost gap compared to fossil fuels and the ancillary regulatory conditions necessary to bridge that gap by minimising the need for incentives (e.g. exemption from system charges, additions, contemporaneity). For example, a memorandum has been signed in **Ravenna** between Hera, the Municipality of Ravenna, Ravenna Holding, Start Romagna and Aess (Agency for Energy and Sustainable Development) in which the parties intend to carry out joint analysis and research activities aimed at assessing the economic and technological feasibility of a **green hydrogen supply chain development programme** (production, storage, transport and use) to be used in the **local public transport** sector in the Municipality of Ravenna. The feasibility study involved the **implementation of a refuelling station for buses fuelled by hydrogen** produced on site using an electrolysis and compression plant, fuelled largely by renewable electricity generated by a **photovoltaic plant** (the remainder will be taken from the network to cope with the discontinuity of the solar source). Once fully operational, the project will involve the purchase of a total of 10 vehicles, amounting to an annual requirement of **40 tonnes of green hydrogen**; the installed power will be 1.75 MW of photovoltaics and 875 kW of electrolysis, generating a peak production of 175 Nm³/h.

Further assessments have also been carried out in the **production of hydrogen from methane** for use in production cycles, such as the **production of fertilisers** for the agricultural sector, where hydrogen is the basic molecule in the end product. In this context, a memorandum was signed in **Ferrara** between Hera Group, Yara Italia and Sapio (leaders in the production of nitrogen and complex fertilisers and technical and medicinal gases respectively) with the aim of exploring the technological, economic and regulatory feasibility of using **green hydrogen to fuel the production of fertilisers for the agricultural sector**. In particular, the envisaged experimental hydrogen generation plant would use the renewable energy produced by the Ferrara **waste-to-energy plant** to produce hydrogen from water electrolysis and feed the nearby Yara industrial plant dedicated to fertilizer production. Sapio will be responsible for scouting plant technologies and further technical solutions to supply the Yara plant. There will be a production capacity of around **500 tonnes per year of green hydrogen**, which would be used to replace part of the same gas currently produced from fossil fuels. The location of the electrolyser is still being determined, whether at the waste-to-energy plant or at the Yara petrochemical site.

Lastly, an innovative power-to-gas plant is being built at the **Bologna Corticella water treatment plant**, closely integrated with the urban wastewater treatment process, to store renewable energy that can be used without limitation to transform hydrogen into synthetic methane using carbon dioxide. In the course of 2021 the final technical form was set up and the authorisation process started.

In 2022, Hera Group's commitment to hydrogen development will continue along the following axes:

- experimental injection into the gas distribution network of a mixture of hydrogen and methane in Modena;
- construction of a power-to-gas plant in Bologna (start of the construction phase at the end of 2022);
- feasibility study of a Hydrogen Valley in Modena, consisting of two main components: the electrolysis system at the waste-to-energy plant and/or landfill site and the Energy park.

In addition, there will be continuity in terms of the preparation of application business cases in the hard-to-abate industrial sectors and public and heavy transport, also to support possible policy and regulatory actions.

Renewable energy for the Hera Group

In 2021, 82.3% of the electricity consumption of the Group's main companies was **covered by energy from certified renewable sources**.

CONSUMPTION OF ELECTRICITY FROM RENEWABLE SOURCES

GWh	2019	2020	2021
Consumption of electricity from the renewable sources network (GO)	483.7	465.8	471.2
Total electricity consumption from the network	583.9	561.2	572.8
Consumption of electricity from renewable sources network (%)	82.8%	83.0%	82.3%

In 2021, all Group companies except Aliplast purchased electricity from renewable sources for their electricity consumption. We plan to use electricity from renewable sources for 100% of the consumption of Group's companies by 2023.

Renewable energy for our customers

Creating shared value and sustainability are the pillars on which Hera Comm bases its commercial operations and as a result the design of new offers and solutions for customers also centres around these principles. The choice of **"green" energy** is the first step in a customer's change process towards environmental sustainability, and Hera Comm helps its customers make this choice by marketing 100% "green" offers.

Hera Comm's entire retail portfolio guarantees the **supply of electricity from renewable sources certified** by the Energy Services Manager ("Guarantee of Origin"), and from the end of 2021 **the offsetting of CO₂ emissions from natural gas consumption** for new customers through the purchase of carbon credits certified by international standards that support decarbonisation projects with a positive impact on the environment and society. In 2021, purchases of carbon credits contributed to the following projects:

- A 280 MW **hydroelectric power plant** in Turkey, capable of generating about 800 GWh/year of energy, with an estimated benefit of about 470 thousand tonnes of CO₂e avoided each year. Support for this project has also created jobs for the local community during implementation and management, prevented flooding downstream of the project activity, and helped to protect certain wildlife species in the area, such as migratory water birds.
- A 25 MW **wind farm** in India, built using local workers, providing employment and economic development for the local community, with an estimated reduction of around 30 thousand tonnes of CO₂e per year.

Customers that choose these plans, can also help to reduce paper consumption by using online billing, and are on the road less since they use direct debit to pay their bills.

ELECTRICITY AND GAS CONTRACTS AT YEAR-END WITH "GREEN" OFFERS

	2019	2020	2021
Electricity contracts at year-end with electricity from renewable sources out of total electricity contracts (excluding safeguard contracts) (%)	19.8%	28.0%	36.9%
Gas contracts at year-end with CO ₂ offsets on total gas contracts (excluding default and last resort contracts) (%)	5.3%	9.6%	20.1%
Electricity and gas contracts with "green" offers on total electricity and gas contracts (excluding safeguard, default and last resort supply contracts) (%)	11.7%	16.6%	26.9%

The 2019 figure includes data on Estenergy, Amgas Blu, Ascotrade, Ascopiave Energia, Blue Meta, and Etra Energia which merged into Hera as at 31/12/2019. The 2021 figure does not include data on the company Eco Gas.

At the end of 2021, 883,601 customers had chosen green energy, representing **26.9% of the total**, an increase of more than 67% compared to 2020 (527,879). The increase was also due to the extension of these options to more recently acquired trading companies, which were previously inactive. Specifically, **renewable electricity contracts account for 36.9%** (490,738 contracts, +44%), while **gas contracts with CO₂ offsets account for 20.1%** (392,863 contracts, +110%).

The indicator was calculated excluding safeguard, default and last resort contracts since, by their very nature, it is not possible to market offers in line with the Group's commercial strategy in these markets. Including contracts in the safeguard, default, and last resort markets, 26% of energy contracts include energy efficiency solutions (36.4% of electricity contracts and 19.2% of gas contracts).

In mid-2021, the range of renewable energy offers was enriched with the **Hera Fotovoltaico** option, which allows the purchase of **photovoltaic systems** installed in a workmanlike manner which, thanks to the discount on the invoice, qualify for the tax deductions envisaged, through a "turnkey" service that starts with the technical inspection and ends with the management of administrative and tax procedures. By the end of 2021, photovoltaic panels with a total installed capacity of 850 kW had been sold.

The sale of 'green' energy

Once again, in 2021, Hera purchased enough electricity from **renewable sources** to fully **cover the consumption of all of Hera Comm's free market** household customers, not just those who have activated the dedicated offer. The transaction, which involves the purchase of **Guarantee of Origin (GO)** certificates, ensuring that the energy comes from renewable sources, was made possible thanks to the availability and price conditions such as to be able to cover the 1929 GWh consumed by Hera Comm's free market household customers who did not choose to buy electricity from renewable sources.

Including renewable energy sold to companies that have voluntarily chosen a more sustainable energy profile and that sold to Group companies, we sold **4,074 GWh** of renewable energy in 2021, accounting for **40.1%** of the electricity we sold on the **free market**.

ELECTRICITY FROM RENEWABLE SOURCES SOLD TO FREE MARKET CUSTOMERS

GWh	2019	2020	2021
Electricity from renewable sources sold	2,957.0	3,410.8	4,073.8
Total electricity sold	9,872.3	10,353.6	10,159.5
Electricity from renewable sources (% of total volume sold)	30.0%	32.9%	40.1%

The 2019 figure includes data on Estenergy, Amgas Blu, Ascotrade, Ascopiave Energia, Blue Meta, and Etra Energia which merged into Hera as at 31/12/2019. The 2021 figure does not include data on the company Eco Gas.

Considering also the markets for greater protection, the graduated protection service and the safeguard service, in 2021 **a total of 4,073.8 GWh of renewable energy was sold, equal to 34.8%** of the total electricity sold (up by almost 8 percentage points on the previous year). By their very nature, these markets do not allow offers to be made to customers that are aligned with the Group's commercial strategy, and the purchase of electricity that is sold to customers is the responsibility of the Single Buyer (in this case, electricity from renewable sources is considered as per the latest available average national fuel mix, where for 2021 the share of renewable energy is 0%).

ELECTRICITY FROM RENEWABLE SOURCES SOLD TO FREE MARKET, PROTECTED MARKET, GRADUAL PROTECTION SERVICE AND SAFEGUARD CUSTOMERS

GWh	2019	2020	2021
Electricity from renewable sources sold	3,043.4	3,482.9	4,073.8
Total electricity sold	12,830.4	12,820.7	11,714.0
Electricity from renewable sources (% of total volume sold)	23.7%	27.2%	34.8%

The 2019 figure includes data on Estenergy, Amgas Blu, Ascotrade, Ascopiave Energia, Blue Meta, and Etra Energia which merged into Hera as at 31/12/2019. The 2021 figure does not include data on the company Eco Gas.

The sale of **natural gas with CO₂ offsets** grew further in 2021, following the start of the marketing of this offer in 2019: the share sold with emissions **offsets increased from 0.8% in 2019 to 9.1% in 2021** (4.4% in 2020, more than doubling).

NATURAL GAS SOLD WITH CO₂ OFFSETTING

Million scm	2019	2020	2021
Natural gas sold with CO ₂ offsetting	16.2	127.4	288.3
Total natural gas sold (excluding volumes sold to wholesalers, default service, and last resort supply)	2,018.0	2,927.7	3,181.5
Natural gas sold with CO₂ offsets (% of the total sold volumes excluding volumes sold to wholesalers, default service, and last resort supply)	0.8%	4.4%	9.1%

The 2019 figure includes data on Estenergy, Amgas Blu, Ascotrade, Ascopiave Energia, Blue Meta, and Etra Energia which merged into Hera as at 31/12/2019. The data does not include data on the companies Eco Gas and AresGas.

Also considering the markets for default service and for supply of last resort, the total natural gas sold with CO₂ offsets in 2021 was 8.6% (4.2% in 2020).

2.04 Climate change mitigation

Hera for climate

The challenge of climate change and Hera Group's commitment

Climate change is one of the greatest challenges facing humanity today. Accepting this challenge means initiating an **ecological transformation** of technology, economy and society. Fossil fuels are one of the main causes of climate change and it is therefore essential to reduce their consumption to limit the increase of the main greenhouse gas, carbon dioxide.

The Group's commitment in this area starts with several actions taken in terms of **mitigation and adaptation** as described in this chapter

The Group's strategy for climate change mitigation mainly consists of:

- purchasing **renewable energy** to power its business;
- increasing **renewable energy production** (in particular biomethane and geothermal energy);
- initiatives and projects to **reduce its carbon footprint**. For example: energy efficiency plans from Iso 50001 certification and reduced environmental impact of the Hera fleet;
- offering solutions to **reduce the carbon footprint of customers** in all segments (households, condominiums, businesses, and public administration). For example: sale of electricity from renewable sources and natural gas with CO₂ offsetting, additional services to households and businesses for energy efficiency, district heating development, energy efficiency and renewable electricity in public lighting, energy requalification of buildings, support for urban electric mobility;
- promotion and implementation of **circular economy initiatives**, such as separate collection, commitments on plastic recycling, production of biomethane from organic waste;
- implementing **technological innovation projects and plant engineering initiatives** for a more complete environmental sustainability of its business.
- we are studying initiatives, also in partnership with other companies, aimed at **developing hydrogen as an energy vector**.

Since 2006, the Hera Group has been a member of the CDP, an independent not-for-profit organization that provides businesses and countries with a way to measure, track, manage and share information about climate change and on the sustainable use of water resources on a global scale. CDP compliance requires **measuring and reporting** all of an organisation's performance, and the initiatives taken to reduce GHG emissions. In 2021, Hera confirmed the **level A-** (on an A-D scale) of 2020, which is **higher than the average of the "Energy utilities network" sector** (level B), **the European average** (level B) and **the global average** (level B-).

Still in the field of **reporting**, this assessment contains:

- the results of our process to **align with the Recommendations of the Task Force on Climate-related Financial Disclosure (TCFD)** which started in December 2019 and involved several Departments and all the Group's Business Units;
- the first reporting of GHG emissions validated by the **Science Based Targets initiative** in March 2021.

TCFD recommendations

In 2015, the United Nations member states signed the **Paris Agreement**, committing to work to limit the global average temperature rise to well below 2°C compared to pre-industrial levels and strive to limit the increase to 1.5°C by the end of this century. In the same year, the G20's **Financial Stability Board (FSB)** established the **Task Force on Climate-related Financial Disclosures (TCFD)** to support organisations in becoming more transparent about the financial opportunities and risks linked to climate change. In 2017, the TCFD published recommendations on financial reporting (updated in 2021), which are now an international reference for corporate climate risk management. The **TCFD's recommendations** are applicable to organisations in all sectors and are classified into four areas: governance, strategy, risk management, and metrics & targets.

The Hera Group decided to adopt the approach proposed by the TCFD by launching a process of alignment with the recommendations in December 2019. The results of this have been published in the Sustainability report 2020 and the **"Hera for climate" report**. The working group dedicated to TCFD consists of: Shared Value and Sustainability Department, Enterprise Risk Management, Central Strategy, Regulation and Local Authorities Department, and Energy Management. Some steps also involved: Central Innovation Department, Administration, Finance and Control Department, HR and Organisation Central Department, Quality, Safety and Environment Department and the Business Units.

Governance of climate change issues

At the **Board of Directors** level, management of the risks and opportunities linked to climate change is supported by the **Control and Risks Committee**, the **Risk Committee** and, indirectly, the **Ethics and Sustainability Committee**, the tasks of which include monitoring the implementation of sustainability policies and the prior review of sustainability reporting to be submitted to the Board.

The **CEO** is responsible for ensuring the implementation of the sustainability and shared value guidelines through the Shared Value and Sustainability Department, one of whose functions is to coordinate the **balanced scorecard system**. In addition to chairing the **Executive Committee**, the **Chairman of the Board of Directors** is responsible for setting strategic guidelines and for decisions on **capital allocation**. In fact, the Central Department for Strategy, Regulation and Local Authorities reports directly to him.

The **Control and Risks Committee** is the advisory body set under the Corporate Governance Code to support the decisions and assessments of the Board of Directors concerning the internal control and risk management system, including risks related to 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 to include climate change in the list of relevant risks to be addressed by the Committee.

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. It coordinates the process of defining balanced scorecards, prepares corporate guidelines and reporting in the Shared Value and Sustainability area, and develops new sustainability projects. In addition to that, the head of the department is also a member of the Group's **Ethics and Sustainability Committee**.

The **Central Department for Strategy, Regulation and Local Authorities** plays a key role in the resilience of the Group's strategy. The management's forward-looking and future-oriented analysis skills were crucial in carrying out Hera Group's **first climate scenario analysis**. Among the initiatives identified to seize the opportunities defined through the scenario analysis, the most promising have been included in our 2021-2025 business plan.

Within Hera Group's organisational structure, a role in the management of climate opportunities and risks is also played by the **Administration, Finance and Control Department**, in particular for defining the annual budget and raising capital, and by the **Energy Management Department**, which supports the CEO in developing energy-saving initiatives.

With the aim of **strengthening the governance of climate change aspects**, the following internal documents have been updated during 2021: Management system manual, Group risk management policy (guideline), Management control planning (guideline), Management system review (procedure), Investment authorisation process (procedure) and Business impact analysis and risk assessment methodology (procedure). In particular, in the **"Group risk management policy" guideline**, reference to the analysis of medium-long term climate scenarios has been introduced, while the **"Management control planning"** guideline specifies that the strategic planning process must provide for medium-long term industrial development in line with the company's "Scope", i.e. the pursuit of carbon neutrality, one of the three areas of shared value creation.

The management system and Enterprise Risk Management

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

Concerning the **identification, assessment and management of climate risks**, the organisational structure adopted by the Hera Group makes it possible to manage the exposure to risk arising from its businesses and, at the same time, to preserve the effectiveness of management along the entire value chain.

In our corporate governance system, the **Control and Risks Committee**, which is a part of the Board of Directors, is responsible for monitoring the functionality of the internal control system, the efficiency of company operations, as well as compliance with laws and regulations.

The Control and Risks Committee receives regular reports from the **Risk Committee**, which is the main body for steering, monitoring, and reporting on risk management strategies, including climate risks. The Risk Committee is responsible for defining the guidelines for the **Enterprise Risk Management** process, the mapping and monitoring of corporate risks and the definition of **Risk Policies**, to submit to the Board of Directors for approval.

Specific risk analyses are conducted by the **Enterprise Risk Manager** or by the Risk Specialists, who play an essential role in identifying, assessing and controlling how risks are managed. Climate-related risks, both physical and transitional, are included in the risk categories that have been analysed by the Enterprise Risk Manager.

During 2020, the **climate scenario analysis conducted** by the cross-functional working group led the Enterprise Risk Manager to define new quantification methods to assess the potential financial impact of the most relevant climate risks, activities which continued in 2021.

Analysis of climate 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, analysis of the scenarios helps us understand how physical and transitional **climate opportunities** and **risks** may affect our business over time.

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

We chose the **IEA ETP 2DS transition** scenario, developed by the International Energy Agency, as the “ambitious” climate scenario, that described a future development characterised by strong decarbonisation processes to keep the increase in average temperatures below 2°C.

IEA ETP 2DS TRANSITION SCENARIO: KEY PARAMETERS TO 2050

Energy	■ Energy intensity (TWh/GDP): -67% vs. 2013
	■ Production of advanced biofuels: 20-fold increase from 2020 to 2025
	■ Natural gas import price: 10.2 \$/MBTU (2017: 5 \$/MBTU)
Electricity	■ Strong increase in production of electricity from renewable sources
	■ Emission factor: <40 gCO ₂ /kWh (2017: 484 gCO ₂ /kWh)
	■ 50% of solar generation from domestic panels (distributed generation)
GHG emissions	■ Demand for electricity: +68% vs. 2017
	■ CO ₂ emissions: -54% vs. 2017
	■ CO ₂ price: up to \$210/tCO ₂ (2017: Euro 5.8/tCO ₂)
	■ Carbon capture utilization and storage (Ccus): 3500 MtCO ₂ (2017: 2.4 MtCO ₂)

We selected the **IPCC RCP 8.5 physical** scenario as a “pessimistic” scenario, in order to study the possible impacts on Hera Group’s strategy in case of a “business-as-usual” pathway and a resulting large increase in average temperature (about 4° C). We selected the indicators available in the models simulating the RCP 8.5 scenario from the results of an analysis previously conducted by Enterprise Risk Management, which involved the business units in order to identify the climate events to which they are most exposed.

PHYSICAL SCENARIO RCP 8.5: KEY PARAMETERS

Dimension	Parameter	1980-2005	Trend to 2050
Precipitation	No. of days with heavy rainfall	23 days	↘
	No. of rainy days	90 days	↘
	Consecutive days without rain	25 days	↗
Temperatures	Average maximum temperature	17.5 °C	↗ ↗
	Average minimum temperature	8.5 °C	↗ ↗
	Heating degree days	1950 DD	↘ ↘
Sea	Sea level	+8cm (vs. 1990)	↗ ↗

At the same time, we defined **timescales** to distinguish and classify risks, opportunities and impacts as short-, medium- and long-term. This strategic approach enables us to go beyond the traditional time frame of the business plan.

Short-term

Medium-term

Long-term

From 0 to 5 years

From 5 to 10 years

From 10 to 30 years

Business plan timescale

Decarbonisation timescale

European Green Deal timescale

Risks and opportunities arising from climate change

The analysis of the ETP 2DS and RCP 8.5 climate scenarios identified **eight physical risks**, **eight transition risks**, and **15 opportunities**. Each risk and each opportunity has been linked to:

- a timescale;
- a priority level (defined as the combination of the level of likelihood that the context in which Hera operates will change as 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 RCP 8.5 climate scenario analysis conducted by the Hera Group, combined with the investigations already carried out by Enterprise Risk Management together with the business units, identified **eight physical risks**. The physical risks are distributed over the medium- and long-term timescales, with more occurrences in the 2031-2050 horizon consistent with the notion that the impacts of climate change will become increasingly evident in the long term. To mitigate, manage or transfer these risks, we also identified **21 management methods**. Some of the management methods envisaged in the 2021-25 business plan are explained in the following section on Hera's climate strategy.

CPR SCENARIO 8.5: SUMMARY OF PHYSICAL RISKS AND HOW TO MANAGE THEM

8 Physical risks

21 Management methods
(no. and category of risk)

Changing weather and climate phenomena	2 average period 2 long period	6 Acute 8 Chronic
Rising temperatures	2 average period 1 long period	2 Acute 3 Chronic
Rising sea levels	1 long period	2 Chronic

Short-term horizon: 2022-2025; Medium-term: 2026-2030; Long-term: 2031-2050

Of the eight physical risks assessed, we subjected those with a higher priority level to an in-depth analysis to quantify their **financial impacts**. In particular, the risk associated with the **decline in gas consumption and district heating** for civil use as a result of the **temperature increase** was assessed as significant in the long term.

Further **assessments are underway** regarding risks related to weather and climate phenomena, with particular reference to flooding and its effect on the group's assets.

Transition risks

We identified transition climate risks mainly by the analysis of the International Energy Agency's ETP 2DS scenario. The analysis led to mapping **eight transition risks**, mainly concentrated in the medium-term time horizon and distributed over two out of three categories of the classification suggested by the TCFD. We also linked each risk to **one or more management methods**, for a total of **12** that will allow the Group to be better prepared for possible future changes. Some of the management methods envisaged in the 2021-25 business plan are explained in the following section on Hera's climate strategy.

IEA 2DS SCENARIO: SUMMARY OF TRANSITION RISKS AND HOW TO MANAGE THEM

8 Transition risks		12 Management methods (no. and category of risk)
CO ₂ : -54% by 2050	4 average period	1 Political-Regulatory/Reputation 2 Political-Regulatory 1 Market 1 Reputation
Electricity: increasing demand and FER share	3 average period 1 long period	2 Technology 3 Market 2 Political-Regulatory
Short-term horizon: 2022-2025; Medium-term: 2026-2030; Long-term: 2031-2050		

We further investigated the transition risks considered to be a priority to assess their **financial impacts**. The risks related to trends in **energy efficiency** and **electrification of consumption**, and to the extension of **carbon pricing systems** were found to merit further assessment. We defined management methods and monitoring indicators for each risk class.

Opportunities

The Hera Group identified the opportunities arising from decarbonisation processes on the basis of the International Energy Agency's ETP 2DS scenario. The analysis led to the identification of **15 opportunities**, mainly associated with projected reductions in greenhouse gas emissions, increased demand for electricity and greater use of renewable energy sources and the development of advanced biofuels. Most of the opportunities are expected in the short term and we identified **36 initiatives** to seize them.

We classified ten of the opportunities as **relevant in the short term** (by 2025). We further developed the initiatives designed to capture the most promising opportunities to feed into Hera Group's new **2021-2025 business plan**. The following section describes how the new plan seizes the opportunities to participate in the decarbonisation process and what initiatives will be implemented to achieve the objectives.

IEA 2DS SCENARIO: OVERVIEW OF OPPORTUNITIES AND INITIATIVES

15 Opportunities		36 Initiatives (no. and category of opportunity)
CO ₂ : -54% by 2050	6 short period 1 long period	5 Efficient use of resources 1 Energy sources 6 Products and services 5 Markets
Electricity: increasing demand and FER share	3 average period 3 long period	8 Products and services 3 Energy sources 1 Efficient use of resources
Energy: increase in advanced biofuels	1 short period 1 average period	6 Energy sources 1 Products and services
Short-term horizon: 2022-2025; Medium-term: 2026-2030; Long-term: 2031-2050		

Hera's climate strategy

Hera Group's new 2021-2025 business plan takes the sustainability guidelines of **European policies** as a reference and confirms the **Sustainable Development Goals** as the basis for the creation of shared value.

The framework of the new business plan consists of **three strategic dimensions: climate and environment, economy and society and innovation and skills**, which the Group's projects in all its businesses are built around, to combine the development of the multi-utility with that of the context in which it operates, in a "win-win" perspective to increase the share of EBITDA "with shared value" (EBITDA CSV).

The EBITDA CSV indicator measures the share of the Group's consolidated EBITDA generated by business operations that respond to the drivers of change and related impact areas identified in the shared value creation model that informs Hera's approach to sustainability.

In the new model which was updated last year, one of the three drivers of shared value creation is the **pursuit of carbon neutrality** of the services we provide, both for the benefit of customers and of the

local ecosystem. The actions envisaged to fight climate change therefore play an important role in the environmental dimension and in the shared value creation model.

The strategic framework reaches beyond the Plan's timeframe, to 2030. Particularly noteworthy here are the targets for reducing greenhouse gas emissions in line with the criterion of the Science Based Targets initiative, which are discussed in detail in the following section.

The physical and transitional risk management and business initiatives linked to the opportunities included in our 2021-2025 business plan are outlined below.

Physical risk	Timescale	Priorities	Management method
Floods and flooding with resulting landslides and mudslides	Medium term 2026-2030	Medium-high	■ Infrastructural upgrading of drainage networks, reservoirs and water treatment plants ■ Increased alert capacity for extreme events in critical areas
Rising temperatures	Long-term: 2031-2050	Medium-high	■ Market strategies oriented towards the development of customer-dedicated VAS to complement and enrich the offer portfolio
Extreme weather events	Medium term 2026-2030	Medium-low	■ Network resilience plan and reinforcement of the electricity distribution network in the face of extreme winter events with interventions on overhead powerlines and substations
Changes in the distribution over time of annual precipitation and average rainfall amounts	Long-term: 2031-2050	Medium-low	■ Strengthening and expanding water resources to increase the resilience of water networks ■ Construction of interconnections between water networks ■ Enhancement of the application of advanced leak detection techniques to increase the efficiency of the network

Transition risk	Timescale	Priorities	Management method
Electrification of energy consumption and development of renewable energy sources	Medium term 2026-2030	Medium-high	■ Commercial proposition aimed at the development and sale of photovoltaic systems, consumer and utility scale, and the development of sustainable mobility ■ Acquiring increasing shares of electricity customers as a result of energy carrier switching ■ Increased presence in electricity distribution
Limits on the generation of greenhouse gas emissions	Medium term 2026-2030	Medium-high	■ Reducing the group's carbon footprint with energy efficiency improvement projects, increasing optimised consumption management and the use of zero-emission energy sources
Introduction of measures requiring structural and non-structural efficiency measures	Medium term 2026-2030	Medium-high	■ Specific projects in the field of energy efficiency ■ Enhancement of advanced techniques aimed at limiting the use of primary resources in the field of: ■ water (reduction of water losses, reuse of water resources) ■ waste (initiatives to enhance recovery and recycling)

Opportunities	Timescale	Priorities	Initiative
Air quality and urban emissions policies, including incentives for efficient district heating systems	Short-term 2022-2025	Medium-high	- Production capacity saturation of existing district heating systems - Conversion of district heating plants to "Efficient district heating systems" - Installation of CO₂ capture, utilisation and storage for waste-to-energy plants "CLIMA" project to reduce gas network losses
Fiscal bonus for energy efficiency and EU incentives for decarbonisation	Short-term 2022-2025	Medium-high	Services for energy efficiency in buildings
Raising customer awareness and increase of green offers by utilities	Short-term 2022-2025	Medium-high	- Green loyalty programmes with value-added services for energy efficiency and carbon neutrality - NexMeter installation
Technological optimisation and plant efficiency improvement	Short-term 2022-2025	Medium-high	Plant optimisation through revamping
Stimulating the circular economy and increasing demand for recycled plastics and/or bioplastics	Short-term 2022-2025	Medium-high	Increase of plastic recycling activities
Dissemination of Renewable Energy Communities and Environmental Communities, and increase of distributed renewable energy demand	Short-term 2022-2025	Medium-high	Promoting the sales of domestic photovoltaic systems ("Energy garden" project)
Development of electric transportation and increased demand for electricity along road infrastructure	Short-term 2022-2025	Medium-high	Converting the fleet to low-carbon vehicles
Production of biomethane through recovery processes (possible eligibility for incentives)	Short-term 2022-2025	Medium-high	- Production of biomethane from FORSU - Production of biomethane from pruning material
Production of syngas and/or green gas (hydrogen, biogas) for the decarbonisation of the gas chain and to handle overproduction of renewable energy	Medium term 2026-2030	Medium-high	- Construction of Power-to-Methane plants for electrical energy storage - Experimental hydrogen injection into the gas network in Castelfranco Emilia (Mo)
Strengthening Hera's position as a reference point for local and urban sustainability	Short-term 2022-2025	Medium-low	Construction 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 depleted landfills and water service facilities

Climate performance and targets

The Hera Group's strategy to **seize the opportunities** linked to decarbonisation and **mitigate the risks** of climate change is also governed by monitoring specifically defined **KPIs**.

On the one hand, **greenhouse gas emission** indicators and related **intensity indices** measure the company's overall ability to reduce its climate impact and minimise risks. On the other hand, the **metrics that influence emissions**, reclassified in line with the new TCFD guidelines (Guidance on Metrics, Targets, and Transition Plans - 2021). These quantitative measures, which include economic-financial indicators, capture how Hera Group is redesigning its internal processes and, above all, its commercial offering to seize the opportunities offered by regulatory, technological, and market developments related to decarbonisation.

The following table summarises the types and number of indicators that apply to each monitoring area. The indicators are set out in the appendix to this report.

Monitoring scope	Indicators	Of which with target / forecasts
Emissions	12	10
Intensity index of emissions	6	2

Monitoring scope	Indicators	Of which with target / forecasts
Risks and opportunities	5	0
Investments and use of capital	5	0
Remuneration	3	0
Other TCFD metrics - Energy	12	9
Other TCFD metrics - Resources	7	6
Total indicators	50	27

GHG emissions of Hera Group

The **Group's total emissions** (Scope 1 + Scope 2 + Scope 3) in 2021 were about **12,345 thousand tonnes of CO₂e**.

Specifically, the **emissions directly produced** by the Group (Scope 1) are equal to 982 thousand tonnes of CO₂e and represent 8.0% of the Group's total emissions. The Group's **indirect emissions from consumption of electricity** (Scope 2), using the market-based method, amount to more than 46 thousand tonnes of CO₂e and represent 0.4% of the Group's total emissions.

The **emissions indirectly caused by the Group's activities** (Scope 3) amount to 11,317 thousand tonnes of CO₂e, equal to 91.6% of the Group's total emissions. According to the "Technical Guidance for Calculating Scope 3 Emissions" published by the GHG Protocol, Scope 3 emissions can be divided into two categories: upstream (upstream categories) and downstream (downstream categories). The Hera Group's Scope 3 includes the following emission categories:

- upstream category (4,365 thousand tonnes of CO₂e, 35.3% of the Group's total emissions): production of fuels consumed for the generation of 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; 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's vehicles for waste transport; production and printing of bills;
- downstream category (6,952 thousand tonnes of CO₂e, 56.3% of the Group's total emissions): consumption by customers of natural gas sold; production of energy by joint venture plants; recycling of waste from separate waste collection.

[305-1]

[305-2]

[305-3]

COMPOSITION OF GREENHOUSE GAS EMISSIONS

thousands of t CO ₂ e	2019	2020	2021	Delta 2021/2020
Waste treatment (waste-to-energy and landfills for municipal waste)	613.1	580.3	569.7	-1.8%
District heating	201.4	171.7	197.7	+15.1%
ASE and HSE energy services and other fuel consumption (methane, diesel, LPG)	208.9	186.4	170.5	-8.5%
Leaks in the gas network	28.8	18.2	13.7	-24.3%
Company fleets (diesel, petrol, LPG, natural gas)	30.5	29.7	30.2	+1.6%
Total direct emissions (Scope 1)	1,082.6	986.2	981.8	-0.5%
Indirect emissions from energy consumption (Scope 2, market-based)	48.4	44.4	46.6	+5.0%
Total emissions Scope 1 + 2 (market-based)*	1,131.0	1,030.6	1,028.4	-0.2%
Sale of methane gas - downstream emissions*	6,268.5	5,915.0	6,214.3	+5.1%
Sales of electricity*	4,386.7	4,195.8	3,170.3	-24.4%
Sale of methane gas - upstream emissions	814.7	769.0	1,063.5	+38.3%

thousands of t CO ₂ e	2019	2020	2021	Delta 2021/2020
Emissions from energy production and consumption (not included in Scope 1 and 2)	418.6	309.3	359.6	+16.3%
Other indirect emissions	612.0	423.9	509.0	+20.1%
Total indirect emissions (Scope 3)	12,495.4	11,613.0	11,316.7	-2.6%
Total emissions Scope 1 + 2 (market-based) + Scope 3	13,626.4	12,643.6	12,345.1	-2.4%

The calculation criteria are aligned with the methodology of the Science Based Targets Initiative. The 2019 figure includes data on EstEnergy, Amgas Blu, Ascotrade, Ascopiave Energia, Blue Meta, and Etra Energia which merged into Hera as at 31/12/2019. The calculation specifications adopted are detailed in the appendix.

*Indicators with validated science-based target. For electricity sales, the target is related to carbon intensity (t CO₂e/MWh). See the section on "Greenhouse gas reduction targets" for more details.

In 2021, total GHG emissions (Scopes 1, 2 and 3) **decreased by 2.4%** compared to 2020.

In particular, direct emissions (**Scope 1**) and indirect emissions from electricity consumption (**Scope 2**) remain broadly stable (-0.2%) compared to 2020. This is due to lower emissions from waste treatment plants (-1.8%), fuel consumption (-8.5%) and gas network losses (-24.3%), offset by increased emissions from district heating (+15.1%) and company fleets (+1.6%). Considering the change from base year 2019 for the validated science-based targets, scope 1 and 2 emissions are reduced by 9.1%.

Scope 2 emissions in 2021 are 46.6 thousand tonnes, up 5.0% from 2020 as a result of higher consumption of non-renewable electricity (+6.6%), partially offset by a reduction in the emission factor (-1.6%). The value of Scope 2 emissions shown above was calculated using the market-based method, which makes it possible to attribute value to the organisation's specific energy purchase choices, i.e. the part of renewable energy purchased with Guarantee of Origin certificates and therefore with zero impact; an emission factor relative to the national "residual mix" (for 2021 equal to 412 g CO₂e/kWh) is applied to the residual share of electricity purchased without certificates. On the other hand, Scope 2 emissions calculated with the location-based method amount to approximately 154 thousand tonnes, calculated by applying the Italian average emission factor from electricity production, which does not take into account the company's specific purchasing choices.

Total indirect **Scope 3** emissions in 2021 are around 11.3 million tonnes of CO₂e, **down 2.6%** from the previous year. For an analysis of the trend in indirect Scope 3 emissions, see a later section on greenhouse gas reduction targets.

GHG emissions under the EU-ETS

The **European Union Emissions Trading System (EU ETS)** is a cornerstone of the European policy to fight climate change and a key tool for cost-effective reduction of greenhouse gas emissions in regulated sectors. The system covers about 45% of European emissions and in January 2021 its fourth phase of application began, to end in 2030. By 31 March of each year, installations in the regulated sectors must report the greenhouse gas emissions recorded in the previous calendar year, and by 30 April cancel a number of emission permits ("European union allowances", 1 Eua = 1 t CO₂) made available on the market at a calibrated and decreasing rate over time to **encourage a gradual reduction of emissions** in accordance with the medium to long term EU objectives.

In "**Fit for 55**", the package of legislative proposals presented in July 2021 by the European Commission, the new targets for reducing greenhouse gas emissions are defined: from -40% to -55% by 2030 compared to 1990. The new contribution to be made by the sectors covered by the EU ETS corresponds to an increase in the reduction from -43% to -61% compared to 2005. A forthcoming revision of the ETS Directive will therefore support these new objectives, including by extending the sectors involved.

In the Hera Group there are **eight plants subject to EU ETS regulations** in 2021, **all** of which are related to energy production at the service of **district heating networks**. At the end of 2020, the S. Giacomo thermal power station in Bologna left the EU ETS scope. The emissions recorded in 2021, equal to 150,508 tonnes of CO₂, are higher than those of 2020 (119,728 tonnes of CO₂), mainly due to the effect of a different seasonality and a generalised greater energy production, especially by the largest plant, the Imola cogeneration plant. To take into account the fact that district heating is a public utility service and that it meets environmental sustainability criteria, the charge associated with actual emissions imposed by the ETS system is partly mitigated by **free allocation** of EUA or a maximum allowed amount of emissions within which no charges are made. This amounted to a total of 28,380 t CO₂ in 2021 (up from 23,219 t CO₂ in 2020 due to the change in the regulatory period); in particular, the EUAs allocated for free in 2021 amounted to 7,907 t CO₂ (13,246 t CO₂ in 2020).

In 2021, emissions from plants under EU-ETS accounted for 15.1% of the Group's total direct emissions (in 2020 they were 12.1%).

Carbon intensity indices [305-4]

The Group's emission results can be represented by a number of indices that indicate their evolution and prospects, giving a picture of the company's performance in reducing impact in terms of greenhouse gases emitted. By relating direct emissions (Scope 1) and indirect emissions from energy consumption (Scope 2) to certain economic and demographic indicators, we can obtain **carbon intensity indices** that reflect the improvements generated.

CARBON INTENSITY INDICES

	2019	2020	2021
Total emissions – Scopes 1 and 2 (t CO ₂ e)	1,131,035	1,030,620	1,028,381
EBITDA (millions of Euro)	1,085	1,123	1,224
Carbon intensity indices (t CO ₂ e Scope 1 and 2 / EBITDA millions of Euro)	1,042	918	842
Residents served (thousands)	4,332	4,221	4,224
Carbon intensity indices (t CO ₂ e Scope 1 and 2 / thousands of residents served)	261	244	244

The calculation criteria are aligned with the methodology of the Science Based Targets Initiative. The 2019 figure includes data on EstEnergy, Amgas Blu, Ascotrade, Ascopiave Energia, Blue Meta, and Etra Energia which merged into Hera as at 31/12/2019.

The emission intensity index calculated as the ratio of Scope 1 and 2 greenhouse gas emissions to **EBITDA** improved compared to the previous year (-8.2%) due to the increase in EBITDA and substantially stable emissions. The same index calculated on **revenues** shows an improvement from 137 tonnes of CO₂e in 2020 to 94 (-31.3%) due to a change in revenue. The ratio on a **public citizen** basis is unchanged (emissions and number of the public served remain stable compared to the previous year). Relating Scope 3 emissions to the number of **customers**, the emission intensity index is about 5 tonnes per customer.

By comparing the emissions generated by power and heat plants with the energy produced by the plants themselves, the carbon intensity **index of power generation** in 2021 is **458 kg CO₂e/MWh, down 21%** from the 2013 baseline (580 kg/MWh).

CARBON INTENSITY INDEX OF ELECTRICITY SALES

	2019	2020	2021
Emissions from the sale of electricity (t CO ₂ e)	4,386,685	4,195,757	3,170,303
Electricity sold (MWh)	12,010,215	12,258,095	11,301,302
Carbon intensity index of electricity sales (t CO ₂ e / MWh)*	0.365	0.342	0.281

*Indicator with validated science-based target. See the section on "Greenhouse gas reduction targets" for more details. The calculation criteria are aligned with the methodology of the Science Based Targets Initiative. The 2019 figure includes data on EstEnergy, Amgas Blu, Ascotrade, Ascopiave Energia, Blue Meta, and Etra Energia which merged into Hera as at 31/12/2019.

The carbon intensity **index of electricity sales** also improved, amounting to 0.281 t CO₂e/MWh in 2021 (-17.8% compared to 2020). This result was achieved thanks to the higher volumes of renewable electricity sold with Guarantee of Origin on the total compared to the previous year, as reported in the section "[Renewable energy for our customers](#)" in this chapter.

Greenhouse gas emissions reduction targets

As part of the process of aligning our reporting with the TCFD recommendations, we explored climate and transition scenarios with a 2050 time horizon. On the basis of these studies, 15 development opportunities were identified for the businesses managed by the Group, which were translated into initiatives during the preparation 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 greenhouse gas emissions, both direct and indirect.

On the basis of the above, we have defined our **emission reduction targets for 2030** compared to 2019 in line with the **Science Based Target Initiative** method (with particular regard to the "Well below 2°C" level) and included in the **2021-2025 business plan** approved in January 2022. The scope of the targets includes both the Group's emissions (Scope 1 and 2) and those of its customers (Scope 3, for the sales of electricity and the sales of natural gas downstream) and therefore applies to 86.5% of the Group's total 2019 emissions. The targets 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 greenhouse gas emission reduction targets 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 from bioenergy consumption and combustion of the biodegradable fraction of municipal solid waste);
- Scope 2: **increase the share of certified renewable electricity purchased to cover domestic consumption from 83% to 100%** by 2023;
- Scope 3 downstream methane gas sales: **absolute reduction of 30%** by 2030 compared to 2019;
- Scope 3 electricity sales: **reduction of carbon intensity (t CO₂e/MWh) by 50%** by 2030 compared to 2019 in line with the Sectoral decarbonisation approach (Sda).

Based on these targets, the reduction in greenhouse gas emissions for the defined period 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 used as a reference for defining the targets: decarbonisation of electricity production, increase in energy efficiency, and electrification of consumption.

Below is a table showing the development over the last three years of indicators with 2030 targets validated by SBTi. The 2025 forecast as per the 2021-25 Business Plan is also shown.

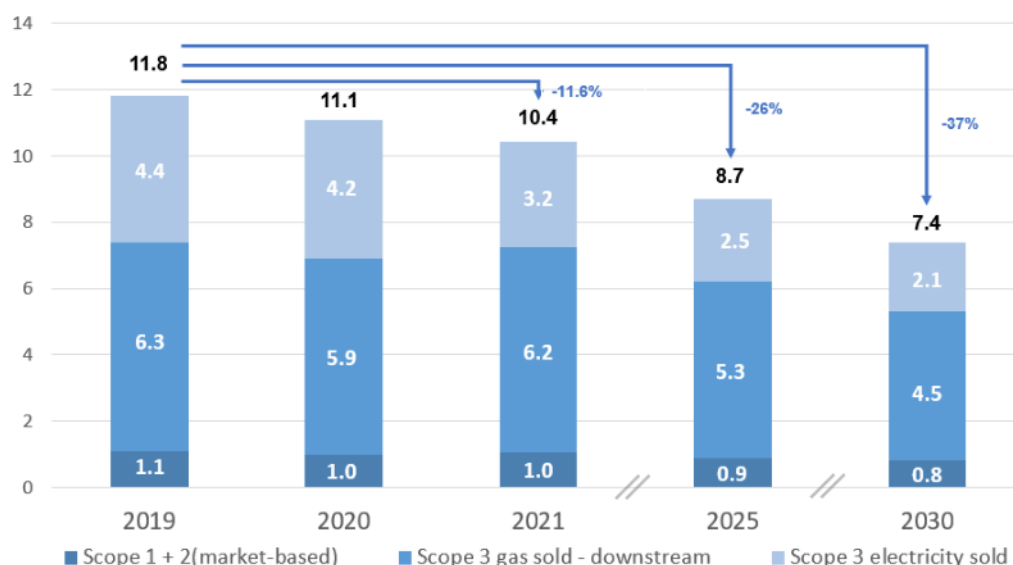
GREENHOUSE GAS EMISSIONS AND SCIENCE-BASED REDUCTION TARGETS

	2019 (base year)	Delta 2020/2019	Delta 2021/2019	2025 (forecasts)	2030 target
Direct and indirect emissions Scope 1+2 (market-based)	1,131.0 kt CO ₂ e	-8.9%	-9.1%	-20%	-28%
Indirect emissions Scope 2 (market based)*	48.4 kt CO ₂ e	-8.3%	-3.7%	-100%	-100%
Indirect emissions Scope 3 downstream from sale of natural gas	6,263.5 kt CO ₂ e	-5.6%	-0.8%	-15%	-30%
Carbon intensity of electricity sales - Scope 3 upstream	0.365 t CO ₂ e/MWh	-6.3%	-23.2%	-34%	-50%

*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 data on EstEnergy, Amgas Blu, Ascotrade, Ascopiave Energia, Blue Meta, and Etra Energia which merged into Hera as at 31/12/2019.

Furthermore, the chart below shows the GHG emissions in the three-year period 2019-2021, those expected in 2025 based on the 2021-25 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 data on EstEnergy, Amgas Blu, Ascotrade, Ascopiave Energia, Blue Meta, and Etra Energia which merged into Hera as at 31/12/2019.

In 2021, **Scope 1 and 2** emissions **decreased by 9.1%** compared to 2019, mainly due to the reduction of emissions from waste treatment plants (landfills and waste-to-energy plants, also thanks to the closure in 2020 of the Ravenna waste-to-energy plant) and to a lesser extent from district heating, industrial cogeneration, and the gas network in the form of leaks.

With regard to **Scope 3 emissions related to the sale of natural gas (downstream) and the sale of electricity**, the reduction recorded in 2021 compared to 2019 is 11.9%, mainly due to higher volumes of renewable electricity sold and, to a lesser extent, lower quantities of electricity sold. Emissions related to volumes of gas sold in 2021, on the other hand, are almost unchanged compared to 2019 (-0.8%), after the drop recorded in 2020 as a result of milder winter temperatures and lower thermal energy needs associated with the health emergency.

In short, considering the perimeter of GHG emissions for which the 2030 reduction target has been defined compared to 2019, the second annual report following the validation of the science-based targets by SBTi shows a **decrease of 11.6%** as a result of the trends described above.

Emissions avoided or compensated

[305-5]

GHG EMISSIONS AVOIDED OR COMPENSATED

thousands of t CO ₂ e	2019	2020	2021
Direct emissions avoided (Scope 1)	557.6	506.5	540.1
Indirect emissions from energy consumption avoided (Scope 2)	169.6	156.2	148.4
Other indirect emissions avoided (Scope 3)	1,608.7	1,283.7	1,272.0
Emissions compensated	-	257.6	582.8
Total emissions avoided or compensated	2,335.9	2,204.0	2,543.3

Thanks to the Group's activities in 2021, a total of approximately **2.5 million tonnes** of greenhouse gases were avoided. Comparing this value to the number of inhabitants served by the Group, **602 kg of greenhouse gases per person were avoided**.

Emissions avoided or offset as a result of the following activities are considered in the calculation:

- Scope 1: electricity and heat production from renewable sources compared to the average national production mix; use of district heating compared to traditional heating with methane and diesel boilers; energy saving measures compared to a scenario with unchanged consumption; separate collection compared to a scenario with only undifferentiated collection;
- Scope 2: Energy saving measures compared to a scenario with unchanged consumption; consumption of energy from renewable sources (either through purchase of guarantee of origin certificates or considering the national fuel mix) compared to energy consumption as per the national average mix;
- Scope 3: Energy saving measures in public lighting compared to a scenario with unchanged consumption; white certificates compared to a scenario with unchanged consumption; sale of renewable energy (either through purchase of guarantee of origin certificates or considering the national fuel mix) compared to the sale of energy as per the national average mix; sale of Aliplast's recycled plastic compared to the sale of virgin plastic; to a lesser extent, domestic self-production through the sale of photovoltaic panels and use of recycled paper for printing bills compared to bills printed on non-recycled paper.

Furthermore, **emissions offsets** from the sale of methane gas to customers are also included in the calculation (see the section "Energy transition and renewables" for more details) and, to a lesser extent, CO₂ sequestration from trees planted as a result of Group initiatives.

3. ENVIRONMENT - REGENERATING RESOURCES AND CLOSING THE LOOP

3.01 Objectives and performance

What we said we would do	What we have done	SDGs	Progress*
Transition towards a circular economy			
Achieve 75% of separate waste collection by 2024 also by major investments focused on engaging residents and businesses (77% Hera, 60% AcegasApsAmga, 73% Marche Multiservizi).	65.3% separate collection in 2021 (stable compared to 2020 due to regulatory changes) (65.9% Hera, 57% AcegasApsAmga, 73% Marche Multiservizi) (see page 73).	11, 12	
Reach a >75% recycling rate for packaging by 2024 and a 67% overall recycling rate for municipal waste by 2030 (exceeding the EU objectives for 2035).	73% packaging recycling rate in 2020 (+1 percentage point compared to 2019). The overall recycling rate was 55% in 2020. The 2021 data will be accounted for in the "Tracking Waste" report (see page 304)	11, 12	
Increase by 70% by 2025 and by 150% by 2030 (compared to 2017) the plastic recycled by Aliplast, increase by 30% the plastic collected in the municipalities served, and by 50% the plastic selected and sent for recycling by the Group's plants. Those are the commitments made under the "New Plastics Economy Global Commitment" of the Ellen MacArthur Foundation to fight pollution from plastic waste.	+36% plastics recycled by Aliplast in 2021 (compared to 2017), +28% plastics collected in the municipalities served and +17% plastics sorted and sent for recycling by the Group's plants, in line with the 2025 commitments for the Ellen MacArthur Foundation's "New Plastics Economy Global Commitment" (see page 304).	11,12,17	
Reuse 9% by 2024 and 15% by 2030 of reusable wastewater out of total wastewater.	6.0% by 2021 of reusable wastewater out of the total wastewater of Hera and AcegasApsAmga (it was 5.1% in 2020).	6, 8, 12, 14	
Reduce by 17% the internal water consumption by 2024 and by 25% by 2030, compared to 2017 consumption.	16.6% reduction in internal consumption in 2021 compared to 2017 consumption due to specific water saving activities	6, 8	
26% of customers with "Water Consumption Diary" in 2021 equal to 200,000 customers.	202,773 household customers with the "Consumption Diary" at the end of 2021 (27% of resident household customers; it was 20% at the end of 2020).	6, 8, 17	
-4% linear water losses by 2024 and -10% by 2030 compared to 2018.	-2% linear water losses in 2020 (9.9 m³/km/day) compared to 2019 (10.1 m³/km/day) (see page 97).	6, 8	

What we said we would do	What we have done	SDGs	Progress*
Sustainable management of water resources			
Achieve 100% compliance for urban areas >2,000 p.e. by end 2023 by continuing the compliance plan for the sewage and depuration sector. In addition, 247 urban areas of the 249 served with between 200 and 2,000 p.e. in 2021, of which: ■ Achieve compliance for 212 urban areas of the 212 served with between 200 and 2,000 p.e. in Emilia-Romagna (73 yet to achieve compliance as of 2021); ■ Achieve compliance for 35 urban areas of the 37 served between 200 and 2,000 p.e. in Triveneto (two that will become compliant by 2030) By 2021, implement further 5 measures in urban areas of more than 10,000 p.e. in relation to the requirements of Resolution 201/2016 of the Regional Government of Emilia-Romagna on the compliance of urban wastewater sewage (12 interventions in total carried out by 2021, compared to 36 to be carried out by end of 2030).	In 2021, Regional resolution N. 2153 redefined the total number of urban units, the priority and timing of interventions in Emilia-Romagna. 99.6% urban areas >2,000 p.e. compliant at end 2021 (97.6% at end 2020). In addition, 180 urban areas of the 239 served with between 200 and 2,000 p.e. in 2021, of which: ■ 144 achieve compliance out of 202 managed with between 200 and 2,000 p.e. in Emilia-Romagna; ■ 36 achieved compliance out of 37 managed with between 200 and 2,000 p.e. in Triveneto (1 to be upgraded by 2025) 2 measures were carried out in 2021 in urban areas of more than 10,000 p.e. (in Emilia-Romagna) in relation to the requirements of Resolution 201/2016 of the Regional Government of Emilia-Romagna on the compliance of urban wastewater sewage. (see page 106).	6, 14	
1 further intervention concluded in the Rimini Seawater Protection Plan, thus bringing to 10 the number of interventions concluded by the end of 2021 out of the 14 that make up the Plan.	The work planned for 2021 (construction of the southern backbone) will be completed in 2022 (see page 315).	6, 14	
77% of users served in areas with a Water Safety Plan defined by 2024 and 100% by 2030 (12.8% in 2020).	22.6% users served in areas with a Water Safety Plan (see page 102).	6	
Protection of air, land, and biodiversity			
256,000 square metres of land reused between 2021 and 2024 to design, build, and upgrade infrastructure (66% of the total land involved in new designs, constructions and upgrades).	30,000 square metres of soil reused in infrastructure projects completed in 2021 (61% of the total soil involved) (see page 122).	8	
13% increase of the volume served by district heating by the end of 2024 compared to 2019, improving the air quality in the cities we served. In Bologna, continue the design of the CAAB/Pilastro and Sede S. Giacomo interconnection to significantly reduce CO ₂ and NO _x emissions.	3.5% increase in volume served by district heating in 2021 compared to 2019 (+1% compared to 2020). Continued planning of the CAAB/Pilastro and Sede S. Giacomo interconnection, with work scheduled to start in 2023 (see page 116).	7, 11, 13, 14	
>300 public infrastructure works installed by 2024 for electric transportation in cities.	194 public infrastructure works installed in 2021 for electric transportation in cities (104 at the end of 2020). (See page 121)	11, 17	
*  Result achieved or in line with plans.  Result with moderate deviation from planning.			
What we will do		SDGs	
Transition towards a circular economy			
76% separate collection by 2025 also thanks to a strong investment focused on the engagement of the public and businesses (77% Hera, 70% AcegasApsAmga, 73% Marche Multiservizi) (65.4% in 2021).		11, 12	
76% packaging recycling rate by 2025 and >80% by 2030 (higher than EU 2030 targets).		11, 12	

What we will do

SDGs

Increase in recycled plastics:	
+125% plastics recycled by Aliplast by 2025 and +150% by 2030 (compared to 2017) + 30% more plastic collected in the municipalities served as part of the Ellen MacArthur Foundation's 'New Plastics Economy Global Commitment' to combat plastic waste pollution. - Building an innovative plant in Modena for the production of high quality recycled polymers for the IT and electronics sector. Start of construction of a new carbon fibre recycling plant in 2022, reusable in particular in the automotive sector.	11, 12, 17
8.5% by 2025 and 15% by 2030 reusable wastewater out of total wastewater.	6, 8, 12, 14
20% reduction in domestic water consumption by 2025 and 25% by 2030 compared to 2017 consumption.	6, 8
260 thousand customers with "Water Consumption Diary" in 2022, or 35% of the total (202.7 thousand customers in 2021, or 27% of the total).	6, 8, 17
-2% linear water loss by 2025 and -8% by 2030 compared to 2019.	6, 8
Sustainable management of water resources	
Achieve 100% compliance for urban areas >2,000 p.e. by end 2023 by continuing the compliance plan for the sewage and depuration sector. In addition, 239 urban areas compliant of the 239 managed between 200 and 2,000 p.e. in 2025, of which:	
202 urban areas compliant of the 202 managed with between 200 and 2,000 p.e. in Emilia-Romagna (58 still to become compliant); 37 urban areas compliant of the 37 managed with between 200 and 2,000 p.e. in Triveneto (1 still to become compliant);	6, 14
Implementation by 2030 of a further 26 interventions in urban areas of more than 10,000 p.e. in relation to the requirements of Resolution 201/2016 of the Emilia-Romagna Region on the upgrading of urban wastewater discharges.	
By 2025 complete all 14 interventions foreseen in the Rimini Bathing Safety Plan (9 interventions completed by 2021).	6, 14
57% of users served in areas with a Water Safety Plan defined by 2025 and 100% by 2030 (22.6% in 2021).	6
Protection of air, land, and biodiversity	
878,000 square metres of soil reused by 2025 in infrastructure projects (70% of the total soil involved in projects completed from 2018 to 2025).	8
11% increase of the volume served by district heating by the end of 2025 compared to 2020, improving the air quality in the cities we served.	7, 11, 13, 14
In Bologna, continue the design of the CAAB/Pilastro and Sede S. Giacomo interconnection to significantly reduce CO ₂ and NO _x emissions.	
4,000 charging infrastructures (public and private) installed by 2025 for electric mobility.	11, 17
ECO Trees initiative: 10,000 trees planted and maintained over the three-year period 2022-2024, thanks to the purchase of sustainable solutions by customers.	7, 11, 12, 17

3.02 Transition towards a circular economy

The circular economy of municipal waste

Although waste management is not among the measures needed to ensure a transition to a circular economy, it is one of the most urgent areas on which European directives have focused for several years.

Hera Group is a major player in the field of municipal waste management, serving **189 municipalities in five regions for a total population of 3.2 million inhabitants**. In Emilia-Romagna, Hera Spa manages the municipal sanitation service in six provinces, for a total of 134 municipalities. Besides these municipalities, Hera Spa manages three others in the province of Florence. It also serves 44 municipalities in the provinces of Pesaro-Urbino and Ancona through Marche Multiservizi. Since 2013, through AcegasApsAmga, it has served eight municipalities in the provinces of Padua and Trieste.

TOTAL MUNICIPAL WASTE COLLECTED, BY AREA

thousands of tonnes	2019	2020	2021
Emilia-Romagna	1,619.5	1,527.3	1,477.5
Triveneto	254.3	241.0	255.3
Marche	163.9	146.9	153.6
Total	2,037.7	1,915.3	1,886.4
kg/inhabitant	636	597	586

The trend in the last two years shows a decrease in the quantities collected (-1.5% compared to 2020), mainly due to the application, at the moment only in Emilia-Romagna, of Legislative Decree 116/2020, which has led to the exclusion of some waste fractions such as aggregates and pruning waste (the latter only for the last three months) from the total waste stream as of 2021. In the absence of the effect, 2021 shows an increase in quantities of 2.2% compared to 2020, approaching the volumes collected before the health emergency.

Compared to 2020, the overall decrease recorded in **Emilia-Romagna** was -3.3% (49.8 thousand tonnes), lower than that recorded in the supply chains impacted by the new regulations, which was -4.6% (about 68 thousand tonnes). However, excluding the supply chains impacted by the decree, waste collected in Emilia-Romagna increase by 1.2% compared to 2020. In **Triveneto** and **Marche**, there was an increase of 5.9% (14.2 thousand tonnes) and 4.6% (6.8 thousand tonnes) respectively.

The territory served by Hera Spa and Marche Multiservizi is characterised by a high level of assimilation which results in a per capita **annual production of waste among the highest in Italy**: about 586 kilograms per inhabitant (599 kilograms per inhabitant in Emilia-Romagna, 584 in Marche) against a national average of 489 kilograms in 2020. In the Triveneto area the difference with the national average is less evident: 419 kilograms per inhabitant collected in 2020 (Source: Ispra, Rapporto Rifiuti Urbani 2021).

Hera's waste management system is characterised by three main services:

- **local collection**: these are widespread collections throughout the area, primarily targeted at residential users and small, non-residential users and can be carried out using;
- **roadside bins**, set up according to the basic drop-off points (Isole Ecologiche di Base – IEB) model, which groups the main collection chains into individual stations. In recent years, electronic traceability systems for disposal monitoring (e.g. the "lid" model for mixed waste or locking systems for separate waste collection chains) have become increasingly widespread in combination with roadside bins;
- **door-to-door collection**, carried out at the users' premises, where residents set out the waste for collection on set days and times;
- **residential collection** for "target", non-residential users that produce specific waste similar to municipal waste such as cardboard in shops, glass or cans in bars, and organic waste in canteens or restaurants;

- **separate waste collection centres:** also known as Drop-Off Points, these facilities are present in almost all the municipalities Hera serves and complete the range of services offered to residents for disposing of their separated municipal waste. The use of waste collection centres is becoming a real habit for residents: a wide range of categories of municipal waste (including certain hazardous waste) can be safely disposed of besides bulky and heavy waste. Moreover, in many areas, there is a system of discounts that rewards the disposal of various categories of separate waste.

The system is also supplemented by the door-to-door collection of bulky waste (free of charge, by phone call or by appointment), the collection of green waste, and the collection of other types of hazardous waste (such as batteries and pharmaceuticals), at specific businesses. Lastly, roadside collection and collection at shopping centres of WEEE (Waste Electrical and Electronic Equipment) and of waste cooking oil is gradually spreading.

To improve their effectiveness, the collection services are **diversified according to standardised area types** (city centres, residential areas, tourist areas, suburban areas, and industrial zones). For each area, the collection system that best fits in with urban, environmental and local characteristics is identified. The aim is to **maximise the percentage of separate waste collection** and its quality by providing a technically and economically sustainable service.

MAIN FORMS OF WASTE COLLECTION USED

Number of municipalities served	2019	2020	2021	2021 (% on the number of residents)
Roadside collection	84	79	74	50%
Roadside collection with special disposal-control mechanisms	35	37	38	22%
Mixed system (door-to-door for mixed waste and roadside collection for separated waste)	40	41	44	11%
Total door to door	28	30	33	17%
Total	187	187	189	100%

In 2021, in Emilia-Romagna, the number of municipalities using normal bin-based roadside collection fell again while use of collection systems that identify users at the time of disposal increased, to initiate or prepare for quantity-based charging. The number of municipalities with **delivery control systems increases** from 37 in 2020 to 38, while those with an integrated **door-to-door** system increases to 20 (plus six municipalities in Triveneto and seven in Marche). As far as the “**mixed**” system is concerned, i.e. with door-to-door collection for organic and mixed waste and roadside collection for other separate waste collection, nine municipalities in Emilia-Romagna and 35 municipalities in the Marche region now use this method (three more than in 2020). In **Emilia-Romagna**, in view of the gradual switch to quantity-based charging and therefore to systems to control deliveries, the reorganisation of services to allow the identification and measurement of deliveries is underway and will continue over the next few years.

Separate waste collection

The main types of separately collected waste are:

- **packaging and similar:** paper and cardboard, plastic, glass, aluminium and steel cans, wood;
- **durable goods:** iron, waste from electrical and electronic equipment (WEEE) and bulky waste;
- **compostable waste:** kitchen organic waste and “green” waste from mowing and pruning material;
- **other waste:** aggregates from small demolitions (only in Marche and Triveneto, which have not yet transposed the above-mentioned Legislative Decree 116/2020), spent mineral and food oils, batteries and accumulators, medicines and other hazardous urban waste.

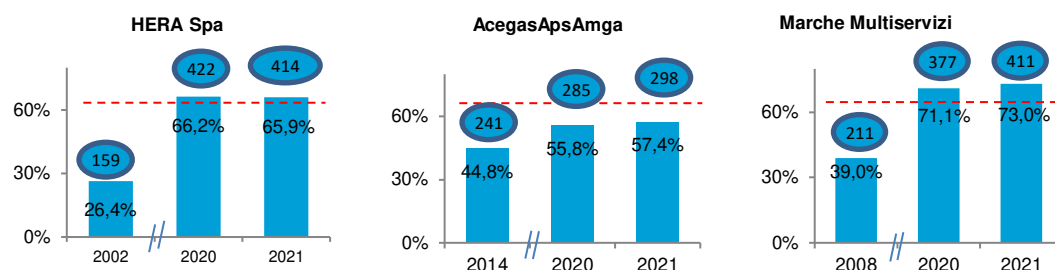
In **Emilia-Romagna**, Regional Law no. 16 of 2015 on the circular economy set as an objective the launch of **quantity-based charging** throughout the region; this objective was confirmed by the new 2020-2025 Regional Mandate Programme presented in June 2020. Quantity-based charging makes the payment of sanitation services no longer be linked only to the area and the number of residents in a house, but also to the quantity of mixed waste produced.

As regards local collection, which accounts for the majority of waste, Hera is implementing various systems in the area **geared towards the future application of quantity-based charging**:

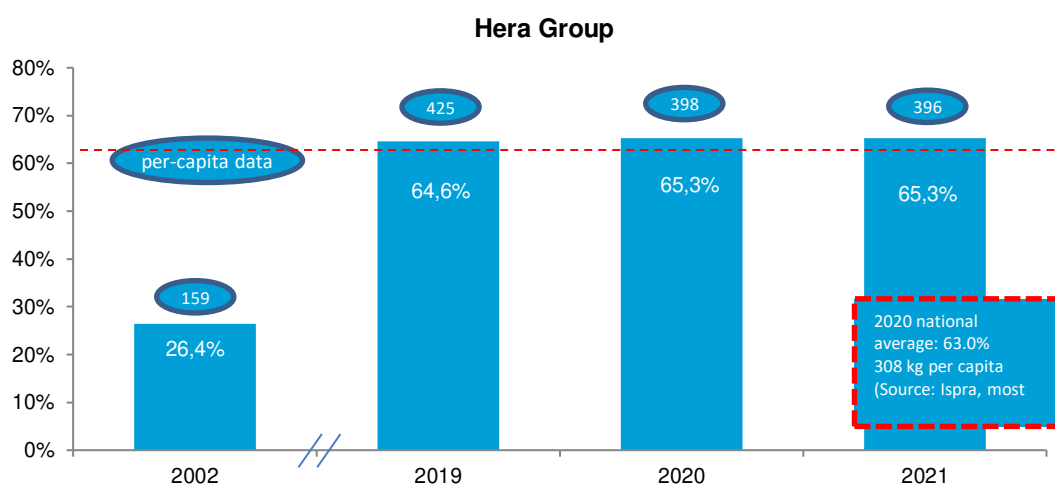
- roadside bins with a control system and user identification (“lid” system);

- residential collection with bins equipped with tag transponders;
- collection centres with weighing and user registration systems.

SEPARATE WASTE COLLECTION



The baseline shown in the graph reflects the first year for which data are available.



Separate waste collection is calculated according to Regional Authority Decision 2218/2016: neutral fractions are therefore excluded (flows from beaches, cemeteries and EWC not classified as municipal waste) and the estimate of waste from home composting set by the Region is included. As per Regional Authority Decision 2218/2016, street sweeping for recovery is counted as separate waste collection. Separately collected waste also includes similar-to-municipal waste disposed of by manufacturers for recovery and waste collected by volunteer associations or directly by municipalities. The amount of waste is made up of separated waste collection (permitted CERs sent for recovery, community composting and permitted domestic composting) and undifferentiated waste (solid urban waste, street sweeping for disposal, bulky waste for disposal and any waste collected separately but sent for disposal). With the entry into force of Legislative Decree 116 /2020, as of 2021 inert waste is considered special waste, and therefore excluded from the municipal waste stream: the only exception is inert waste from dumping, because waste lying on public land is municipal by definition, regardless of its CER and origin. The calculation of separate collection was carried out taking into account the Legislative Decree 116/2020 only for data related to Emilia-Romagna.

In 2021, the volume of **separate collection** remained in line with the previous year at **1,276 thousand tonnes**. This is mainly due to the entry into force of Legislative Decree 116/2020, which introduced changes in Emilia-Romagna that have significantly impacted on the types of waste considered for the quantification of separate collection.

The biggest impact relates to construction and demolition waste, which the decree considers to be special, whether it comes from non-domestic or domestic users. While in 2020 in Emilia-Romagna inert material collected as municipal waste amounted to about 55.8 thousand tonnes, in 2021, as a result of this regulation, the only share included in the volumes of separate collection was that relating to abandoned waste (about 0.5 thousand tonnes).

A further change concerns the management of pruning waste, which can no longer be delivered to the collection points by non-household users but only by household users. The effect on 2021 volumes is almost 5 thousand tonnes less as compliance with the new regulations only took place in Emilia-Romagna in the last quarter).

At Group level, the impact of Legislative Decree 116/2020 was about 1 percentage point on separate collection, which would then exceed 66%.

Despite this, the percentage of separate collection, given by the ratio between the amount of municipal waste collected separately and the total amount of waste (separated and undifferentiated municipal waste) remained stable in 2021 (65.3% in 2021 as in 2020), remaining above the national average of 63.0% recorded by Ispra in 2020 (Source: Ispra, Rapporto Rifiuti Urbani 2021).

In 2021, in the **eight provincial capital cities served by the Hera Group**, the level of separate waste collection was 64.7%, compared to an Italian average of 59.3% for all of Italy's provincial capital cities (weighted average, Source: processing of Legambiente data, Ecosistema Urbano 2021).

In **Emilia-Romagna**, as a result of the above, the percentage of separate collection went from 66.2% to 65.9% (about 67% without considering the effect of the new legislation). In further detail at a territorial level, the percentage of separate waste collection exceeds:

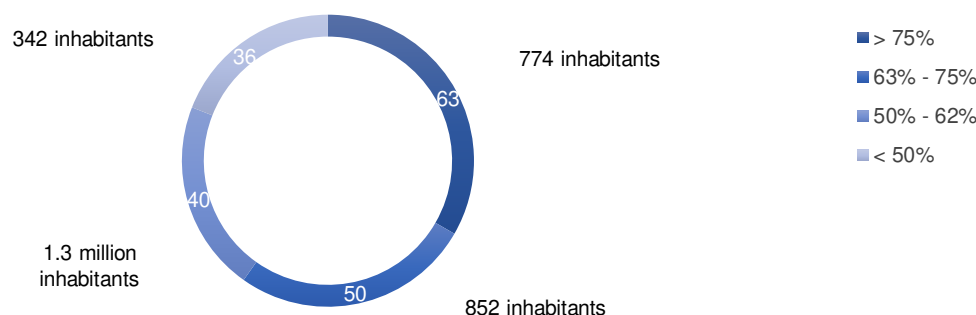
- 85% in the municipality of Ferrara which has been operating under the quantity-based charging system since 2018;
- 70% in Marche;
- 65% in the provinces of Modena, Forlì-Cesena, Rimini;
- 60% in the provinces of Bologna (64.1%, up from 2020), Ravenna and Padua.

The separate waste collection rate for the province of Trieste is still below the Group average (44,4%).

At the municipal level, 2021 ended with **63 out of 189 municipalities served (2 more than the previous year) with a percentage of separate waste collection exceeding 75%**; 24% of the total population served lives in these municipalities.

There were 31 municipalities in Emilia-Romagna with more than 75% of separate waste collection, 18 of which were applying quantity-based charging. The business plan's target for 2025 is to reach 76.8% as the average of the municipalities served in the region. In Triveneto three out of eight municipalities exceeded 75%, and the target for 2025 is to bring the value of separate waste collection to an average of 69.5%. In the Marche region, 29 out of 44 municipalities exceed 75% separate collection (5 more than in 2020); the target for separate collection in 2025 is 79.8%. **The Group's separate waste collection target for 2024 is 75.9%**, as envisaged in the latest business plan approved by Hera Spa's Board of Directors in January 2021.

NUMBER OF MUNICIPALITIES BY PERCENTAGE RANGE OF SEPARATE WASTE COLLECTION (2021)



The Group's separate waste collection, according to Emilia-Romagna data, includes similar-to-municipal waste sent for recovery by manufacturers and separate waste collected by volunteer associations or directly by municipalities as defined by Regional Authority Decision 2218/2016, implemented in the municipal and local regulations in force. The situation is very diverse throughout our service area and depends on the revisions of the regulations of the individual municipalities.

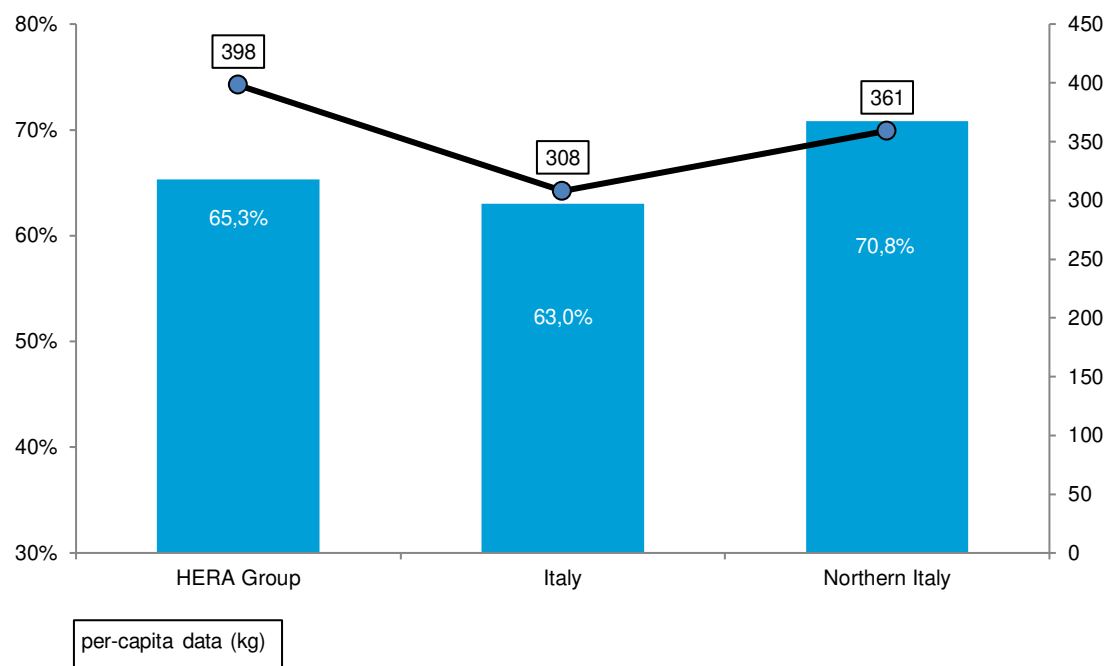
When considering the **effectiveness of separate waste collection**, a useful indicator is the quantity per capita figure, expressed in kg/inhabitant/year, which enables significant analyses on the quantities of **waste sent for recovery per capita, both overall and by single supply chain**. Due to the health emergency that led to lower volumes of separate collection, the per inhabitant separate waste collection at Group level decreased from 398 kg in 2021 to 396 kg in 2020, down 0.4% compared to the previous year.

At **per capita level**, separate waste collection in **Emilia-Romagna**, is around 414 kg/inhabitant/year, down 1.8% compared to 2020 for a total quantity of more than 1,022 thousand tonnes. At the level of individual territories, per capita separate waste collection shows a slight increase in **Bologna** (+1.7%)

and **Forlì-Cesena** (+6.4%), while in the other provinces of the territory the negative effect caused by Legislative Decree 116 generates an overall decrease of 7.3% in **Modena**, 6.9% in **Ferrara**, 3.9% in **Rimini** and 1.8% in **Ravenna**.

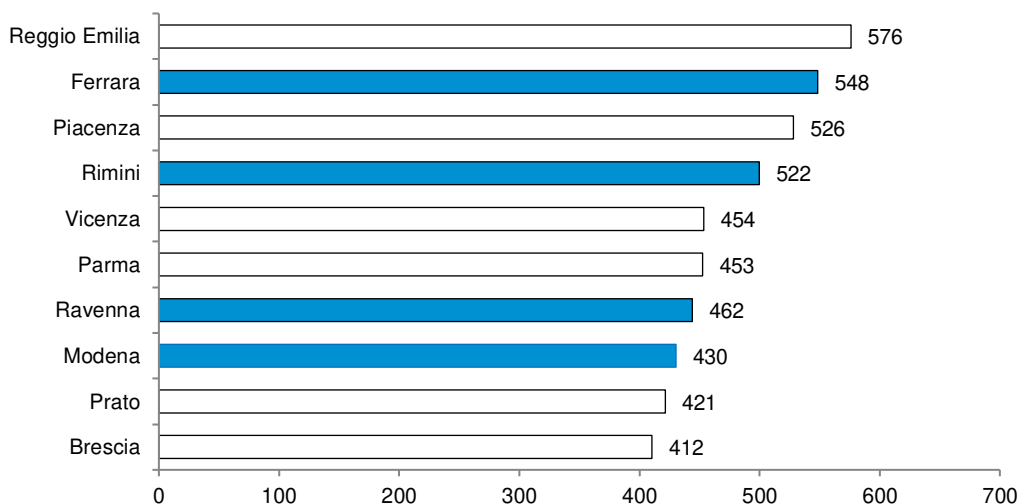
Considering the 2020 data published by Ispra, the Hera Group records, despite the effects of Legislative Decree 116/2020, a per capita separate collection of 28% higher than the Italian average and 10% higher than the average for Northern Italy.

SEPARATE WASTE COLLECTION PERCENTAGE AND PER CAPITA (2020 DATA)



Considering Italy's provincial administrative capitals with populations over 100,000 inhabitants, in 2020 **four of the top 10 best-performing Italian cities by per capita** separate waste collection **were served by the Hera Group**. Among them, Ferrara and Rimini are also among the top ten Italian cities in terms of percentage of separate waste collection (Ferrara with a rate of 87.6% ranks first among provincial capitals and at 71.7%, Rimini is in tenth place among all capitals with more than 100,000 inhabitants). As the data show, the high levels of production of similar-to-municipal waste in the territories managed by the Group generate significant benefits in terms of volumes of waste to be sent for recycling and recovery.

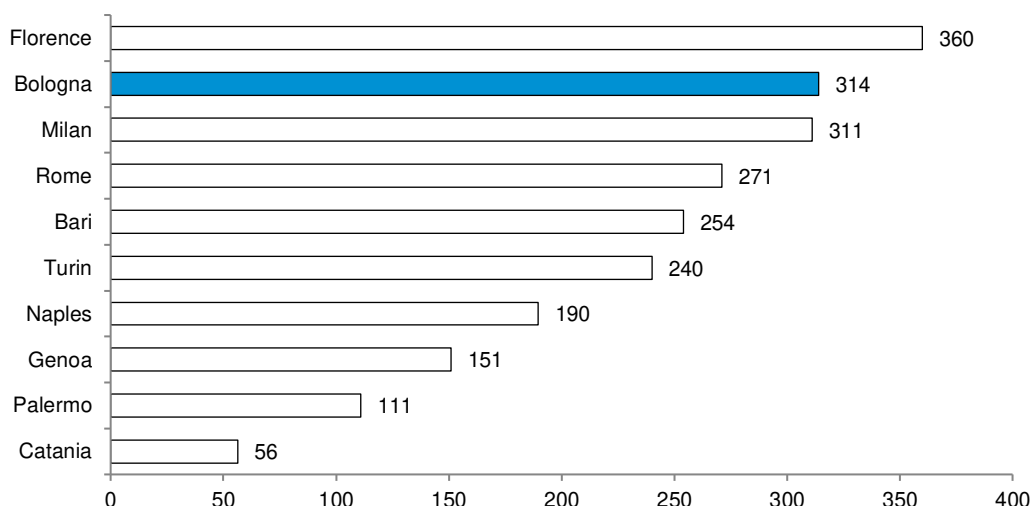
SEPARATE WASTE COLLECTION PER CAPITA, IN KILOGRAMS, FOR MUNICIPALITIES WITH OVER 100,000 INHABITANTS (2020)



Source: processing of Legambiente data, Ecosistema Urbano 2021

On the other hand, considering provincial capital cities with over 300,000 inhabitants, **Bologna ranks second** in Italy for per capita separate waste collection (Source: processing of Legambiente data, Ecosistema Urbano 2021). Bologna is once again in second place in the ranking by percentage of separate waste collection. This result was made possible by the extension in 2021 of the computerised street collection system for the undifferentiated fraction with the new smarty bins that can be opened with the Emerald Card in the San Stefano Porto and Saragozza residential districts. The separate collection of waste in the entire city centre increased from 61.8% in 2018 to 70.4% in 2021.

SEPARATE WASTE COLLECTION PER CAPITA, IN KILOGRAMS, FOR MUNICIPALITIES WITH OVER 300,000 INHABITANTS (2020)



Source: processing of Legambiente data, Ecosistema Urbano 2021

With regard to separate collection by **type of material collected**, it should be noted that in 2021 all fractions of separate collection, with the exception of inert materials and pruning waste, increased and in some cases exceeded pre-pandemic levels. The most significant changes are detailed below:

- collections of **wood** and **bulky items** increased substantially by 14.9% and 10.7% respectively, mainly due to the reopening of collection centres that had been closed during the health emergency;
- plastics collection** confirms the positive trend of recent years with a 5.9% increase in 2021
- glass** and **organic** collections increased by 4.5% and 4.0% respectively, exceeding the volumes collected before the health emergency;
- paper** collection increased by 3.2%;
- Multi-material, iron** and **WEEE** collections grew by 2.6%, 2.5% and 1% respectively;
- collections relating to **green** and **inert** waste, as a result of Legislative Decree 116/2020 on separate collection in Emilia-Romagna, recorded a significant drop of -5.3% and -82% respectively;
- the **Other** item increased (by +4.2%) mainly due to the effect of home composting in Emilia-Romagna, included in the calculation of separate waste collection as per Regional Authority Decision 2218/2016.

SEPARATE WASTE COLLECTION BY WASTE TYPE

thousands of tonnes	2019	2020	2021
Paper and cardboard	261.4	236.1	243.7
Green waste	243.4	230.2	218.0
Glass	116.6	121.3	126.7
Organic waste	237.0	228.8	237.9
Plastic containers	111.5	112.6	119.2

thousands of tonnes	2019	2020	2021
Waste from multi-material collection	64.1	49.0	50.3
Wood	108.1	86.9	99.9
Bulky waste	52.4	52.7	58.3
Inert material	69.0	63.0	11.4
Iron	12.8	12.3	12.6
WEEE	20.0	19.5	19.7
Other	65.1	65.9	68.7
Total	1,361.4	1,278.3	1,266.3

SEPARATE WASTE COLLECTION PER CAPITA (2020)

kg/inhabitant	Paper	Glass	Plastic	Wood	Metals	Organic and green waste
Hera Group	74	38	35	27	4	143
Northern Italy	65	44	31	24	8	135
Italy	59	58	27	15	6	121
Best region	84*	57**	55**	54**	15**	183*
HERA Group (2021)	75.7	39.4	37.0	31.0	3.9	141.6

*Emilia-Romagna, **Valle d'Aosta. Source: Ispra, 2021 Municipal Waste Report

Hera's separate waste collection levels are due to the widespread coverage of its services and to the regulations for categorisation as similar-to-municipal waste, that encourage the material recovery. Hera ranks above the Italian average and the average for northern Italy in all cases except glass and metals.

Separate Waste Collection Centres

Among other types, the waste collection centres receive waste that, due to its nature or size, cannot be collected with normal local services, supplementing roadside and residential collection, and is the most sustainable environmental solution with the lowest impact for collection of separate municipal waste.

There are 171 separate waste collection centres, or drop-off points, for direct disposal by the public. Of these, 141 are located in Emilia-Romagna, two more than in the previous year (in 2021 two new collection centres became operational in Bologna and Ravenna), 11 in Triveneto and 19 in Marche. Many collection centres are equipped with weighing and user-recognition systems that make it possible to track waste disposal and apply tariff discounts.

At Group level, the amount of waste delivered to the separate collection centres decreased from 296,513 tonnes in 2020 to 259,568 tonnes in 2021 (-12%). This trend is mainly caused by the fall recorded for Emilia-Romagna, which has seen a 17% decrease in the amount of sorted waste coming from the Centres as a result of Legislative Decree 116/2020.

In contrast to the amount of waste delivered, the **number of accesses** to the collection centres increased by **9%** in 2021, mainly due to the reopening of most of the collection centres that had been closed during the health emergency.

Minor separate waste collection categories

For some time the Hera Group has been carrying out separate collections of so-called "minor" waste fractions. The main minor separate waste collections are WEEE (Waste Electrical and Electronic Equipment), toners, textiles, and cooking oils. For the latter, see the case study in the annex.

WEEE collection

Currently, 13 "WEEE Point EVO" and 21 "WEEE Shop EVO" service points are active in Hera's area, distributed throughout its several provinces, mainly in shopping malls, to collect small WEEE.

In addition, in the Bologna area, the “mobile” service model provides scheduled itinerant collection, and collects all types of WEEE. However, this collection was unfortunately suspended in 2021, as well as in 2020, due to the health emergency.

On the other hand, the number of deliveries made by the public to WEEE Points and WEEE Shops in the area served grew by around 2%, from just over 39,000 in 2020 to almost 40,000 in 2021.

In the Triveneto area, separate waste collection of minor types is carried out at the drop-off points, during the so-called “Ecological Saturdays” and, for some specific types, through dedicated roadside collections or centres. For example, toner collection is also provided by door-to-door collection systems for non-residential users. In smaller municipalities, where there is no collection centre, on specific days of the month, mobile roll-off containers - known as “eco-self” containers - are provided for the collection of small WEEE and other parts that cannot be handed in to the main circuits.

Toner collection

During 2021, the service of collecting and sending for recovery spent toner cartridges also continued in Emilia-Romagna. Using the “Ecobox” containers distributed to public users such as schools and municipal offices, approximately 180 tonnes of used cartridges were collected and provided to the reuse market (regenerated toner cartridges for printers).

Collection of textiles

Lastly, among the solidarity-based initiatives, it should be noted that in 2021 Hera continued to provide a service for the collection of textile waste, typically referring to used clothing and textiles, using the companies that won the tenders called for in the province.

Under these contracts, the companies awarded the contract (private operators and social cooperatives) carry out the collection service by emptying the containers owned by Hera, and make the best use of the material collected by sending it for recovery in their own plants, giving a new life to these recoverable textile materials, with a view to the circular economy.

The collection of used clothes provides no margin for Hera Spa and the income obtained, net of covering the costs of the service, is allocated by the individual municipalities either to reduce the costs of the municipal sanitation service for residents.

Collection of bulky waste

Bulky waste is waste that due to its type, size and weight, cannot be disposed of in the bins provided for municipal waste. Hera currently offers a number of options to dispose of bulky waste and large appliances, giving users the possibility of sending objects in good condition to be reused, preventing the production of waste or by sending them to the correct recovery or disposal flow:

- **Donating the item to the non-profit organisations** involved in the “Change the Ending” project: if the item can be re-used, its user can donate it for reuse through one of Hera’s partner non-profit organisations. Non-profit organisations may collect bulky waste free of charge at their facility or at the user’s home, to give it a new life and use it for charity. In Ferrara, Ravenna, Modena, and Cesena, reusable goods can be given to non-profit organisations by disposing of them in the “Reuse areas” located in the separate waste collection centres;
- **disposing of the item at drop-off points** (separate waste collection centres): if the bulky goods are not reusable, they can be delivered to the nearest drop-off point using the extensive network of drop-off points located throughout the service area;
- **using the home collection service** provided by Hera: if the item is not reusable and the customer cannot take it to a drop-off point, they can call the call centre to schedule free bulky waste at-home collection.

In 2021, these types of waste accounted for 3.8% of the total waste collected and 5.9% of separate waste collection, which is an increase both in absolute terms and in percentage terms compared to the previous year, also in view of the fact that the amount of waste was slightly down on the previous year (-2.7%).

In Hera Spa’s service area, 172,281 requests were made for the collection of bulky waste, up compared to the previous year (+11%). The quantities collected, including those delivered to the separate collection centres and those abandoned without reporting, amounted to approximately 60,000 tonnes, a significant increase over 2020 of 7.9%.

The number of bulky waste collection requests increased, in line with previous years, due to greater use of dedicated collection services and a greater number of reports for this type of waste, largely linked to a better usability of the channels to contact Hera and a greater appreciation of the cityscape.

Waste prevention initiatives

Waste prevention is a key element in the transition towards a 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 heart of many actions and projects that Hera has put in place over the years in the area. Hera's commitment is also in line with the new European, national and regional regulations that introduce prevention and reuse objectives as an integral part of integrated waste management.

The European Directive 2008/98/EC on waste, transposed into Italian law by Italian Legislative Decree No. 205/2010, defines the following waste prevention and management hierarchy:

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

Waste prevention is confirmed as a priority action also with the European package on circular economy, referred to in one of the case studies in the annex. In particular, Directive 851/2018, transposed by Legislative Decree 116/2020, gives considerable prominence to the concept of prevention by introducing an obligation for Member States to adopt measures to avoid the production of waste. Actions are expected to encourage the re-use of products and the creation of systems that promote repair and re-use activities. A special focus is dedicated to the prevention of food waste by promoting measures to avoid its production, including encouraging food donation to prevent food waste.

On a regional level, Emilia-Romagna's Regional Law 16/2015 on "Provisions to support the circular economy, the reduction of the production of municipal waste, the reuse of end-of-life goods, separate waste collection and amendments to Regional Law 31 of 19 August 1996" addresses waste prevention, including the possibility to grant incentives to companies that implement waste prevention measures, within the framework of the regulation on waste management service fees.

Lastly, the new "Regional Plan for Waste Management and the Remediation of Polluted Areas 2022-2027", recalled the importance of prevention as a "core concept" of waste planning, providing new measures and specific actions aimed at waste prevention along various supply chains.

Below are some of the most significant initiatives implemented by Hera in 2021 in the field of waste prevention. Other significant initiatives such as "Cambia il finale" (Change the ending), "Farmaco Amico" (Medicine friend), and "Cibo Amico" (Food friend), are covered by special in-depth sections of this Sustainability Report (case histories).

Reuse Area

The Reuse Area is a real garage, housed inside a drop-off point, where the public can bring furniture (tables, chairs, beds, etc.), crockery, books, electrical and electronic appliances and miscellaneous objects, provided they are in good condition and therefore suitable for being used again by other people. Everything brought by the public is for all intents and purposes a donation and at the time of delivery documentation is completed as a receipt of the donation. The material is then delivered to one of the Associations that participates in the Cambia il Finale project (described in a case study of this report), which handles the reuse of the goods deemed suitable. With this initiative, every time a citizen goes to the drop-off point, they can, therefore, choose whether to give a second chance of life to their goods by using the Reuse Area or whether to send it for material recovery through the recycling chains. Through the activities of the non-profit organisations involved in the project, the Reuse Area also has social aims, offering support to sensitive sections of the population, making used goods available and creating job opportunities for the unemployed, disabled, or disadvantaged.

In 2021 the reuse area in San Pietro in Vincoli (Ravenna) was inaugurated, joining those in Ravenna north, Cesena, Ferrara and Modena activated between 2018 and 2020.

A total of 2,748 items were donated in 2021 (considering a single item as the simultaneous contribution of several items of small size or value, such as books or crockery or small items), equivalent to a total weight of about 5.6 tonnes of less waste produced.

Trashware

This project is a reference point in the area for those that wish to get rid of old computer equipment that still works and for any parties that need reconditioned computers for basic computer activities. The project was developed in 2011 by the S.P.R.I.Te. student association jointly with the municipality of Cesena, Hera, and the Cesena Campus of the University of Bologna. Its goal is to recover PCs and computer components in general to counter the problems related to hazardous electronic waste. At the same time, it aims to reduce the digital divide of its residents by donating PCs with related peripherals to private individuals, associations, and schools in the municipality of Cesena. The Trashware project completed its tenth year in 2021. The project is promoted through widespread flier distribution and active

presence on the main social networks and the Internet (Facebook as a channel to provide information or receive requests; Instagram, aimed at the younger generation, to promote events or the normal workshop session; trashwarecesena.it as a web showcase for those less accustomed to social media) and supported the organisation of training courses for children in collaboration with local schools. In the second half of 2021, with the gradual return to normality after the restrictions due to the health situation, recruitment and training of volunteers also resumed, especially among the new participants at the Cesena site.

In 2021, there were 136 contacts from stakeholders interested in donating equipment during the year (more than 3,200 since the start of the project) and 281 refurbished PCs were delivered (more than 1,600 since the start of the project), including 234 to schools and associations. In addition to the significant role the project was able to play during the health emergency by providing schools with devices for distance learning, more and more schools are benefiting from the project to build laboratories with refurbished PCs.

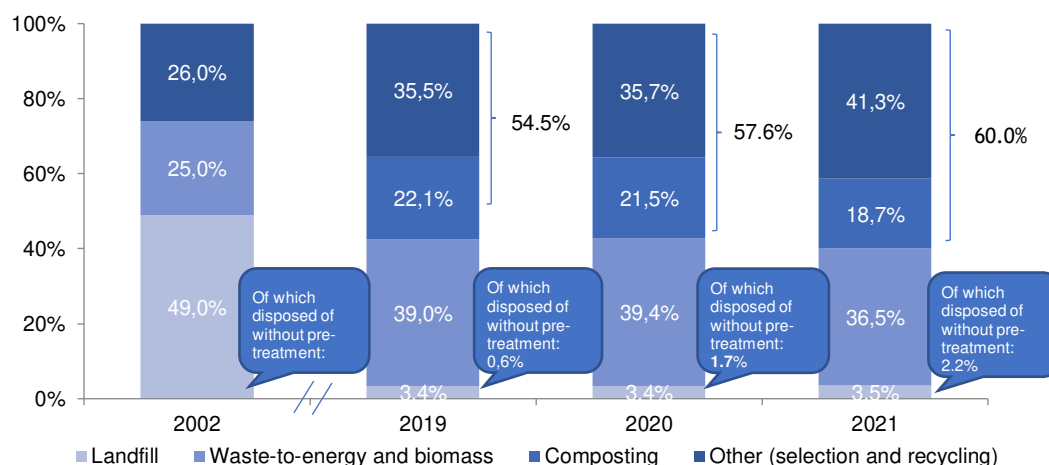
Disposal of municipal waste in Italy and Europe and comparison with Hera

National and EU regulations define principles and priorities for waste management, from minimising waste at source to material recovery, energy recovery and, only as last resort, disposal in landfills.

Over the years, the Hera Group has worked in this direction, as shown by the comparison between 2002 data and the data of the last three years. In particular, in terms of reducing landfill disposal, the Group managed to maintain the already excellent performance achieved in 2019. This is consistent with the Group's objectives, which, in line with national and European regulations and the plans of the relevant authorities, call for a reduction in the use of landfills and an increase in separate waste collection.

In 2021 the share of municipal waste disposed of in landfills after pre-treatment was 3.5%, compared to an Italian average of 20% in 2020 (Source: Ispra) and therefore below the target of 10% by 2035 set by European directives. The use of landfills was particularly low in the Emilia-Romagna service area, standing at 2% in 2021 compared to the average for Emilia-Romagna of 9% in 2020, (Source: Ispra, 2020 Municipal Waste Report). In the Marche region, there is a slight decrease in 2021 compared to 2020 (from 30.9% in 2020 to 29.0% in 2021), due to a general reduction in the amount of waste treated and an increase in sorted waste following the change in the collection service for non-household users. As of 2021, Hera's Triveneto region continues to have no landfills for the disposal of municipal solid waste.

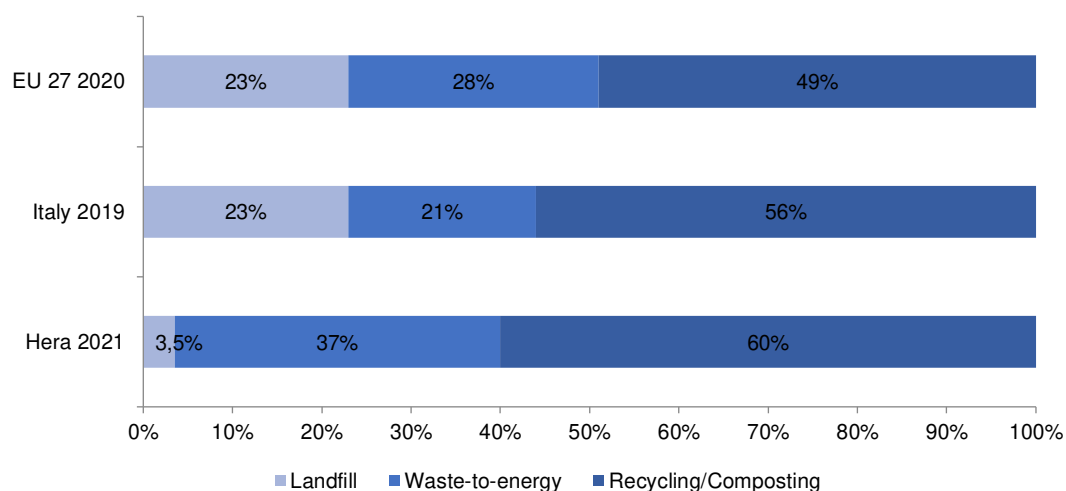
MUNICIPAL WASTE COLLECTED BY HERA, BY DESTINATION



At the European level, the trend towards reducing the use of landfills for municipal waste disposal is also continuing. However, there are significant differences among the countries: in the EU-27 the figure for 2020 was 23% (source: Eurostat). In Italy, 20% of municipal waste disposed of in 2020 was sent to landfills compared to 19% sent for waste-to-energy treatment. The use of landfills and waste-to-energy treatment remained stable.

Landfills continue to be the primary treatment method in 12 European countries, with peaks of up to 89% in Malta and above 75% in Greece, Romania and Cyprus. In Germany, Sweden, Finland, Denmark, Belgium and the Netherlands, the use of landfill is around 1%, and waste-to-energy ranges from 32% to 61%, while the remainder is sent for recycling. Hera is in line with these countries in terms of recycling with further improvements planned for the coming years.

MUNICIPAL WASTE MANAGEMENT IN EUROPE AND ITALY, AND HERA'S RANKING (2020)



MUNICIPAL WASTE: A THREE-SPEED EUROPE AND HERA'S AREA OF OPERATION IS AMONG THE BEST PERFORMING (2020)

Country	Landfill	Waste-to-energy	Recycling / Composting
Countries with landfill use lower than the European average			
Sweden	0%	61%	39%
Germany	1%	32%	67%
Belgium	1%	44%	55%
Denmark	1%	45%	54%
Finland	1%	58%	42%
Netherlands	1%	42%	57%
Austria*	2%	39%	59%
Hera Group	3.5%	37%	60%
Luxembourg	4%	43%	53%
Slovenia	9%	17%	75%
Estonia	17%	50%	33%
France	18%	39%	43%
Lithuania	19%	30%	52%
Italy*	23%	21%	56%
European Union (27 countries)	23%	28%	49%

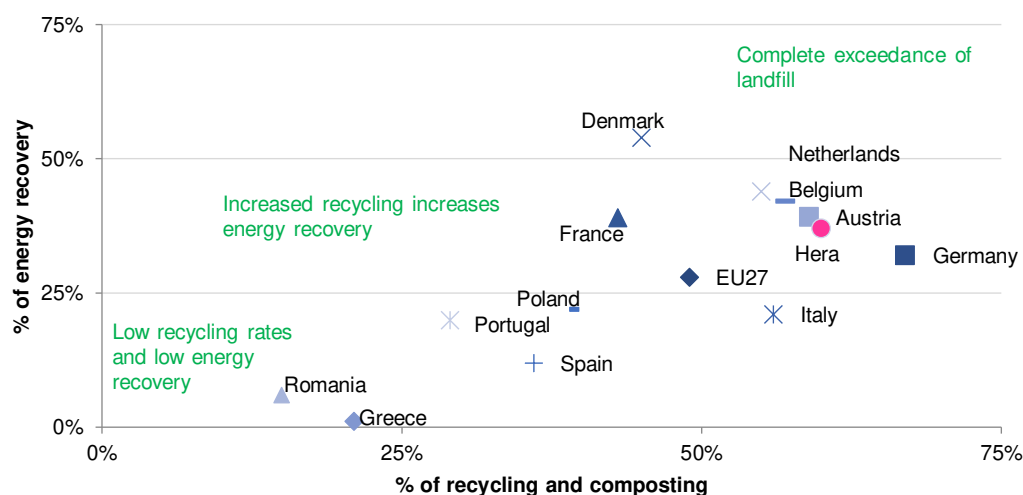
Countries with landfill use less than or equal to 50% but higher than the European average

Ireland	24%	34%	43%
Poland	40%	22%	39%
Czech Republic	50%	15%	35%
Slovakia	50%	8%	42%
Hungary	50%	17%	33%

Country	Landfill	Waste-to-energy	Recycling / Composting
Countries with landfill use greater than 50%			
Portugal	51%	20%	29%
Spain	52%	12%	36%
Latvia	56%	3%	41%
Bulgaria**	60%	4%	37%
Croatia	62%	0%	38%
Greece*	78%	1%	21%
Cyprus	79%	2%	19%
Romania	80%	6%	15%
Malta	89%	0%	11%

* Data 2019. Source: processing of Eurostat **data 2018 Source: processing of Eurostat data

DISPOSAL OF MUNICIPAL WASTE IN EUROPE: THE CORRELATION BETWEEN RECYCLING/COMPOSTING AND ENERGY RECOVERY. HERA AMONG THE EUROPEAN BEST PRACTICES (2020)



Source: processing of Eurostat data

Material and energy recovery in Herambiente's separation plants

The evolution of the Hera Group's strategy is developed in full harmony with the criteria of the circular economy, expressed in various actions and choices that lead to the perception of change in the territory and in everyday life. The Herambiente Group pursues specific objectives determined by the Group's overall strategy, in particular, new recovery solutions from waste and scrap for the production of biofuels or biomethane, new recycled plastics, e.g. derived from molecular recycling, new recycling options and citizen involvement to improve the quality of separated waste.

Six (of the total of 15) of our **selection plants** process the municipal and special waste coming from separate waste collection and from industrial or artisan manufacturing in the province in which they are located. The objective of the process, which uses more or less complex technologies and treatment lines according to the type of waste to be treated, is to recover the greatest possible amount of material from the incoming flow and reduce reliance on landfills. These systems recover paper/cardboard, plastic, wood, metal, glass, biodegradable waste (pruning material), tires, textiles, and inert materials. The treatment lines used are specific to the characteristics of each collection. Five of the six plants have computer vision systems that are particularly effective in separating plastic and paper from municipal waste both in terms of flow (hourly quantity of waste treated) and in terms of the quality of the material obtained by the operation. The scrap of the treatment, the non-reusable fractions that are not sent for material recovery, are dispatched to be used for energy recovery or to be disposed of.

In 2021, Herambiente's separation and recovery plants treated **426,532 tonnes of waste**, up 5.3% compared to 2020. The increase is mainly due to the increase of incoming waste from Hasi and the drop-off points, which had experienced a consequent decrease in activity during the health emergency in 2020. The quantity **sent for material recovery** accounts for 75.9%, while the share sent for **energy recovery** accounts for 4.9%, resulting in an **overall recovery of 80.8%**, slightly lower than in 2020. The amount of plastics sorted and sent for recycling in 2021 increased to **52,400 tonnes** (+17% compared to 2017). Increasing the quantities of plastics sorted and sent for recycling is one of the Group's three objectives as part of the New Plastics Economy Global Commitment, an initiative with which in 2018 the Ellen MacArthur Foundation wanted to tackle plastic pollution at source and make the entire plastics supply chain more circular.

The shredding operation to reduce the volume of large-sized waste, coming from the mechanised sorting of bulky waste, already present in the Ferrara and Bologna plants, was started up and will be fully operational in 2021 also in the Modena plant. Authorisation for shredding is currently being obtained for the Voltana plant, which will be able to carry out its specific activity presumably from the early months of 2022 when the authorisation is actually obtained.

DESTINATION OF TOTAL WASTE TREATED – HERAMBIENTE'S SELECTION PLANTS

Tonnes	2019	2020	2021
Waste sent for material recovery	327,480	311,599	323,628
Non-reusable fractions outgoing	104,799	93,379	102,798
<i>of which for energy recovery</i>	<i>34,097</i>	<i>18,004</i>	<i>20,732</i>
Other waste sent for disposal	199	56	105
Total waste treated in selection plants	432,478	405,034	426,532
<i>of which sent for material recovery (%)</i>	<i>75.4%</i>	<i>76.9%</i>	<i>75.9%</i>
<i>of which sent for energy recovery (%)</i>	<i>7.8%</i>	<i>4.4%</i>	<i>4.9%</i>
waste sent for material and energy recovery (%)	83.2%	81.4%	80.8%

The circular economy to support businesses

Through its Herambiente subsidiary, the Hera Group operates over 90 treatment plants for the recovery and disposal of municipal waste, and of hazardous and non-hazardous special waste. The equipment includes waste-to-energy plants, composting/digestion plants, material selection and recovery plants, chemical/physical plants and stabilisation plants; several plants are used exclusively for the treatment of special waste in order to provide increasingly complete and precise services to industries and companies for the management of their waste and scrap.

The initiatives launched by Herambiente for material and energy recovery continued in 2021, and were characterised by a constant focus on transitioning its industrial activities towards a **circular economy** approach. In particular:

- an improvement in the **biomethane production performance of the Sant'Agata Bolognese plant**, which exceeded **8 million cubic metres** of biomethane produced, increasing production compared to 2020 by 0.2 million cubic metres. On the basis of this project, the Group has prepared two further projects to convert existing plants to biomethane production in **Voltana di Lugo** (Ra) and **Spilamberto** (Mo). The two projects underwent the necessary authorisation procedures, which were completed in 2021. Work on the Spilamberto project has started and contracts for the main supplies making up the plant have been awarded. The plant is expected to be completed and started up by the end of 2022, with the biomethane produced being fed into the distribution network. Expected production stands at 3.6 million standard cubic metres. The Voltana project, although authorised, is awaiting the issuing of the new biomethane incentive decree that will replace the 2018 Ministerial Decree;
- Herambiente Group's constant focus on implementing the synergies arising from its presence in the **PE and PET-based polymer recovery** value chain, through the agreement signed between Aliplast and Nextchem for the design and construction of a plant capable of regenerating polymers that make up "rigid" and three-dimensional objects. Please refer to the case study in the annex for details.

- completion of **logistics platforms** that handle the **storage, characterisation and pre-treatment** of waste to make it compatible with the recovery and/or disposal systems available in Italy and abroad. In this context, the agreement signed in 2020 with **Eni Rewind** to build a technologically advanced platform for treatment of industrial waste in the "Ponticelle" area, adjacent to Ravenna's petrochemical complex, capable of receiving and pre-treating up to 60,000 tonnes per year of industrial waste in solid, liquid and sludge form (mainly hazardous), is extremely significant; The project was developed in 2020 and underwent a single authorisation procedure in October 2021. Also in this area, in 2021 Hasi completed some important M&A transactions to expand its plant network in the Triveneto area with the acquisition of majority stakes in the companies **Recycla** and **Vallortigara**, which own and operate some important recovery centres in the special waste sector.

In 2021, construction work began on the "F3" plant in Ravenna and line 2 of the **waste-to-energy plant in Trieste**; these works will be completed in 2022, with both plants scheduled to start up in August. In December 2021, the Services Conference was concluded, expressing a favourable opinion with specifications for the construction and operation of the project to replace lines 1 and 2 of the **Padua waste-to-energy plant** with a new line; this project is expected to be completed in 2023 and 2024. The primary objective of these measures is to give a **long-term perspective to the current waste-to-energy capacity** of these plants, increasing the efficiency of their energy recovery, reliability, and continuity of operation, and, above all, equipping the plants with the best and most innovative flue gas cleaning systems to further reduce their environmental impact.

In addition to measures on individual projects, we are examining the feasibility of applying **new technologies** to extract resources and value from waste in market segments that currently, instead, resort to dumping solutions. Such as the collaboration with manufacturers and the University of Bologna to develop an innovative technology to **recover carbon fibre**. Please refer to the case study in the annex for details.

For more details on the progress of the interventions and the expected/obtained environmental benefits, please refer to the table in the section "[Development of plant equipment](#)".

The recovery of industrial waste with Herambiente Servizi Industriali (HASI)

Herambiente Servizi Industriali is the Group's company that offers waste management solutions and services for businesses. **It is currently the largest Italian company dedicated to industrial waste treatment.**

Key elements of HASI's offer are **maximum traceability, compliance with all environmental regulations** and the identification of the optimal recovery and recycling solutions to **minimise landfill disposal**.

In 2021 Hasi acquired Recycla (Ud), SEA (An) and Vallortigara (Vi), which manage platforms for industrial waste, following a business strategy aimed at creating value for customers and for the Group, proposing solutions increasingly **oriented towards sustainability**, also thanks to synergies with subsidiaries and parent companies.

In addition to global waste management solutions, Hasi offers services aimed at O&M (operations and maintenance) customers of private waste treatment plants, implementation of improvement/efficiency plans, and solutions designed to maximise recovery and overall reduction of the waste produced, such as by managing certain flows as by-products.

Herambiente Servizi Industriali has maintained a strong relationship with its client companies, as confirmed by the contract renewals for the Global Service with its longstanding clients, leaders in the food, pharmaceutical and engineering industries, and by the major new commercial opportunities it has seized. The latter include the treatment of significant flows produced by the leading European steel maker, the renewal of the waste treatment service at the Italian plants of the multinational leader in tobacco processing, and the launch of the large contract signed at the end of last year to manage waste from the extraction activities of the leading independent natural gas storage services operator in Italy, offering, where possible, material and energy recovery solutions as alternatives to disposal.

The integration of our waste management services with on-site systems operation helps the Group be effective and well-known in the market, encourages customer loyalty and creates value, besides being a factor that sets it apart from its competitors.

The traceability of all waste delivered to HASI is totally transparent. Since 2015, Herambiente's website has featured a special area dedicated to customers, who can remotely view the status of their waste streams, the validity of approvals, and the status of their payments. For each contract, information is provided in real time, and also includes information on the treatment operations, showing where each was sent, and the recovery percentage achieved versus the total waste received. More recently, we added a new feature that customers can use to book their disposals online.

Hasi handled around 1.1 million tonnes of industrial waste in 2021, of which around 43.1% was sent for material or energy recovery.

DESTINATION OF TOTAL WASTE TREATED – HERAMBIENTE SERVIZI INDUSTRIALI

thousands of tonnes	2019	2020	2021
Waste sent for material and energy recovery	329.2	264.5	488.4
Total waste sent for disposal	1,112.8	650.7	645.8
Total waste treated*	1,441.9	915.2	1,134.3
Waste sent for material or energy recovery (% on the total quantity of waste treated)	22.8%	28.9%	43.1%

The 2021 figures do not include Recycla and Vallortigara and include liquid waste treated in the water treatment plants of the Malpasso platform.

The increase in the volumes treated in 2021 is explained by the termination of the restrictive national measures aimed at containing the health emergency initiated in 2020, which had led to the closure of most commercial and industrial activities, and by the inclusion of the volumes of liquid waste treated through the osmosis process of the three water treatment plants of the Malpasso (Pi) platform, which had not been considered in previous years.

In particular, in January 2021, the third section of the Malpasso osmosis plant became fully operational, with the aim of reducing well water withdrawal to a minimum and increasing the fraction of water recovered. In 2021, this resulted in an increase in the volume of water recovered of about 60,000 tonnes compared to 2020. In fact, osmosis is a process that allows the recovery of water, bringing it to a high quality level, higher, for example, in the case of Malpasso, than that taken from artesian wells. Recovered water is reused for industrial purposes through, for example, its reintegration into cooling circuits, boilers, the preparation of reagents and for irrigation purposes within plants. Among the platforms equipped with water treatment plants through osmosis, in Hasi, in addition to the Malpasso platform, there is also the Ragghianti (Pi) treatment platform. Again, due to the excellent quality of the discharge, much of the water is recovered for internal platform use.

Below are some examples of recovery-oriented solutions applied to our customer portfolio:

- scraps of leather are used to produce soil improvers and fertilisers;
- the recoverable parts of paper are sent to paper mills;
- plastic is washed, cleaned, and made into flakes for subsequent processing;
- wood scraps are used to produce chipboard panels;
- ferrous materials are separated and recycled in foundries;
- organic waste from food manufacturing companies is used for composting to produce energy and produce compost;
- some types of production waste made of plastic or polylaminates (which until recently were sent to energy recovery) are selected and separated directly in the company and sent for material recovery at the group's plants or at third parties;
- all mixed waste that is not hazardous, non-separable, nor recoverable in terms of material, to be used for energy recovery.

In 2021, we continued our cross-selling activities to customers and prospects thanks to commercial synergies with Aliplast and the services offered by Hera Group companies. This is reflected in the first memorandum of understanding signed by **Hera Business Solution** (Hera Group's integrated and sustainable multi-service offer dedicated to companies) and a top Italian food company, leader in fresh fruit and vegetable, grain and legume processing (discussed in detail in a case study in this report). The collaboration is in the context of a business relationship already in place with Hasi that provides waste management, including plans to reduce waste, combined with Global Service solutions to achieve maximum recovery, and the management of the treatment plant in use at the factory.

Hera Group's contribution to future plastics

The Aliplast Group, that Herambiente acquired in 2017, has **eight plants**. The three foreign plants located in Spain, Poland, and France, and the two Italian plants, at Formigine (Mo) and Quinto di Treviso (Tv), source and select the plastic. The Ospedaletto di Istrana (Tv) and Borgolavezzaro (No) plants transform the waste plastic into finished products, while the Gualdo Cattaneo (Pg) plant produces finished goods using semi-finished recycled plastic products.

Aliplast **manages the integrated plastic cycle**, transforming waste into finished products, mainly PE films, PET plate and granules/flakes of the leading polymers. Its primary commitment is to make the plastic life-cycle sustainable, by collecting and recycling plastic to produce new materials, with the lowest possible environmental impact. Focusing on constant research, development, and technological innovation (regarding products, services, and processes), Aliplast manages a traceable plastics production chain, which is capable of transforming a disjointed chain into a virtuous circle and of ensuring high-quality final products that are efficient and economically more convenient than traditional materials.

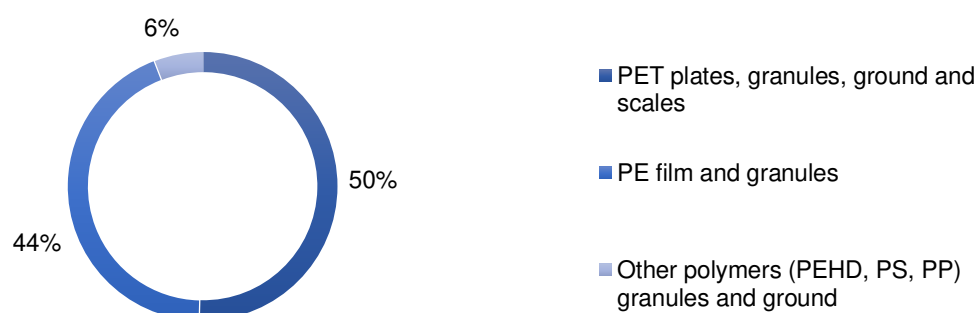
WASTE TREATED BY ALIPLAST

Tonnes	2019	2020	2021
Incoming waste	90,104	84,987	97,411
Total incoming waste sent for material recovery	80,416	74,947	88,284
Secondary raw material from incoming waste (New plastics economy Global Commitment)	72,766	68,848	80,877
Incoming waste sold (material recovered from third parties)	7,650	6,098	7,406
Waste sent for material recovery (% on the total quantity of waste treated)	89.2%	88.2%	90.6%

The plants treat **waste from industrial scrap and from separate municipal waste collection**. This waste was transformed into new products or, to a lesser extent, delivered to third-party recycling companies. The Aliplast Group directly recycles a significant share of the incoming waste and discards only a small percentage of it if it is made of non-recyclable polymers or because of weight loss due to the presence of liquids. The percentage of incoming waste sent for material recovery is over 90%, the increase in the last year being due to increased processing of PE polymer, which has a higher recyclable share than LDP.

The secondary raw material from the incoming waste is sold or used to produce recycled plastic products. Products sold by Aliplast in 2021 contain around 79% secondary raw material from waste plastic. In 2021 Aliplast recorded a strong increase in the sale of recycled plastic products (around 17% more than in 2020), mainly due to the recovery of the supply chains in which it sells its products, in which there was a growing demand for recycled material. The increase in sales led to an increase in waste input and material recovery (14.6% and 17.8% respectively compared to 2020), while the volumes of **secondary raw materials obtained increased** from 68,848 tonnes in 2020 to 80,877 tonnes (+17.5%). The growth in sales and volumes also led to an increase in the ratio of waste input to secondary raw material output, which stood at 83% in 2021, an increase of about three percentage points over the previous two years. This data is publicly reported in the Ellen MacArthur Foundation's **New Plastics Economy Global Commitment**, and described in a case study of this report.

PRODUCTS SOLD BY ALIPLAST, BY TYPE (2021)



The food industry demands high safety standards and strict compliance with applicable food industry regulations. Aliplast's range of products, which is entirely **certified at the European level for food contact**, consists of polymers in granules and flakes, and PET rigid film for thermoforming and extrusion, ideal for producing food trays and bottles.

In 2018 Aliplast developed an IT tool for calculating the **carbon footprint** of five types of products, as described in greater detail in a case study in this Sustainability Report.

The circular approach within the Hera Group

Waste produced by the company [306-1]

In 2021, the waste produced by the Group amounted to **2,278,788 tonnes**, compared to 2020 (2,218,540 tonnes) there was a slight increase in the total amount of by-products leaving the Group's plants. In particular, the following were reported:

- increased solid waste production from chemical-physical waste caused by Vallortigara;
- increased production of solid waste from storage caused by Recycla;
- increased production of liquid waste from the water treatment.

The increase in the production of the above-mentioned waste meant that there was an increase compared to the waste produced in 2020, despite the fact that during 2021 there was less production of leachate from landfills, composting and chemical-physical plants due to the lower rainfall; and also less production of waste from inert material plants (solid waste and other waste).

The analysis carried out to define the destination of the waste produced by the Group in 2021 was characterised by a new type of reporting, with new views and additional details which, in addition to breaking down the quantities for each category of waste destined for disposal and recovery, distinguishes between hazardous and non-hazardous waste and differentiates those destined for Group plants from those destined for third parties. Thanks to this in-depth analysis, it was possible to provide further information on the destination of the waste produced.

[306-3]

MAIN TYPES OF WASTE PRODUCED BY THE COMPANY, BY DESTINATION (2021)

Waste category	Non-disposal	Disposal	Total
Water from chemical-physical-biological treatment	16,860	368,936	385,796
Other waste from Herambiente storage and plants	137,439	253,013	390,451
Biostabilised	87,217	1,170	88,387
Sludge produced by chemical-physical-biological plants	1,133	45,778	46,911
Leachate from landfills/composting	14,980	290,708	305,688
Waste-to-energy plant electrofilter particulates	36,198	12,951	49,149
Production of fuel from waste	78,859	114	78,974
Liquid waste from stabilisation	-	27,810	27,810
Solid waste from stabilisation	10,216	46,229	56,445
Sand from water treatment plants	-	4,315	4,315
Waste-to-energy plant slag	237,103	7,933	245,036
Non-reusable fractions from selection plants	10,526	166,291	176,817
Liquid waste from water treatment	1,604	50,733	52,337
Chemical-physical solid waste	21,816	14,629	36,445
Composting leachate	-	28,574	28,574
Leachate from water treatment	-	8,034	8,034
Wastewater from water treatment	140,499	-	140,499
Water purification sludge	110,124	46,996	157,120
Total	904,574	1,374,214	2,278,788

The table has been updated to the new GRI 306: Waste 2020 standard and the data will be compared with the previous year's figures from the 2022 financial statements onwards.

In 2021, waste produced by the Group and sent to recovery operations amounted to 904,574 tonnes (of which 94% non-hazardous and 6% hazardous waste). Of the total waste sent for recovery, 23% went to **Group plants** and the remaining 77% to **third-party plants**. The waste categories that had a significant

weight within the total waste produced and destined for recovery were: **slag from waste-to-energy** totalling 237,103 tonnes (26%), **wastewater from water treatment** totalling 140,000 tonnes (16%), **wastewater treatment sludge** totalling 110,000 tonnes (12%), **bio-stabilised** waste totalling 87,000 tonnes (10%), **fuel produced from waste** totalling 78,000 tonnes (9%).

[306-4]

MAIN WASTE NOT DESTINED FOR DISPOSAL BY OPERATION (2021)

Classification	Operation	Third party plants	Group plants	Total
Hazardous	Recycling	23,279	233	22,889
	Other recovery operations	21,244	9,454	30,698
<i>Total hazardous</i>		<i>326,662</i>	<i>76,770</i>	<i>402,095</i>
Non Hazardous	Recycling	326,662	76,770	402,095
	Composting	8,254	102,141	110,395
	Other recovery operations	312,612	23,924	336,536
<i>Total non hazardous</i>		<i>647,528</i>	<i>202,835</i>	<i>849,026</i>
Total		692,052	212,522	902,613

"Other recovery operations" include the reuse of bio-stabilised material to cover landfilled waste, the reuse of electro-filter dust and the shredding of surplus material used to produce CSS. The table has been updated to the new GRI 306: Waste 2020 standard and the data will be compared with the previous year's figures from the 2022 financial statements onwards.

Waste produced by the Group and subsequently sent for disposal amounted to 1,374,215 tonnes (of which 91% non-hazardous and 9% hazardous waste), of which **84% was sent to Group plants** and the remaining **16% to third-party plants**.

[306-5]

MAIN WASTE DESTINED FOR DISPOSAL BY OPERATION (2021)

Classification	Operation	Third party plants	Group plants	Total
Hazardous	Waste-to-energy	30,946	8,426	39,372
	Landfills	16,330	10,536	26,866
	Other disposal operations	31,172	22,507	53,679
<i>Total hazardous</i>		<i>78,448</i>	<i>41,469</i>	<i>119,917</i>
Non Hazardous	Landfills	49,843	183,343	233,186
	Waste-to-energy	8	66,415	66,302
	Other disposal operations	44,307	910,383	954,811
<i>Total non hazardous</i>		<i>94,158</i>	<i>1,160,141</i>	<i>1,254,299</i>
Total		172,606	1,201,609	1,374,215

Other disposal operations include the chemical and physical treatment of compost leachate, liquid waste and sludge. The table has been updated to the new GRI 306: Waste 2020 standard and the data will be compared with the previous year's figures from the 2022 financial statements onwards.

have waste with a very low quantity of unburned matter and low water content. This has resulted in a lower percentage of slag being produced and, above all, a quality level that is more suitable for subsequent recovery.

In 2021, the eight waste-to-energy plants managed by Herambiente and intended for municipal waste (thereby excluding the Ravenna plant) produced 237,103 tonnes of slag, or 20% of the waste treated in these plants. **97% of the slag produced was recovered**, for example by producing cement and concrete mixes, while the remainder was disposed of in landfills.

The plants in Ferrara, Bologna and Rimini also have **ferrous metal separation systems** that enable the reuse of the metal in the metallurgical industry. In 2021, 4,204 tonnes of metals were recovered, a figure in line with 2020 (it was 4,255).

There are two main ways to recover particulate matter from flue gas scrubbing:

- the sodium-rich powder is picked up by Solvay Italia, which processes it to recover its residual bicarbonate content;
- lime powders and electrofilter particulate are sent to Germany where they can be reused to restore cavities in decommissioned mines.

The **sludge produced by chemical, physical, and biological plants** is sent abroad where it is used in a process to produce cement granules that can then be used as a raw material to produce composite mixtures for geoengineering applications, i.e. in levelling, reclamation and shaping of the surface of areas, formation of embankments or for special applications in areas where there is mining waste from the extraction of hard coal. In addition, the granulate can also be used in civil engineering to build the bottom layers of foundations and roads, or for land reclamation.

Biostabilised material is reused as material for the preparation of daily landfill covers and, in some cases, also for their final cover.

Wastewater sewage from water treatment are all potentially reusable, as water for washing vehicles or yards.

Lastly, by shredding the waste from the sorting centres, it is possible to produce **secondary solid fuel** (CSS), which is then used in boilers and cement plants.

Recovery of purification sludge

Wastewater treatment sludge is considered special waste and must be managed in accordance with the requirements of **Legislative Decree 152/2006**. In 2021, the plants managed by the Group produced 34.6 kilograms of sludge per equivalent inhabitant served, 1.2 kilograms more than in the previous year. At Group level, a part of the sludge produced (46,995 tonnes, about 29%) was disposed of through dedicated **incineration** (21,584 tonnes, 13.7% of the total), **landfilling** (16,378 tonnes, 10.4% of the total compared to 15.5% in 2020) and a residual part through other treatments (9,069, 5.8%). The remaining part was recovered (110,124 tonnes, about 71%) through **indirect agronomic reuse after composting** (102,141 tonnes, 65%), **direct recovery in agriculture** (7,983 tonnes, 5.1%). The Group aims to further reduce the landfilling of sludge in the territories served. In particular, in Emilia-Romagna (territory served by Hera Spa), the target for 2030 is to reduce the amount to 1.5%.

Work on the centrifuges at the Castelnovo Rangone plant and the sludge thickener in Riccione was completed in 2021. In addition, the use of a new-generation additive continued in the Ravenna and Sassuolo water treatment plants, which can lead to a reduction in the production of sludge and induce an increase in the production of biogas that can be used to produce thermal energy and possibly also electricity. As far as the Triveneto area is concerned, it should be noted that in the Padua area, after the installation of the 900 m² solar greenhouse in 2020, work continued on sludge drying through the installation of two biological dryers with innovative technology. Furthermore, in the Trieste area an agreement was signed between the main operators in the Friuli Venezia-Giulia region for a centralised drying project. Finally, preliminary design work is underway for a 20,000 tonne drying plant at the San Giorgio di Nogaro (UD) treatment plant. In the Marche region, a new plant is planned at the Borgheria water treatment plant in Pesaro, which will allow biological sludge to be transformed into fertiliser directly within the purification cycle.

Waste management in electricity distribution activities [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 operation and maintenance activities in the field of electricity distribution, with the aim of verifying compliance with the "do not significant harm" principle in relation to the environmental objective of "transition to a circular economy".

Within the Group, electricity distribution is an activity carried out by the companies Inrete and AcegasApsAmga; in the course of internalised activities, residues may be produced from processing such as: cables, metals, plastics, batteries, oils, packaging (wood and metal), transformers and capacitors.

These are delivered from the construction site to the company's premises to be assessed and, if unsuitable for further use, classified as waste for recovery or disposal.

In 2021, Inrete produced around **195 tonnes of waste** including mixed metals, plastics, copper cables, alumina cables and more. 91% was sent for material or energy recovery, and 63% was sent for recovery or disposal at Group plants.

In 2021, AcegasApsAmga produced approximately **291 tonnes** of waste (89% was sent for material or energy recovery), all of which was sent for recovery or disposal at external supplier plants.

In the case of worksites entrusted to suppliers, the waste produced refers mainly to excavation earth and rocks; in some worksites in the Triveneto region, the replacement of old networks can lead to the discovery of old asbestos cement pipes, which are sent for disposal through the company Herambiente. At these sites, waste is monitored through a periodic spot check of the annex IV form.

In 2021, a working table was launched within the Group involving Inrete, AcegasApsAmga and Hera Spa to promote the circularity of meters. In particular, the aim is to increase material recovery in view of the massive substitution planned for 2022 in the Modena, Imola, Gorizia and Trieste areas. The possibility of reusing plastic recovered from old meters in the manufacture of the new generation NexMeter Gas meters is also being explored.

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 next few years, the introduction of the following aspects is being assessed:

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

The development of plant equipment

The main interventions

In 2021 Herambiente Group made operating investments **for material and energy recovery**, and for the creation of additional landfill volumes, totalling **Euro 78.7 million** (plus a further Euro 68.2 million for operations relating to acquisitions).

The following table shows the construction, upgrading or renovation of facilities completed during the year as well as those currently in progress. For a description of the main actions carried out, see the section "[The circular economy at the service of businesses](#)".

MAIN INTERVENTIONS OF CONSTRUCTION/EXPANSION/IMPROVEMENT OF WASTE TREATMENT PLANTS

Plant	Progress at 31 st December 2021	Type of measure	Environmental benefits expected/obtained
Spilamberto (Mo) plant	In progress	Construction of biomethane production section	Biomethane production from January 2023 of 3.6 MScm and treatment 40 kton/year FORSU
Voltana (Ra) plant	Authorised plant	Partial conversion to biomethane production	Biomethane production from 2024 of 2.0 MScm and treatment 60 kton/year FORSU
Pesaro biodigestion plant Marche Multiservizi	Planning stage (permitting process in progress)	New plant	Treatment of organic waste through anaerobic biodigestion and composting of 105 kt/year separated into 75 kt/year from organic fraction and 30 kt/year from clippings and pruning waste

Plant	Progress at 31 st December 2021	Type of measure	Environmental benefits expected/obtained
Trieste waste-to-energy plant	In progress	Revamping of Line 2	Increased treatment and energy recovery capacity (20 thousand MWh/year expected)
Ravenna waste-to-energy plant (F3)	In progress	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	Planning stage (permitting process in progress)	Replacement of lines 1 and 2 with new line 4	Increased energy recovery (+70,000 MWh/year planned), upgrade to BAT and continuity of operation.
5th portion of Ravenna landfill	Currently in the authorisation stage	Construction of 5th portion of landfill for NH and H stabilised waste	Capacity increase
Firenzuola (Fi) landfill	Completed	Construction of 5th lot	Capacity increase
Loria landfill (Tv)	Lot 6 completed and currently being tested, Lot 5 under construction	Construction of lots 5 and 6	Capacity increase
Sommacampagna (Vr) landfill	Completed	Capping and environmental restoration	Reduction of leachate production and environmental restoration
S. Agata Bolognese (Bo) landfill	Completed	Capping and environmental restoration	Reduction of leachate production and environmental restoration
Ravenna landfill site km 3.8	Intervention authorised	Restoration and renaturation of the area	Renaturation and landscaping; site within the Po Delta Park
Ravenna landfill, fourth portion	Completed	Capping and environmental restoration	Reduction of leachate production and environmental restoration
Landfill 9th sector Ravenna	Planning stage	Capping and environmental restoration	Reduction of leachate production and environmental restoration
Serravalle (Pt) landfill	In progress	Construction of lot 14	Capacity increase
Castiglione delle Stiviere (Mn) plant	Completed (plant in operation)	Modification and revamping of high-quality secondary solid fuel (SSF) production line	Reduction of processing waste that cannot be used as fuel
Carbon fibre recovery plant (Bo)	Planning stage (permitting process in progress)	New plant	Increased range of recoverable waste and production of recovered materials with less energy expenditure than the virgin raw material
Aliplast rigid plastics recovery plant (Mo)	Planning stage (permitting process in progress)	New plant	Increase of the range of recoverable plastic waste
Voltana (Ra) selection plant	Planning stage (permitting process in progress)	New line for the treatment of glass waste from separate waste collection	Improvement of glass recovery system from separate waste collection
Hasi Malpasso (Pi) plant	In progress	New osmosis/evaporation line for liquid waste/wastewater	Recovery of water for industrial use
Hasi Ragghianti (Pi) plant	In progress	Doubling of tank park for flammable waste	Capacity increase
Hasi Ponticelle (Ra) platform	Planning stage (permitting process in progress)	New platform for storage and pre-treatment of industrial waste	Capacity increase
Special waste recovery plant in Marano Vicentino di Vallortigara (Vi)	In progress	New plant	Special waste recovery (paper/cardboard, wood, metals, etc.)

Environmental impact assessments [102-11]

The **IEA** and **Screening** procedures are accompanied by a series of **environmental assessments** of the effects of the works (both during construction and at the project stage) on the environment, and on human health and well-being, based on the characteristics of the project itself and following analysis of the components involved in their pre-construction condition. In particular, interference with the following aspects was analysed: atmosphere, water resources, soil and subsoil, flora, fauna and ecosystems, noise, human health and well-being, landscape and cultural heritage, residential system, and socio-economic conditions.

In addition to qualitative and descriptive evaluations, the approach used involves running specific **modelling and forecasting simulations** using software and calculation algorithms, to obtain numerical data that can be compared with standards and limits defined by industry regulations and that can assess the relevance of the impact. Model simulations are carried out in particular for the release of pollutants and odorous substances into the atmosphere, and noise emissions. They are also used to prepare risk analysis at landfill sites, where it is necessary to request exceptions to the acceptance criteria for incoming waste, and in any case necessary during plant closure procedure as required by recent regulatory updates on landfills.

All the simulations carried out include an accurate characterisation of the sources and the assessment of the most unfavourable scenario, so as to provide a **precautionary analysis**. Landscape assessments are carried out by using renderings and photomontages to assess the visual effect of the new works on the surrounding environment, for example for creating new lots/landfill sites. In addition, if the works planned are located within or near sites of Community interest (sites belonging to the Natura 2000 Network), special assessments are required to determine whether or not the works/activities in the project could have a significant impact on these sites. Lastly, in some cases, the applications are also accompanied by a specific "Health impact assessment and proposed health monitoring plan". Once impacts have been assessed, specific **mitigation measures** are identified, where necessary, so as to reduce them and, if that is not possible, specific compensatory measures are implemented (construction of photovoltaic plants, planting trees, construction of charging stations for electric vehicles, etc.).

It must be noted that the design of the works is always carried out by identifying and using the best available technologies as required by Legislative Decree No. 152/06 as amended and Art. 29 bis, paragraph 3, which, for landfills, are defined by Italian Legislative Decree No. 36/03 as amended.

In the course of 2021, the following were activated, within the framework of Article 27-bis of Legislative Decree 152/2006 as amended. "Single Regional Authorisation Measure" the following Environmental Impact Assessment Procedures (still ongoing):

- "Ponticelle development compartment: HEA multifunctional platform and Eni Rewind bio-recovery platform";
- Single authorisation procedure for Environmental Impact Assessment, Environmental Impact Assessment and building permit pursuant to Articles 27 bis and 208 of Legislative Decree no. 152 of 3 April 2006 concerning the project to optimise non-hazardous special waste recovery operations at the Aliplast SpA plant in Ospedaletto di Istrana (TV).

In the course of 2021, the following EIA procedures were activated (otherwise known as Screening) as a result of which the competent authority assesses whether an EIA procedure is necessary. These procedures are still in progress.

- Project entitled 'Construction of new rigid plastics recovery plant' presented by Aliplast;
- Morphological optimisation" project of the landfill for non-hazardous and non-putrescible waste.

Still in 2021, we also applied for the review of **Integrated Environmental Authorisations** for compliance with BAT (Best Available Techniques), seeking a renewal, following:

- the Commission's Implementing Decision (EU) 2018/1147 of 10/08/2018 establishing the conclusions of Best Available Techniques (BAT) for waste treatment;
- the Commission's Implementing Decision (EU) 2019/2010 of 12/11/2019 establishing the conclusions of Best Available Techniques (BAT) for waste incineration.

The main **plants/sites** for which IEA review applications have been activated in 2021 are:

- Waste-to-energy plant for urban and special non-hazardous waste and chemical/physical water treatment plant located in the "Area 2" plant area, in the Municipality of Modena (MO)
- Waste-to-energy plant located in the municipality of Granarolo dell'Emilia (BO) - Soc. FEA Frullo Energia Ambiente s.r.l.;
- Waste-to-energy plant for non-hazardous waste and equipped ecological platform, in the municipality of Forlì (FC);

- Multi-purpose waste treatment facility, with production of biomethane, compost and biostabilised waste, including management of the existing landfill, in the municipality of Sant'Agata Bolognese (BO);
- Baiona Ecological Centre (F3 incinerator, Wastewater Treatment (TAS) plant and FIS waste incinerator) in the municipality of Ravenna (RA);
- Sorting and recovery plant for urban waste from separate collection and special non-hazardous waste at Castiglione delle Stiviere (MN);
- Landfill for non-hazardous waste located in Vinchiaruzzo Municipality of Cordenons. Application for review for renewal due to IEA expiry.

The evaluations in submission of the IEA Review applications showed that they all **substantially comply with the sector BAT**.

During 2021, a request was also made to modify the integrated environmental authorisation of the composting plant located in the Municipality of Ozzano dell'Emilia (BO), for the construction of an experimental plant included in a LIFE-Environment project called Life STEAM (LIFE18 ENV/IT/000092) based on steam explosion technology. The experimental activity was approved.

In the course of 2021, a request was also made for the activation of the application for the Single Authorisation pursuant to Article 208 of Legislative Decree 152/2006 and subsequent amendments and additions for the construction and management of a new carbon fibre regeneration plant to be located in the Municipality of Imola (BO). The construction of the plant, designed as part of an Italian partnership between Curti, the University of Bologna and Herambiente (the first industrial applicator of this new recovery system), will make it possible to make efficient use of carbon fibre waste through thermal regeneration. The main objective is to respond, with a highly technological and sustainable design solution in terms of circular economy, to the growing demand for carbon fibre and composite materials which, with the current capacity of the industry, is in danger of not being met.

The following is a description of three major plant operations concerning the waste-to-energy plants in Padua and Ferrara and a new biodigestion plant in Pesaro.

The project for the **waste-to-energy plant in Padua** involves replacing the existing lines 1 and 2 with a new line (line 4) with characteristics similar to those of the existing line 3 and a nominal capacity equal to the sum of lines 1 and 2. The objective is essentially a technological upgrade of the system, through the replacement of lines 1 and 2, which have been in operation since the 1960s and 1970s respectively.

The waste-to-energy plant in Padua, authorised to operate under Integrated Environmental Authorisation Decree no. 78 dd.06/09/2017 issued by the Veneto Region, is owned and managed by the company Hestambiente (70% controlled by Herambiente and 30% by AcegasApsAmga). Over the years, lines 1 and 2 have undergone various partial technological upgrades, essentially aimed at improving environmental performance (flue gas treatment system), also in conjunction with the start-up of Line 3 in 2010; however, these interventions have only marginally affected 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.

The analyses carried out in order to evaluate a possible revamping of the lines showed that a significant investment would guarantee a recovery in performance, but only temporarily; in fact, any intervention could not have included the complete replacement of significant parts of the plant (e.g. furnace and boiler).

The logical next step was to evaluate the construction of a completely new line 4, similar in technology and performance to the existing line 3, keeping lines 1 and 2 in operation for the duration of the construction site so that the continuity of the waste disposal service to the territory could always be guaranteed.

In terms of potential, the decision was taken to remain within the current IEA authorisation perimeter:

- 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 brief, the objectives of the intervention are therefore essentially:

- recovery of the disposal capacity which is currently well below the authorised capacity;
- improving energy performance in order to increase energy recovery;
- increased availability through improved reliability and reduced faults;
- improving environmental performance.

The total amount estimated for the implementation of the project is about 110 million euro.

On 3 December 2020, the authorisation process was started by submitting to the Veneto Region the necessary documentation required for a single environmental authorisation measure; after requests for integration and various meetings with the various stakeholders, the Conferences of Services were started and the Environmental Impact Assessment of the project was approved with a positive outcome, albeit with various prescriptions. Of these, the most impactful is the reduction of the plant's maximum authorised annual capacity to 219,000 tonnes. There are also further requirements aimed at increasing the environmental performance of the plant (including 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 for atmospheric emissions of certain parameters compared to the values set out in Legislative Decree 152/2006.

As of the date of approval of these financial statements, all the Service Conferences have been completed where, during the last meeting on 6 December 2021, the intervention was approved and the draft of the new Integrated Environmental Authorisation (IEA) was defined. The next step, which has not yet been completed, is the issuing of the formal measure by the Veneto Region.

It should also be noted that, within the Single Environmental Authorisation Measure process, the review of the IEA pursuant to the Executive Decision (EU) 2019/2010 of 12/11/2019 was also included, which in any case should have been carried out and made operational on the existing plant by December 2023.

In terms of planning, Hestambiente has entrusted all the design activities and intends to entrust the implementation to the Heratech Group company.

During 2021, the **Integrated Environmental Authorisation of the Ferrara** waste-to-energy plant underwent the review process required by current legislation to verify the plant's compliance with the recently published new Best Available Techniques on waste incineration (BAT-WI).

In fact, Article 29-octies of Legislative Decree 152/2006 provides that, within four years of the publication of BAT-WI, which took place in December 2019, the competent authority must carry out a review of the permit conditions to ensure that they are updated to BAT, and that the plant complies with those conditions.

The review procedure started on 30 October 2020 and ended on 5 May 2021 with a new authorisation act issued.

As part of the proceedings, a positive assessment was made of the request to consolidate the annual waste treatment limit of 142,000 tonnes/year, corresponding to the annual disposal capacity under running conditions at the nominal thermal load, an increase of 12,000 tonnes/year over the previous limit of 130,000 tonnes/year. This plant configuration corresponds to the configuration of the project approved at the time with the Environmental impact assessment (Order of the Provincial Council no. 448 of 31 October 2002) and was allowed by the previous authorisation only to receive municipal waste from outside the region, and on the basis of a specific and documented request to that effect by the competent authorities.

The ability to run regularly at the nominal heat load is a necessary prerequisite for a waste-to-energy plant, and in general for any thermal plant, to achieve design operating conditions, with consequent optimisation of energy and environmental performance. In particular, continuous operation at full load allows for improved combustion conditions and reduced carbon monoxide emissions.

Again with reference to the management of waste flows entering the waste-to-energy plant, the new authorisation also overcomes the limitation on the quantity of special waste that the previous IEA required to be delivered "in a complementary and minority manner" with respect to urban waste. In the new authorisation structure, it will therefore also be possible to better manage the effects of the progressive increase in separate collection, which is accompanied by an increase in the flow of "surplus" (non-recoverable waste) from the processing of separate collections.

This waste, classified as hazardous waste (EER code 191212) because they result from the treatment of other waste, is generally destined for incineration, which is the only form of recovery applicable to these material flows (energy recovery), whose only alternative destination would be landfilling.

The new authorisation structure will therefore allow the Ferrara waste-to-energy plant to make a full contribution to achieving the recovery and disposal targets set by the Regional Waste Management Plan:

- self-sufficiency for the disposal of non-hazardous municipal waste, waste resulting from its treatment and non-hazardous special waste within the region, through the optimal use of existing facilities;
- energy recovery of waste fractions for which no material recovery is possible;

- residual use of waste-to-energy plants for energy recovery and final disposal of undifferentiated urban waste that cannot be further recycled, produced in the region, in compliance with the proximity principle;
- landfill zeroing of untreated waste and progressive closure of landfills.

As regards the construction of a **biodigester in Pesaro**, the project concerns the construction and management of an anaerobic biodigester and composting plant for organic waste from separate waste collection and clippings and pruning waste. The design capacity is 105,000 tonnes per year, broken down into 75,000 tonnes from organic waste and 30,000 tonnes from grass cuttings and pruning waste. At the date of approval of this report, the Single Regional Authorisation Measure, which includes all authorisations, including the Environmental Impact Assessment and the Integrated Environmental Authorisation, is in progress.

The project raised some objections from local stakeholders, mainly environmental associations, for the following reasons:

- inadmissibility of the project because it is not envisaged in the public planning (it should be noted, however, that it is a market-based initiative and therefore not part of public planning);
- oversized compared to the provincial needs (the company replied that the plant is designed to handle the peaks that occur in the summer period linked to tourist flows);
- environmental impact from transport traffic, emissions, land consumption (a number of reports assessing the environmental impact of the plant have been submitted on these aspects).

The “Sblocca Italia” decree and the new regulations on waste disposal

Art. 35 of Italian Legislative Decree No. 133/2014, converted, with amendments, into Italian Law No. 164/2014, the so-called “Sblocca Italia” law, aims to develop a suitable, integrated system at national level to manage municipal waste and to meet the separate waste collection and recycling objectives.

To apply the principles and objectives defined in Art. 35, the Hera Group uses the following hierarchy to identify the priority criteria for the saturation of the capacities of its waste-to-energy plants:

- local municipal waste;
- regional municipal waste;
- any municipal waste from outside the region according to the resolutions of the relevant bodies;
- non-hazardous special waste until saturation of the residual heat load.

On the basis of these principles, our integrated environmental authorisations (IEAs) were updated between the end of 2015 and during 2016 and, at the same time, we signed framework agreements with Local Authorities for the waste-to-energy plants of Forlì, Rimini, Modena and Ferrara. The agreement on the Forlì waste-to-energy plant stipulates that only municipal waste from the regional basin will be sent to this plant, in accordance with the current planning. The agreement on the waste-to-energy plant in Ferrara was superseded in 2021 with the issuing of the new Integrated Environmental Authorisation, which sets the maximum authorised disposal capacity at 142,000 tonnes/year of non-hazardous waste, with priority for municipal waste produced in the region.

In 2021, no solid municipal waste from other regions was treated in Herambiente’s eight waste-to-energy plants for municipal waste (thus excluding the Ravenna plant), as determined by the relevant authorities. Also in the case of **landfills**, no solid urban waste from other regions has been treated, as determined by the competent authorities.

The circularity of water

Non-invoiced water

The percentage of non-invoiced water compared to water fed into the network is related to physical or real losses (due to breakage of pipes or hydraulic equipment, etc.) or procedural or apparent losses (metering inaccuracies, errors in estimated presumed consumption at 31 December, unrecorded internal consumption, and illegal use). The latter losses result in water which is effectively delivered to the end customer but is not recorded and invoiced.

Until 2006, network losses were calculated as the difference between the water fed into the water network during the year and the water accounted for as supplied to customers during the same period: the amount was estimated at 31 December of each year on the basis of the historical consumption of customers since it is not possible to take a single reading of all the meters at 31 December. This estimate was then supplemented so as to consider the correct period of recording in accounts of the water sold to customers as at 31 December of the previous year, calculated after reading all the meters. Since 2007, network losses have been calculated by integrating the adjustments coming from meter readings in the pertinent

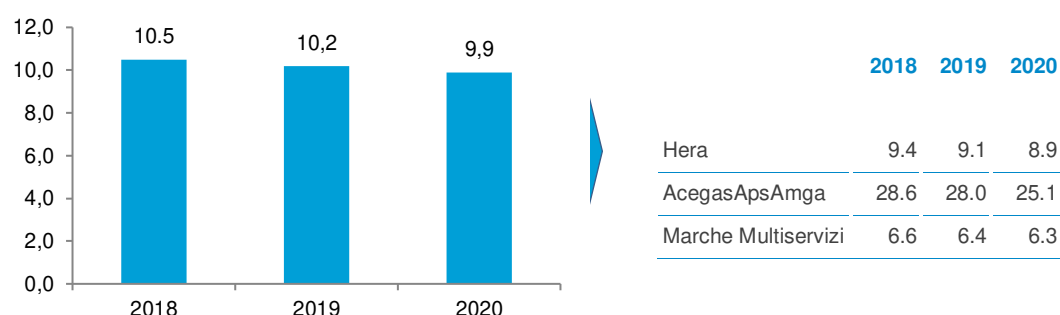
year, thereby ensuring comparability of the water sold with the related amounts fed into the system each year. To calculate non-invoiced water, we used the method defined by ARERA in its Technical Quality Regulation (resolution 917/2017); the volume of water lost is calculated as the difference between the volume fed into the water network and the volume leaving it; this value is compared to the input volume to calculate the percentage and to the length of the supply and distribution pipelines to calculate the losses per km. With this approach, it is however possible to calculate the final figure for the year only around four to six months after the close of the financial statements, after all the meters have been read. That is why the table below does not include the figures for 2021. On the basis of the information available at the date of approval of this Report, there is no evidence to suggest that the final figure for non-invoiced water for 2021 differs significantly from that for 2020.

At a Group level, the **network loss** figure for 2020 is **29.9%**, slightly down on 2019 (both figures calculated according to the Arera resolution). The Group continues to be positioned at a level **significantly lower than the Italian average** of 41.2% in 2019, **also lower than the average for the North-Eastern area** of 38.4% in 2019 (Source: Arera, 2020 Annual Report), and than the 36% in 2020 **average for provincial capitals** (Source: Legambiente Ecosistema Urbano 2021).

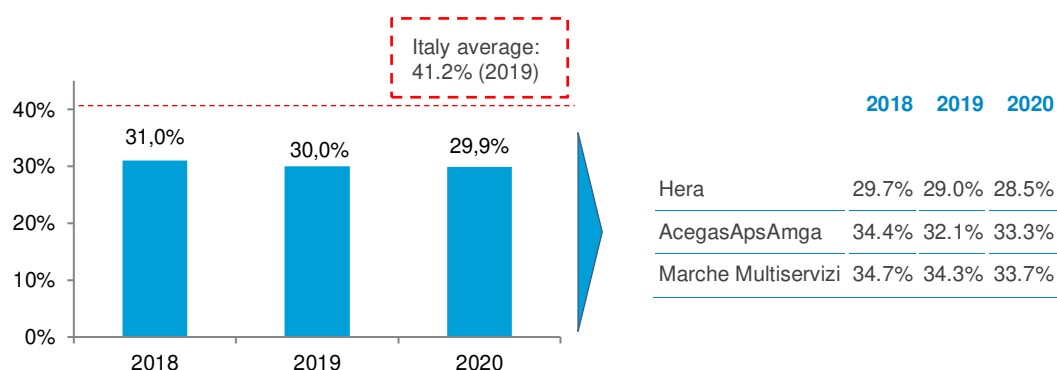
The corresponding **linear losses** index (2020 figure) is **9.9 m³/km/day**, slightly down compared to 2019. We believe that the figure of non-invoiced water per kilometre of network is more representative of the effectiveness and efficiency of the distribution system and more useful for comparison with other companies. The figure for losses per km in Emilia-Romagna was 8.9 m³/km/day in 2020, substantially in line with the average of 8.3-8.4 m³/km/day found by the European Environment Agency on a group of **32 European utilities** that took part in the study entitled "Performance of water utilities beyond compliance". It is an even more significant value if compared with the average of 23 m³/km/day of the Italian utilities for 2019 (Source: Utilitalia, 2019 Sustainability Report) and with the 22 m³/km/day of the **Italian average** reported by Arera for 2019 (Source: Arera, 2021 Annual Report). The figure is also lower than the **average for the North-east**, which has the best performance at Italian level, at 13.8 m³/km/day in 2019 (Source: ARERA, 2020 Annual report).

The **objective of the Hera Group** is to reduce linear losses to **9.4 m³/km/day by 2030**.

NON-INVOICED WATER PER KILOMETRE OF NETWORK OPERATED (M³/KM/DAY) (PHYSICAL AND ADMINISTRATIVE LOSSES FROM THE DOMESTIC WATER NETWORK CALCULATED USING ARERA'S METHOD)



NON-INVOICED WATER (PHYSICAL AND ADMINISTRATIVE LOSSES FROM THE DOMESTIC WATER NETWORK CALCULATED USING ARERA'S METHOD)



The recovery of purified water in the interest of the local area

In April 2018, a **three-year programme agreement was signed between Hera Spa and the Emilia-Romagna Region, Arpa, Atersir and Consorzio Bonifica Renana** aimed at **recovering the wastewater** discharged by the Bologna treatment plant (the total reuse potential is **7.5 million cubic metres**).

The agreement enables the consortium to withdraw about 2,160 m³/h, equal to about 40% of the flow rate treated during the summer period. In particular, part of the water purified by the plant is carried by a dedicated pipeline to the "Savena Abbandonato" plant, leaving the corresponding flow, coming from the river Reno, to go to the "Canale Navile". This is done through a modulated management of surface water flows by the Consorzio della Bonifica Renana, in relation to the demands and the degree of drought of the water bodies.

Under the agreement, Hera and the Consorzio della Bonifica Renana have invested about Euro 120,000 to implement the system (sluice gate and pumping/extraction plant) to transfer part of the flow treated by the Bologna water treatment plant to the network of channels managed by the consortium. During the activity, additional analyses are planned on the waste water discharged by IDAR, to monitor additional parameters with respect to those already in the authorisation process.

This initiative, in addition to the primary objective of protecting water bodies in the area, also pursues the principle of reuse of water as a good to be preserved. In 2021, the total flow diverted to the Renana reclamation plant from the Bologna wastewater treatment plant is **approximately 891 thousand cubic metres**.

In July 2019, a **Memorandum of Understanding was signed by Hera and the Consorzio della Bonifica Renana for some minor water treatment plants in the Bologna area**, so as to identify the operating methods to apply to enable reuse of water treated by the water treatment plants located in the consortium's district downstream of the discharge, and possibly be stored, to improve the hydrological balance of the flows through the water bodies in the consortium's district. The total reuse potential is approximately **2.5 million m³**.

In 2020, we signed a **Programme Agreement for the reuse of wastewater** from the **Sassuolo and Savignano sul Panaro** wastewater treatment plants, and the agreement was sent **to the Municipality of Modena** for the wastewater treatment plant, to formalise the reuse process already in use (final approval expected in February 2021). These agreements, aimed at reusing water for irrigation purposes in the Modena area, resulted in a potential reuse volume of about **4.2 million m³**.

In 2021, the VALUE CE-IN research project ("Efficient use of wastewater and sludge in view of circular economy and industrial symbiosis") continued in the **Cesena area**. However, although the agreements with the consortia have been made and the volumes of potential reuse identified (0.3 million cubic metres), reuse cannot currently be operational due to the presence of protected fauna within some of the treatment plants. In addition, the framework agreement with the Emilia-Romagna Region, Arpa and the Land Reclamation Consortia for the indirect re-use of purified wastewater for irrigation purposes and in view of hydraulic balance was extended to some plants in the **Ravenna and Ferrara** areas, which led to an increase in re-usable wastewater of about **3 million cubic metres**.

In the Triveneto area, also in the province of Padua, there are initiatives aimed at recovering wastewater from treatment plants. In particular, although there are no formal agreements, for three treatment plants (**Abano, Guizza and Cona**), water is recovered indirectly by discharging it into canals for irrigation purposes. The volumes recovered by AcegasApsAmga in 2021 were approximately **3.5 million cubic metres** and have been counted since 2021 in the calculation of the indicator shown in the table below.

REUSABLE PURIFIED WASTEWATER (% OF TOTAL PURIFIED WASTEWATER)

	2019	2020	2021
Reusable purified wastewater (million m ³)	10.0	14.2	20.7
Total purified wastewater (million m ³)	291.3	271.2	347.1
Reusable purified wastewater (% of total purified wastewater)	3.4%	5.2%	6.0%

Figure refers to Hera Spa and, since 2021, AcegasApsAmga

By comparing reusable purified wastewater (i.e. potentially reusable purified wastewater leaving the Emilia-Romagna plants for which reuse agreements have been signed with the Authorities and purified water discharged into canals for irrigation purposes in the Triveneto region) and the total water purified in the plants managed by Hera Spa and AcegasApsAmga, reusable purified wastewater corresponds to

6.0% of the total in 2021 (it was 5.2% in 2020). The objective is to increase this share to 8.5% in 2025, and 15% in 2030.

The commitment to reduce internal water consumption and the consumption by customers

Reduction in consumption within the Group

In 2018, we began to plan actions aimed at **saving, reusing and recovering water** (the "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 domestic and industrial water networks in the Group's most "water-hungry" business units served by Hera Spa in Emilia-Romagna, namely:

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

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

The target outlined in the latest business plan calls for a 20% **reduction in the volume of water used** for operations at the sites and plants by 2025 compared to the 2017 baseline, and a 25% reduction by 2030.

With respect to this objective, a reduction in water consumption of approximately **16% was recorded in 2021 compared to the 2017 baseline** (equal to approximately 1,279 thousand cubic metres in 2021), mainly due to the continuous work of research into areas of improvement in the use of water resources, optimisation of systems, and the implementation of measures to reuse and recover resources.

The savings achieved amount to approximately 255,000 cubic metres, equal to the average water requirements of about 3,500 inhabitants, and are at an advanced level on the trajectory outlined by the business plan for savings in internal water consumption. The outcome was influenced by the earlier than expected completion of some water saving actions initially planned for 2025.

Specifically, in 2021, three of the Group's main water treatment plants (Santa Giustina (RN), Cattolica (RN) and Modena) reduced to zero the use of drinking water for process use, using it only for hygienic and sanitary purposes. Also in 2021, the coarse grids on the wastewater entering the Modena water treatment plant were replaced, and rainwater catchment areas were extended at the Bologna and Cristina Campo sites, which will allow a further reduction in water consumption and recovery.

WATER MANAGEMENT PROJECT

Internal water consumption (thousand m ³)	2017	Reductions related to specific interventions	2021
Sewage, purification, and water network service	571.7	125.1	446.6
Waste collection service	64.1	20	44.1
District heating	208.5	28.5	179.9
Imola cogeneration plant	272.5	7.8	264.7
Corporate offices	127.2	18.3	108.8
Waste treatment plants	277.1	60.8	216.3
Vehicle management	13.7	-5.0	18.7
Total	1,534.8	255.4 16.6% of 2017 consumption	1,279.3

The total consumption is calculated on the basis of the billed consumption using the deviation between billed and read volumes on the meters as a driver for correction. The correction is applied to avoid that the mechanism of estimated readings, which is applied in billing whenever meters are not read on time, leads to an over- or underestimation of the real volumes used.

Therefore, for the coming years, we have scheduled projects, both structural (i.e. fields of operation involving investments in plant modernisation) and non-structural (i.e. aimed at creating awareness of the use of water resources). More in detail, the main actions of the plan are:

- measures to improve the main plants (waste-to-energy plants, water treatment plants, etc.) to allow the recovery and reuse of process water which would otherwise be discharged into public sewage or into the surface water body after purification treatment;
- technological modernisation to optimise the systems, thus reducing water consumption for the replenishment of circuits;
- enhancement of the search for hidden leaks downstream of meters.

The reduction in the operating hours of some plants, together with other factors, added to the water-saving measures, generating real savings of 25% in 2021 consumption compared to 2017.

The Group's water consumption not included in the scope of the water management project such as those of Aliplast, Hasi, the waste-to-energy plants of Trieste, Padua, and Pozzilli, and AcegasApmAmga (for the water treatment plants and offices) amount to approximately **3.3 million m³** in 2021.

The commitment to reduce the consumption of residential customers and businesses [303-1]

When, in 2018, we started the “water management” project within the Hera Group, it became clear that extending this project to **external domestic and business customers** was important, in the awareness that habits, choices, culture in the use of water resources evolve only if the company involves the territory and people in its sustainable development.

Campaigns were therefore prepared and addressed to **residential and business customers**, to analyse and help them reduce their consumption, so as to stimulate and increase virtuous and conscious behaviour in the use of water resources also among our customers.

The **Diario dei consumi (Consumption Diary)** is the tool introduced in 2019 to support the **reduction of domestic consumption**, similar to what has already been experimented in the energy field on the basis of Thaler's behavioural theories. It is an experimental project, developed together with the “Department of Management, Economics and Industrial Organisation” of the Politecnico di Milano, which analyses the behavioural interactions of individuals, trying to enhance positive and virtuous behaviour. In 2021, the service was extended to about 60,000 additional customers and now involves 202,773 residential customers (about 27% of all residential customers).

A report is sent to them, via email, which analyses their consumption patterns in detail, comparing the volumes of water used by the individual customer with that of similar customers and the change in the customer's consumption over time. The report is also complete with tips to help customers choose some good functional water-saving household practices.

Activation of the Diario dei consumi (Consumption Diary) will be gradual and over the next four years will involve all users who have provided their e-mail address to Hera Group.

On the other hand, the “**water management portal**” has been created, specifically for water-hungry **business customers**, i.e. those with water consumption of more than 50,000 m³ per year. Once again in 2021, in line with the previous year, the portal involved 70 companies in the service area, and more than 7,900 of the drinking water supply points we operate. The number of supply points increased by about 500 new contracts from 6 new public administrations registered in the portal. The portal is an interface that allows companies to monitor, through trend analysis, how they use water, so as to evaluate process optimisation strategies.

3.03 Sustainable management of water resources

Water resources

[303-1]

Quality of drinking water

The integrated water service makes the water available in nature suitable for human use and consumption and returns it purified to the environment. Hera is present in the **operation of the water service** in 227 municipalities with a catchment area of over 3.6 million inhabitants. In this area, Hera Group deals with the integrated management of all the phases necessary to make water usable and available for domestic and industrial use and consumption: from withdrawal to drinking water purification and distribution to users, from sewage system management to purification and returning water to the environment.

The management of the entire system of water collection, purification and distribution plants up to the end customer is the so-called **water network service**. Hera Group's water resources include underground water, surface water and, to a lesser extent, springs. In Romagna, we purchase the water we distribute wholesale from Romagna Acque – Società delle Fonti.

The complexity of drinking water purification processes varies depending on the quality of the source water: they range from advanced chemical and physical processes, usually used for surface water, to simpler filtration and disinfection treatments for water coming from deep wells and springs that is already of good quality when collected.

The treatments carried out ensure that the product we distribute has suitable chemical, physical and microbiological features for human consumption, and is constantly compliant with the limits set by applicable regulations.

[303-3]

WATER WITHDRAWN AND FED INTO THE NETWORK, BY SOURCE

Thousands of m ³	2019		2020		2021	
Groundwater	221,221	52.9%	206,894	50.5%	207,907	50.2%
Surface water	162,784	38.9%	170,593	41.7%	172,947	41.8%
Springs and minor sources	34,150	8.2%	32,060	7.8%	33,186	8.0%
Total	418,155	100.0%	409,547	100%	414,041	100%

All sources specified in the table are fresh water ($\leq 1,000$ mg/l total dissolved solids). All water withdrawals refer to areas classified as having a "moderate" water stress risk (values between 2.6 and 3.4, WWF Water Risk Filter, Overall Risk Layer). The Water Risk Filter risk assessment is mainly based on the geographical location that determines the water stress risks related to the basin.

The data provided shows that the total volume of water fed into the network increased slightly compared to 2020 (+1.1%). All sources of supply in 2021 recorded higher withdrawals than in the previous year. From a geographical point of view, the composition of the supply sources can be extremely differentiated: for example, the percentage relevance of groundwater is low in the Marche Multiservizi territory (15.7%), it prevails in the Triveneto region (88.7%), while it is 44.2% in the Emilia-Romagna region where the most used source is that deriving from surface water (49.8%).

Hera Group's distribution network covers **35.104 kilometres** and, where possible, is interconnected and linked to ensure supply continuity even in the event of temporary interruptions of one or more pipelines.

COMPOSITION OF THE WATER NETWORK

%	2019	2020	2021
Plastic	54.3%	54.5%	54.7%
Asbestos-cement	20.3%	20.2%	20.0%
Steel	16.1%	15.9%	15.8%
Cast iron	8.6%	8.7%	8.7%
Other materials	0.7%	0.7%	0.7%
Total	100%	100%	100%

The amount of asbestos-cement in the water network is continuing to decrease, and in 2021 accounted for 20.0% at the Group level. The slight decrease is due to use of materials other than asbestos-cement in new networks or in those subject to extraordinary maintenance. Over the last three years the Group has replaced approximately 98,4 kilometres of asbestos-cement network. At territorial level, the asbestos cement network is most present in the areas of Ferrara, Padua and Ravenna.

Drinking water controls

[416-1]

[416-2]

In 2021, to ensure the quality control of the water supplied, the Group's laboratories in Emilia-Romagna, Triveneto and Marche performed **604,129 analyses on drinking water**, including all the analyses performed for the water network as a whole (tanks, networks, wells, plants, etc.). Of these, 74% were carried out on samples collected in the **distribution networks**. Substantial stability continues in the relationship between the analyses carried out on the distribution network and those carried out on the plants, aimed at effectively preventing 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 its entry into force, Member States must make the necessary amendments to comply with the new directive. Therefore, quality checks on the water used to produce water for drinking and for human consumption are governed by Italian Legislative Decrees Nos. 152/2006 and 31/2001, respectively (transposing EU Directive EU 98/83/EC).

The checks are carried out by the water service operator and the local health authorities at the source **sampling points**, at the water purification and accumulation plants, and along the **supply and distribution networks**.

Hera has consolidated a Group Control Plan which describes the **sampling points** and the **analysis methods used** (parameters and frequencies of the analyses). The Control Plan is developed on the basis of a procedure that focuses on the water's chemical, physical and bacteriological characteristics, so as to fully comply with legal requirements and ensure a top-quality product.

Water quality also means monitoring the effectiveness of the **treatment processes**. For example, the water is checked for chlorites and trihalomethanes, which come from, respectively, the use of chlorine dioxide and sodium hypochlorite as disinfectants. The **concentration of chlorites** and trihalomethanes in the distribution network is kept under constant control in line with the **regulatory limits**.

Since 2008, the average data recorded for the **pH, total hardness, dry solids at 180 °C, chloride, fluoride, sodium, nitrate, nitrite, and ammonium** has been published on the Group's website, listed by individual municipality, and updated every six months. Since 2012, this set of parameters has been extended to include four others: **calcium, magnesium, sulphates, and total alkalinity**. These 13 parameters are considered to be representative of the quality of the **drinking water distributed** and can be used to draw comparisons with the quality of bottled water on the market. Starting from the second half of 2014, the set of parameters was further expanded with 6 additional parameters as required by ARERA: **conductivity, potassium, arsenic, bicarbonate, residual chlorine and manganese**. As such, 19 parameters are published, one more than the number determined by the regulatory authority. The communication concerns 162 municipalities in Emilia-Romagna where Hera manages the water distribution service

Also for the served municipalities of Padua, Trieste and Pesaro Urbino, constantly updated water quality data are available on the AcegasApsAmga and Marche Multiservizi websites.

[417-1]

Since 2012, the **tap water label** has been on Hera's bills and subsequently also on those of AcegasApsAmga. In this way, customers can consult the data on the quality of the water distributed in their municipality (data updated every six months) using their bill.

In addition, water quality parameters are also published on the websites of Hera, AcegasApsAmga and Marche Multiservizi through the "In buone acque" (In good waters) thematic report, so that every customer can easily find data on the quality of water distributed by the Hera Group.

Since January 2009, all drinking water production plants in Romagna have been operated by **Romagna Acque – Società delle Fonti**, the company set up for this purpose by the local regional administrations of Romagna. As a result, the water distributed in the Forlì-Cesena, Ravenna and Rimini areas is in large part purchased wholesale from that company, and Hera's involvement in quality is limited to **operating the networks and the supplementary disinfection stations** along the distribution networks.

The assessments of the quality of drinking water distributed, as compared to the quality of bottled water, are made on the basis of the analytical parameters which are commonly tested at the representative sampling points of the water networks: pH, hardness, dry residue at 180°C, sodium, fluorides, nitrates, and chlorides. The parameters chosen are largely indicative of the saline components the drinking water should have.

Management of water-related impacts

As part of the environmental management system implemented in accordance with ISO 14001:2015, the Hera Group has defined, with the Procedure "Process for the Identification and Assessment of Environmental Aspects and Related Risks/Opportunities", the methodology for identifying the environmental aspects related to the activities, services and plants managed and the potential environmental impacts, followed by an assessment of the significance of the environmental aspects and the environmental risks related to each of them. Given the plant complexity of the processes managed by the Hera Group, a number of plants/services, representative of clusters with homogeneous characteristics, have been examined for each process.

The evaluations carried out on the use of water resources consider the combination of two aspects, the **type of water supply** and the **amount of water consumed/withdrawn** in relation to the output produced: for some plants in the water cycle, both for the drinking water process and the purification process, this aspect was found to be significant and technical-managerial and/or organisational measures are taken to ensure that it is kept under control and, where possible, reduced. Projects have also been set up to have a positive impact on the environment, for example by injecting purified water into watercourses with a low flow, in order to help rebalance the hydro-geological balance. In 2021, the **AWS (Alliance for Water Stewardship)** certification process, an international standard aimed at the responsible use of water resources, was successfully completed for the Val di Setta drinking water plant serving Bologna's primary aqueduct, confirming the group's ongoing commitment to managing and protecting water resources.

In addition to assessing the environmental aspects related to its activities, ISO 14001 requires the organisation to implement its environmental management system with a 'Risk Based Thinking' approach. Within the Hera Group, **risk assessment** is carried out by adopting the Enterprise Risk Management approach, which identifies risk scenarios that may impact the Group, and the related financial and reputational consequences. The combination of the likelihood of occurrence and impact determines the severity of the risk scenarios of individual environmental aspects of representative plants/services. In this context, the reputational factor was considered particularly important. Given the supply system and the type of plant, the environmental risk scenarios (i.e. the risk of aggravating the impacts on the environment itself) related to the methods of use of the water resource were of low severity.

The new technical quality of the water

ARERA introduced the Integrated Water Service Technical Quality Regulation (RQTI) with resolution 917/17. The resolution requires monitoring:

- Three specific indicators concerning interruptions of aqueduct services; exceeding the corresponding standard values will result in automatic compensation being paid to users;
- 6 macro-indicators to which an incentive/penalty system is associated, 3 of which relate to the water network service, 1 to the sewage service, and 2 to the purification service.

The bonus/penalty system is virtually operational from 2020, but we are still waiting for Arera to deliberate on the application outcomes for the first two-year period 2018-2019.

For access to this system, Resolution 917 requires certain prerequisites: a drinking water quality control system, no urban areas subject to European infringement procedures, and minimum quality levels of process and metering user data. The existence of all the prerequisites has been recognised for all Hera Spa operations.

During 2021, we continued to pursue what was started in 2018 and continued in subsequent years with regard to the pursuit of progressive improvement objectives.

The operating actions, both in terms of specific investments and in terms of management actions, concerned in particular countering both physical and administrative water leaks with a related programme to renovate the user meter inventory, improving water quality parameters (drinking water and wastewater), and certain aspects of sewage network management.

Furthermore, a complex project (the so-called Register 917) was consolidated with the Information Systems Department with the aim of automating as far as possible the registration and subsequent reporting to Atersir and Arera of all the technical quality data required, also integrating on the SAP system data already managed in other company modules/applications. The IT project was completed in 2021. During the same year, Atersir anticipated its willingness to introduce a parallel reporting mode for its specific needs.

The management of this data is defined in a separate Quality System procedure.

Application of the new Water Safety Plan

On 23 December 2020, **Directive (EU) 2020/2184** of the European Parliament repealing the previous Directive 98/83/EC on the quality of water intended for human consumption was published in the Official Journal of the European Union. The publication of Commission Directive (EU) 2015/1787 had already amended the latter's Annexes II and III which laid down the minimum requirements of monitoring programmes for water intended for human consumption and the methods of analysis of the various parameters, and introduced the methodology for Water Safety Plans (WSPs) for implementing control and prevention measures to ensure the best quality of drinking water.

It was a substantial change of approach for protecting human health in terms of drinking water, as it marked the transition from a monitoring regime based on the retrospective control 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 direct and indirect impacts induced by climate change.

Italy had transposed this directive with the Decree of the Ministry of Health of 14 June 2017.

Hera has structured prevention and control plans that guarantee good drinking water to its customers, in compliance with regulatory requirements, with constant surveillance carried out through the planning of targeted checks on the entire water production chain. In this regard, the analytical control plan of the integrated water service is drawn up annually, substantially in accordance with the risk assessment criteria contained in Directive 2015/1787.

In light of the new European directive, member states will have two years to transpose it (and therefore by 2022) and by 2029, they will have to carry out the initial risk assessment and management, and achieve full regulatory compliance of the WSPs.

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 drinking water will be elements that must be included in the definition of WSP.

COVERAGE OF WATER SAFETY PLANS

Number	2019	2020	2021
End users served (including indirect users) under a water safety management plan (technically closed)	251,086	273,907	504,898
End users served by the operator for the water network service	2,145,266	2,145,266	2,238,343
% of users served in areas with a Water Safety Plan out of the total number of users served by waterworks	11.7%	12.8%	22.6%

Indirect users: end users of the service provided to the condominium users and coincide with the building units underlying the contract for the supply of one or more services of the integrated water system.

Water safety management plans that are technically closed: plans for which inspections, checklists, risk analyses, improvement actions and risk matrices have been carried out and for which ongoing meetings and in-depth studies have been carried out with bodies, in particular ASL and ARPA; a plan can be defined as formally closed when it is presented to the municipality and sent to the Istituto Superiore di Sanità.

At the end of 2021, there are 32 supply zones served for which a Water Safety Management Plan has been technically closed for an aqueduct in the municipality. Users in these areas account for 22.6% of the total number of users served in areas where the Hera Group manages the aqueduct service.

In Emilia-Romagna, in 2021, the WSPs completed and shared with the reference bodies in the previous year were formalised and the WSPs concerning the Setta plant feed zone and three other minor feed zones in the Bologna Apennines were developed. In addition, in Romagna, WSPs have been developed in the Alto Bidente and Basso Bidente feed areas, plus some smaller areas belonging to local source groups.

In the Triveneto region, activities related to assessments of water plants and the distribution network of the entire water supply chain continued, with the aim of compiling risk matrices for the definition of WSPs. In 2022, the technical closure of the WSPs of the Trieste, Piovese and Padua supply areas, i.e. all the areas served by AcegasApsAmga, is planned.

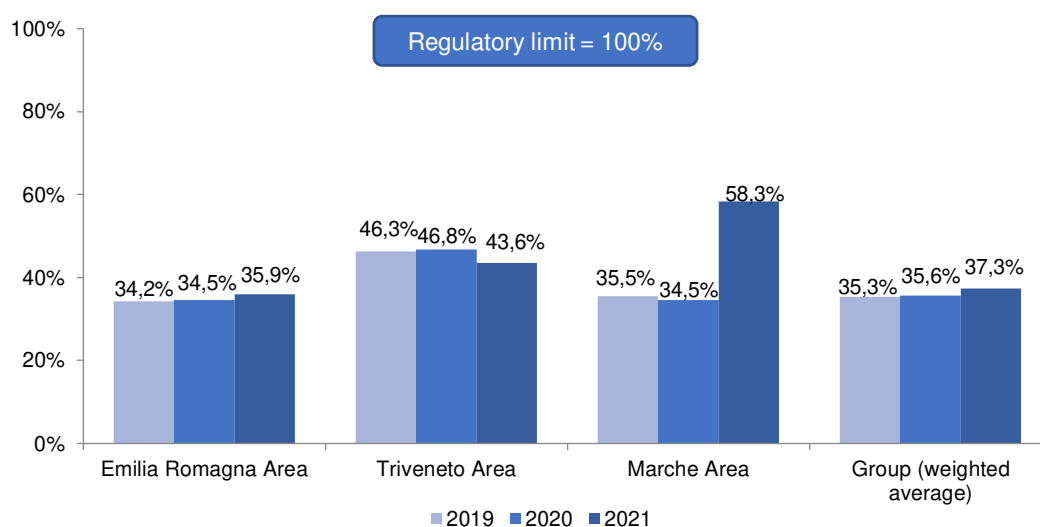
Wastewater purification quality

In 2021 the Hera Group managed the sewerage and purification service in 227 municipalities, of which 47 through Marche Multiservizi and 16 through AcegasApsAmga

Coverage of the **sewerage service** for all urban areas is 98.2% of the territory's needs (population equivalent), while the coverage of the **purification service** is 97.2% of the population equivalent in the territory served by the Group (data for 2021).

In 2021 the Hera Group treated a total of **364.3 million cubic metres of wastewater**, a slight increase compared to the 2020 figures (approximately 360 million cubic metres). It should be noted that this figure is influenced by the amount of rainfall since the sewer network (18,923 km) is predominantly a mixed-type network (56% of the total).

COMPLIANCE OF THE PURIFIED WATER QUALITY WITH THE REGULATORY LIMITS (OPTIMAL VALUES <100%)



The indicator concerns the plants that serve over ten thousand population equivalents (the volumes treated in these plants are 93% of the total wastewater treated) and expresses the ratio between the measured concentration of BOD5, COD, TSS, ammoniacal nitrogen, phosphorus and total nitrogen, and the corresponding maximum concentrations allowed by Italian Legislative Decree No. 152/2006 or by the authorisations in force for the individual plants.

The efficiency in removing pollutants to comply with the regulatory limits, as expressed by the indicator in the chart, is related to the purification capacity of the plant and the technologies used. Low indicator values mean higher purified water quality. At the Group level, this indicator averages 37.3% of regulatory limits, taking into account BOD5, COD, TSS, ammoniacal nitrogen, phosphorus and total nitrogen, and 26.3% excluding phosphorus and total nitrogen. The trend of the indicator summarising the removal efficiency of the main pollutants is slightly increasing compared to 2020. As far as the Marche region is concerned, there has been a considerable increase in this indicator due to the upgrading work carried out in 2021 on the Borgheria water treatment plant in Pesaro, which has led to its inclusion in the category of plants with more than 100,000 population equivalent, which must comply with stricter limitations, as required by the regulations. In the coming years, the indicator is expected to decrease and move closer to the performance prior to the works (around 39%).

[303-2]

The water leaving the water treatment plants must comply with the applicable regulation, Italian Legislative Decree No. 152/2006 as amended, and with the permit requirements. For discharges of municipal wastewater into urban areas of more than 2,000 population equivalents, required to comply with the tables in Annex 5 of Italian Legislative Decree No. 152/06, a Protocol on proper performance of control measures has been drawn up with ARPAE/ARPAT, aimed at scheduling the number of annual controls on the discharge, to assess its compliance, while for discharges in smaller urban areas (less than 2,000 population equivalents) the limits of acceptability and the appropriate treatment are set by the Regions. Group procedures are applied to manage and schedule the controls, to handle anomalies and non-conformities with the rules and regulations on the integrated water service, at EU, Italian, regional, and provincial level, in the individual provinces and municipalities of Hera Group's service area.

The following table shows the main enhancement and upgrade measures of water treatment plants completed during the year and in progress.

MAIN WATER TREATMENT PLANT EXPANSION AND IMPROVEMENT MEASURES

Plant	Population equivalents (no.)	Progress (end 2021)	Type of intervention (with brief description)	Post-intervention condition (4)
Grizzana (Bo)	1,100	Completed	Construction of new sewage water treatment plant and collection of non compliant drainage	Restoration of the Grizzana urban area
Bentivoglio (Bo)	7,000	Completed	Bentivoglio water treatment plant upgrade	Greater plant efficiency through the implementation of a new activated sludge section and extraordinary maintenance of the existing biodisc line
Sasso Marconi (Bo)	12,000	Completed	Revamping the Sasso Marconi water treatment plant	Increased efficiency of the plant, with the possibility of receiving new drainage from housing developments
Vergato (Bo)	2,000	Completed	Expansion of sewage water treatment plant at Tolè	Greater system efficiency
Cento (Fe)	2,000	Completed	Construction of a new water treatment plant in Buonacompra and collection of non compliant drainage	The intervention is part of the regulatory adjustments of DGR 201/2016 and will allow the rehabilitation of the urban areas of Pilastrello, Alberone di Cento and Buonacompra.
Massa Lombarda (Ra)	80,000	In progress	Adaptation of Massa Lombarda water treatment plant to nitrogen limits	Compliance with nitrogen limit
Lavezzola plant, municipality of Conselice (Ra)	4,500	Completed	Upgrade of Lavezzola water treatment plant	The environmental benefits related to the intervention are mainly due to an increased purification capacity of the plant to allow the treatment of new urbanisation and an industrial discharge.
Savignano sul Rubicone (Fc)	139,000	In progress	Savignano treatment plant - Total Nitrogen and discharges upgrading	Compliance with nitrogen limit
Pioppe plant in the municipality of Marzabotto (Bo)	1,300	In progress	Urban area upgrade	The intervention is part of the regulatory adjustments of Regional Authority Decision 201/2016 and will allow the rehabilitation of the urban area of Pioppe.
Lido di Classe plant in the municipality of Ravenna (Ra)	30,000	In progress	Upgrading of the Lido di classe water treatment plant - 1st section	The intervention includes a major revamping of the plant and is one of the regulatory upgrades of Regional Authority Decision 201/2016 that will allow compliance with the nitrogen limit.
San Giovanni in Persiceto (Bo)	16,000	In progress	Recovery of the Former sugar refinery water treatment plant 3rd stage	Compliance with nitrogen limit, also in view of future expansions
Ferrara (Fe)	120,000	In progress	Revamping of Gramicia anaerobic digester and water treatment plant	Improved management of purification sludge through reclamation of anaerobic digesters
Portonovo plant in the municipality of Medicina (Bo)	1,300	Completed	Upgrading of the sewerage/water treatment system of the urban areas of Portonovo and S. Antonio	The intervention is part of the regulatory upgrades of the Regional Authority Decision 201/2016 which included the upgrade of the Sant'Antonio and drainage of Portonovo plant.
Palagano (Mo)	500	In progress	Upgrading for urban area of Monchio Ca' Grande	The intervention is one of the regulatory upgrades of Regional Authority Decision 201/2016 and will include the construction of an appropriate treatment system in the urban areas of Monchio, Grande and Savoniero.
Ca' Nordio (Pd)	197,000	Ongoing (completion scheduled in 2024)	Expansion of the Ca'Nordio water treatment plant	Improvements to the sewage treatment system in the Padua area even in critical weather conditions and optimisation of treatment capacity
Borgheria (Pu)	116,500	Completed	Improvements to the Borgheria water treatment plant	Adoption of a decomposing mud scheme with nitrogen and phosphorus removal, optimisation of energy consumption. This also included the upgrading of the entire sludge line.

Plant	Population equivalents (no.)	Progress (end 2021)	Type of intervention (with brief description)	Post-intervention condition (4)
Montecchio (Pu)	20,000	Completed	Expansion of the Montecchio water treatment plant - Municipality of Vallefoglia	Adoption of a decomposing mud scheme with nitrogen and phosphorus removal. This also included the upgrading of the entire sludge line.
Calcinelli (Pu)	9,000	In progress	Enhancement of the Calcinelli water treatment plant	The intervention involves the adoption of the biological membrane process.

PERCENTAGE OF ANALYSES ON OUTGOING WATER TREATMENT PLANT WATER COMPLIANT WITH REGULATIONS

%	2019	2020	2021
Plants with over 10,000 population equivalents	99.5%	99.5%	99.3%
Plants with less than 10,000 population equivalents	99.9%	99.7%	99.3%
Weighted average	99.6%	99.6%	99.3%

Considering the 10,044 analyses carried out in 2021 in the 227 water treatment plants we operate, in 99.3% of the cases the results were compliant with the regulatory limits. The final values for this indicator in 2021 show a very satisfactory situation, with excellent percentages of compliant controls compared to the total monitoring. The only cases that exceeded the authorised limits were in relation to purely incidental situations, largely compatible with the variability of the incoming quantities, the operating conditions and the structural condition of the plants.

Wastewater purification quality can also be identified by monitoring the upgrade trends of urban areas, defined as areas in which population and production activities are concentrated to the extent that it is technically and economically acceptable to build an independent sewage purification system. As established by Directive 91/271/EEC, Legislative Decree 152/2006 and the Water Protection Plan of Emilia-Romagna, to declare an urban area compliant, the following two conditions must be met:

- at least 95% wastewater collection;
- the capacity of the treatment plants must be greater than the population equivalent of the urban area itself with secondary or tertiary treatment (where necessary).

COMPLIANCE OF THE SEWAGE-WATER PURIFICATION SYSTEM, URBAN AREAS

	2019	2020	2021	2025
Urban areas compliant with regulations >2,000 p.e. (qty)	129	130	132	136
Urban areas compliant for purification >2,000 p.e. (% population equivalents)	97.3%	97.6%	99.6%	100%
Urban areas compliant for purification <2,000 p.e. (qty)	171	174	180	239
Urban areas compliant for purification <2,000 p.e. (% population equivalents)	72.8%	74.5%	81.1%	100%
Urban areas compliant for purification total (qty)	300	304	312	375
Urban areas compliant for purification total (% population equivalents)	96.5%	97.6%	99.0%	100%

The urban areas <2,000 p.e. are in the Emilia-Romagna Region, for which they are all between 200 and 2,000 p.e., and in the Friuli-Venezia Giulia Region. There are no urban areas <2,000 p.e. in the areas served by the Group in the province of Padua, and the Marche Region has not yet issued provisions regarding urban areas <2,000 p.e.

At the Group level, by 2021, 132 out of 136 **urban areas with more than 2,000 population equivalent (p.e.)** will be adjusted to Legislative Decree 152/2006, corresponding to **99.6% of the total population equivalent**.

With Resolution 2153/2021, the **Emilia-Romagna Region** updated the timetable for interventions, the number of equivalent inhabitants and the perimeters of the urban areas, which have gone from a total of 135 urban areas in the territory served by the Group, as reported in the previous Sustainability Report, to a total of 136.

With regards to **Triveneto** and **Emilia-Romagna**, 100% of the urban areas > 2,000 p.e. served in the territory are in compliance with the water treatment legislation.

In the **Marche region** managed by the Group, there are four urban areas > 2,000 p.e. declared non-compliant for which the 2014/2059 and 2009/2034 infringement procedures have been initiated. In 2021, the measures to achieve conformity for the urban area of Pesaro >10,000 p.e. were completed, resolving the 2014/2059 infringement, while the measures to bring the other four urban areas into conformity with the dictates of Community and national regulations by 2023 are already planned, as established by the new planning of the Marche Region Territorial Ambit Authority approved in December 2020. By 2023, therefore, all urban areas with a population equivalent greater than 2000 in the service areas of the Hera Group will have achieved compliance.

In addition to the above, the Emilia-Romagna Regional Government, in its resolution 201/2016 on the adaptation of urban wastewater discharges, ruled to implement some additional measures in **urban areas with more than 10,000 p.e.** These are structural adjustments relating, for example to the upgrade of undersized network floodways or more thorough nitrogen abatement. Although these situations do not undermine the compliance of those urban areas to Legislative Decree 152/2006, they may locally jeopardise the achievement of quality objectives for water bodies. This is why the Emilia-Romagna Region, together with the managers of the integrated water service, through the most recent resolution 2153/2021, has defined times and criteria for compliance. Nine interventions have already been carried out (Riccione water treatment plant in 2017, Cattolica water treatment plant in 2018, Castel San Pietro and Lugo water treatment plants in 2019, Budrio, Medicina and Alfonsine water treatment plants in 2020 and Lido di classe and Misano water treatment plants in 2021). A further 5 measures are planned by end 2023 (San Giovanni in Persiceto, Savignano sul Rubicone, Massa Lombarda) out of a total of 12 nitrogen upgrading measures in 11 urban areas. In addition, there is 1 intervention planned in 2025, and 22 by 2030. It should be borne in mind that a total of 24 urban areas are affected by the 35 improvement measures, some of which involve more than one intervention in different years.

As to **urban areas under 2,000 p.e.** (between 200 and 2,000 for Emilia-Romagna), where there are still critical issues for subjecting the final effluents to appropriate treatment, Regional Government of Emilia-Romagna has identified and defined new deadlines for the upgrading with the new resolution 2153/2021. By 2021, 144 urban areas out of 202 will be in compliance, with a total of 107,259 thousand population equivalents. 38 urban areas in Emilia-Romagna with a total of about 27,913 population equivalents are planned to be upgraded by 2024. In the Triveneto area, there are 37 urban areas with a population equivalent of less than 2,000, of which 35 have already been upgraded in 2019, one will be upgraded in 2021 (Trieste Duino Aurisina with a population equivalent of 1,689) and one will be upgraded by 2025.

In summary, considering Emilia-Romagna and Triveneto, there are 239 urban areas of less than 2,000 p.e., of which 180 were upgraded at the end of 2021, corresponding to 81.1% of the population equivalent. By 2025, urban areas of less than 2,000 p.e. will all be brought into conformity. Concerning urban areas of less than 2,000 p.e. in Marche, the Regional Government has not yet issued provisions in this regard.

At Group level, the total number of urban areas >2,000 and >2,000 complying with the sewage treatment regulation is 312 out of 375 and corresponds to 99% of the total population equivalents.

Constructed wetlands

Constructed wetlands are a natural process used to treat polluted water based on the capability of soil and vegetation to remove pollutants. They are designed as a system of biological ponds and of planted macrophyte vegetation. The purification process is completely environmentally friendly and does not involve the use of chemicals. The wastewater arriving at the plant flows into a bed of gravel and aquatic plants: here microorganisms come into play to eliminate the pollutants present. The action of the plants is fundamental because the micro-organisms necessary for the entire system develop in their roots; they absorb the oxygen produced by the plant species and trigger the processes necessary for purification of the wastewater.

This kind of treatment also contributes to the reclamation of borderline areas, creating natural environments and landscapes that are pleasing to the eye, and often chosen as refuges for various species of birds, amphibians and reptiles.

Hera Spa manages seventeen small to medium-sized phyto-water treatment plants (one less than in 2020), located in the provinces of Bologna, Florence, Forlì-Cesena, Rimini and Ravenna. These mainly carry out secondary biological treatments, downstream of primary sedimentation, or tertiary treatments used as a final refinement of the effluent before final discharge. Marche Multiservizi operates five constructed wetlands plants with a potential of between 80 and 180 population equivalents.

3.04 Protection of air, land, and biodiversity

Atmospheric emissions from waste-to-energy plants

All of Hera Group's waste-to-energy plants are equipped with **flue gas purification systems** and **process and emission control systems**, designed and built so as to attain:

- high flue gas purification performance in all process conditions;
- high operational versatility;
- high reliability of emission control systems.

To pursue these objectives, the **plant engineering standards** adopted in the Group's plants are characterised by:

- **a double reaction and filtration system** to lower the concentrations of particulate, hydrochloric acid, hydrofluoric acid, sulphur dioxide, heavy metals, dioxins and furans, and polycyclic aromatic hydrocarbons (except for the Pozzilli plant, equipped with a single reaction and filtration system);
- **a double reaction system** (non-catalytic and catalytic) to reduce nitrogen oxide concentrations (except for the Pozzilli plant, equipped with a single, non-catalytic reaction system);
- **a double flue gas monitoring system** for process control (except for the plants in Pozzilli and Trieste and lines 1 and 2 of Padua, equipped with a single system). The two systems measure the concentrations of the main pollutants from the furnace and downstream of the first reaction and filtration phase. On that basis it adjusts the volume of reactants required to achieve purification levels that are compliant with statutory emission thresholds and which are, on average, 80-90% below such thresholds;
- **a continuous double monitoring system** for stack emissions: one as a backup for the other to ensure the continuity of the analysis of the concentrations in the atmospheric emissions.

The possibility of using double purification and monitoring systems in series (or in parallel for stack monitoring) enables us to successfully pursue the objectives described above.

In addition to the above, to **monitor emissions and environmental impact**, the following are carried out annually:

- **specific checks on stacks** for parameters that cannot be measured continuously, with intervals defined in the Integrated Environmental Authorisation and using certified laboratories;
- **checks on the fallout of pollutants on the ground**: through external monitoring programmes prescribed in individual authorisations, analyses are carried out on the deposition of pollutants 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 legal limits, do not have any significant impact on the surrounding environment.

Plant renewal has made it possible to significantly improve the percentage of pollutant emissions abated: since the beginning of 2008 the two new lines of the Ferrara waste-to-energy plant have been fully operational, since the beginning of 2009 the new Forlì plant 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. The **revamping** of the F3 incinerator in the Ravenna waste-to-energy plant and Line 2 of the Trieste waste-to-energy plant are underway, as well as the authorisation phase for the construction of a fourth line in the Padua waste-to-energy plant, which will replace the current Lines 1 and 2 and will be equipped with a dual flue gas monitoring system.

This paragraph also contains data on the Faenza biomass plant (operated by Enomondo, 50% owned by Herambiente and not consolidated using the line-by-line method), which is equipped with a double reaction system (catalytic and non-catalytic) to reduce the concentration of nitrogen oxides.

Legislative Decree. 152/2006 requires **continuous monitoring of stack emissions** for seven parameters: particulates, hydrochloric acid, nitric oxides, sulphur oxides, carbon monoxide, hydrofluoric acid, and total organic carbon. Mercury is also continuously monitored at the Ferrara, Forlì, Modena, and Rimini plants.

[305-7]

EMISSIONS INTO THE ATMOSPHERE FROM WASTE-TO-ENERGY PLANTS, CONTINUOUSLY MONITORED PARAMETERS

tons	2019	2020	2021
Particulates	4.6	4.8	5.3
Hydrochloric acid	18.5	20.3	20.7
Nitrogen Oxides	701.7	718.6	663.8
Sulphur oxides	18.4	19.9	19.1
Carbon monoxide	80.3	81.1	75.1
Hydrofluoric acid	0.6	0.6	0.6
Total Organic Carbon	9.9	9.8	7.8
Waste treated in the plants (thousands of t)	1,360	1,371	1,304
Gross electricity generated (MWh)	864,698	894,813	852,379
Thermal energy produced (MWh)	243,248	259,995	244,182

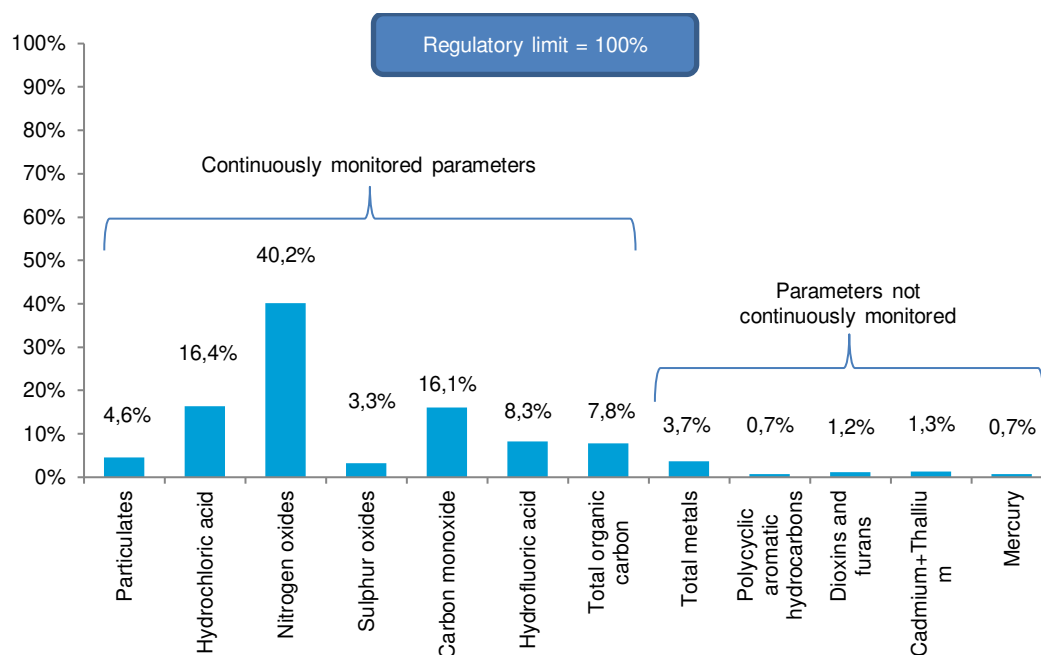
The data are calculated using continuous measurement systems which are subject to the approval of the supervisory bodies at the time the plant is granted a permit to operate. The procedures used by individual plants to collect and calculate the volume of substances released are not completely standardised. Including figures for the Enomondo waste-to-energy plant.

The analysis of mass flows over the last two years shows an **improvement** with regard to almost all emissions from waste-to-energy plants, partly as a result of lower volumes of waste treated (-5%), with the exception of dust (+9%) and hydrochloric acid (+2%). Reduction percentages range from -4% for sulphur oxides to -21% for total organic carbon. Hydrofluoric acid emissions are stable. However, these deviations are small and depend on the composition of the waste treated as well as on the quantities of waste.

With regard to **pollutants that are not continuously monitored** (sum of metals, polycyclic aromatic hydrocarbons, dioxins and furans), the results of the analyses carried out during the year allow us to estimate the total emissions: 165 kg of metals were emitted in 2021 (128 kg in 2020), 0.6 kg of polycyclic aromatic hydrocarbons (stable compared to 2020) and 8.6 mg of dioxins (10.9 in 2020).

The results of the emissions measurements carried out by the Hera Group's waste-to-energy plants confirm that in 2021 they will continue to emit far less than the limits **permitted by law, given that they are equipped with the best technology available and operate at their best.**

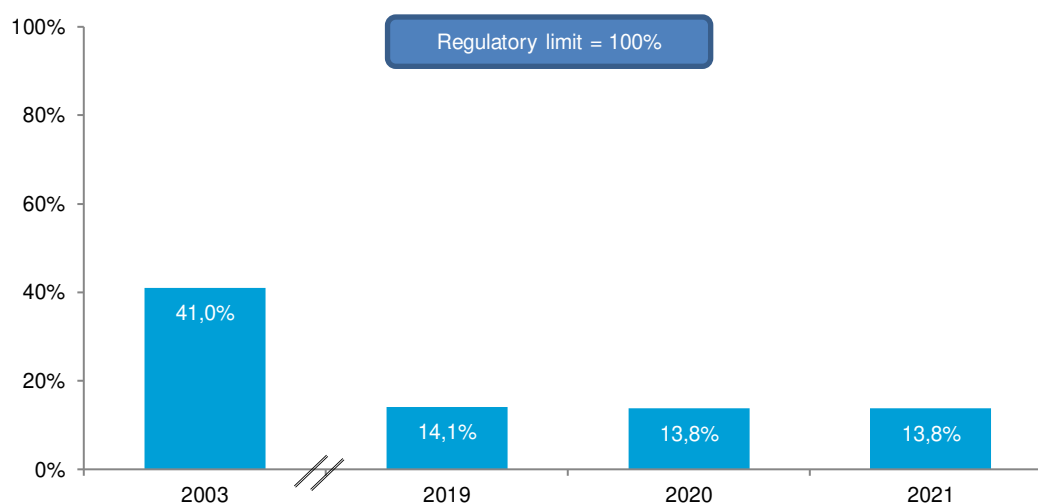
COMPLIANCE OF ATMOSPHERIC EMISSIONS OF WASTE-TO-ENERGY PLANTS WITH REGULATORY LIMITS PURSUANT TO ITALIAN LEGISLATIVE DECREE NO. 152/2006 (OPTIMAL VALUES: < 100%) (2021)



Including the Enomondo waste-to-energy plant.

For all **continuously monitored pollutants**, average stack concentrations were **at least 60%** (for nitrogen oxides) and **up to 97%** (for sulphur oxides) below the limits. Even for parameters that are **not continuously monitored**, all values are significantly below legal limits by **at least 96%** (sum of metals), **to over 99%** (polycyclic aromatic hydrocarbons and mercury).

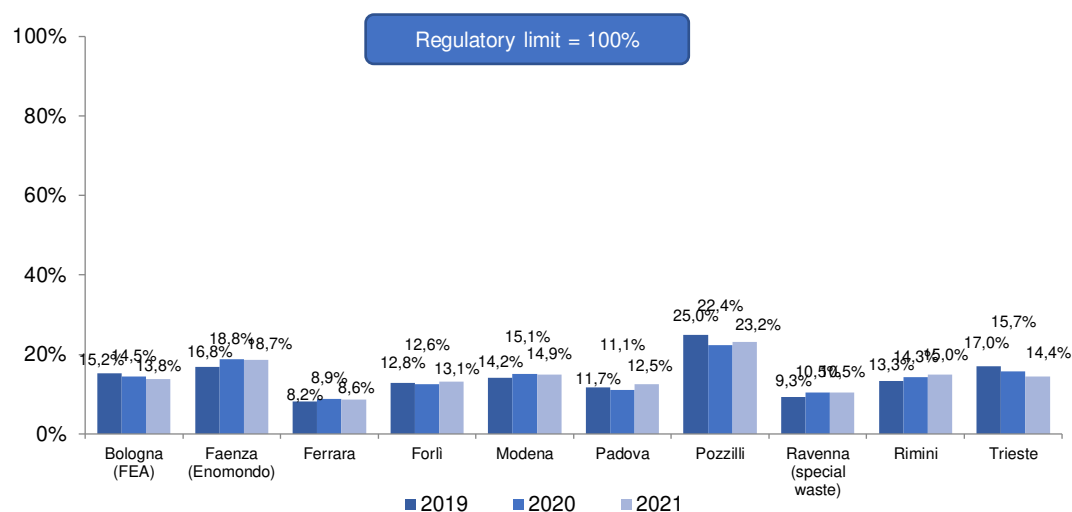
ATMOSPHERIC EMISSIONS OF WASTE-TO-ENERGY PLANTS WITH RESPECT TO THE LEGAL LIMITS PURSUANT TO ITALIAN LEGISLATIVE DECREE NO. 152/2006 – CONTINUOUSLY MONITORED PARAMETERS (OPTIMAL VALUES <100%), WEIGHTED AVERAGE OF THE VOLUMES OF WASTE TREATED IN THE PLANTS OPERATED



Including the Enomondo waste-to-energy plant.

Taking into account all the continuously monitored pollutants, also in 2021 the **concentrations of atmospheric emissions** from waste-to-energy plants were on average **86.2% below the limit** (13.8% of regulatory limits), whereas in 2003 this percentage was 59%.

COMPLIANCE OF ATMOSPHERIC EMISSIONS OF WASTE-TO-ENERGY PLANTS WITH REGULATORY LIMITS PURSUANT TO ITALIAN LEGISLATIVE DECREE NO. 152/2006 – CONTINUOUSLY MONITORED PARAMETERS (OPTIMAL VALUES <100%), DETAIL BY PLANT



The same indicator was calculated for the six plants with authorised limits that are more stringent than those set by Italian regulations for 2021 (for the eight continuously-monitored parameters, on average the authorisations are at 73% of the limits let by Italian Legislative Decree No. 152/2006). The data are shown in the following table.

WASTE-TO-ENERGY PLANT ATMOSPHERIC EMISSIONS COMPARED TO AUTHORISED LIMITS – CONTINUOUSLY MONITORED PARAMETERS (OPTIMAL VALUES <100%)

%	2019	2020	2021
Bologna (FEA) waste-to-energy plant	25.7%	24.9%	21.9%
Ferrara waste-to-energy plant	8.5%	9.4%	8.9%
Forlì waste-to-energy plant	24.2%	24.0%	24.4%
Modena waste-to-energy plant	17.2%	18.6%	17.5%
Ravenna waste-to-energy plant (special waste)	11.1%	12.4%	10.8%
Faenza (Enomondo) waste-to-energy plant	19.4%	23.3%	21.4%
Average in relation to authorisation limits	17.7%	18.8%	17.4%

The integrated environmental authorisations for the plants in Ferrara, Forlì, Modena, and Faenza also require continuous mercury monitoring.

The results are **excellent** again in this case: the concentrations are, on average, about **82,6% below the most restrictive limits**. Note that since the limits set by the individual authorisations depend on the specific plant, they are not comparable.

Transparency of waste-to-energy plant emissions

Since 2008, the Group's website **has provided** the previous day's average values and "half-hourly averages" of the Group's waste-to-energy plants (every half hour the online data are updated with the average value of the past 30 minutes). The data are automatically transmitted by the measurement systems, operational 24/7 at all the Group's plants, located in the provinces of Bologna, Ferrara, Forlì-Cesena, Modena, Ravenna, Rimini, and Isernia.

As a further guarantee of transparency, Hera commits to:

- daily or weekly reporting of the half-hour and daily averages to the control agency (ARPA);
- yearly reporting on the plant's operations, by 30 April every year, to the competent authority;
- if the plant is EMAS registered, the control results are published upon formalisation of the "Environmental Declaration";

- publishing annual data, compared to regulatory limits and limits in the permits, in the Group's sustainability report.

Since 2015, the Group's website also provides the data of the Padua and Trieste plants, in the same format (half-hour average updated in real-time).

Lastly, from 2018 on, average annual data on periodic self-checks on metals and organic micro-pollutants has also been available for all plants.

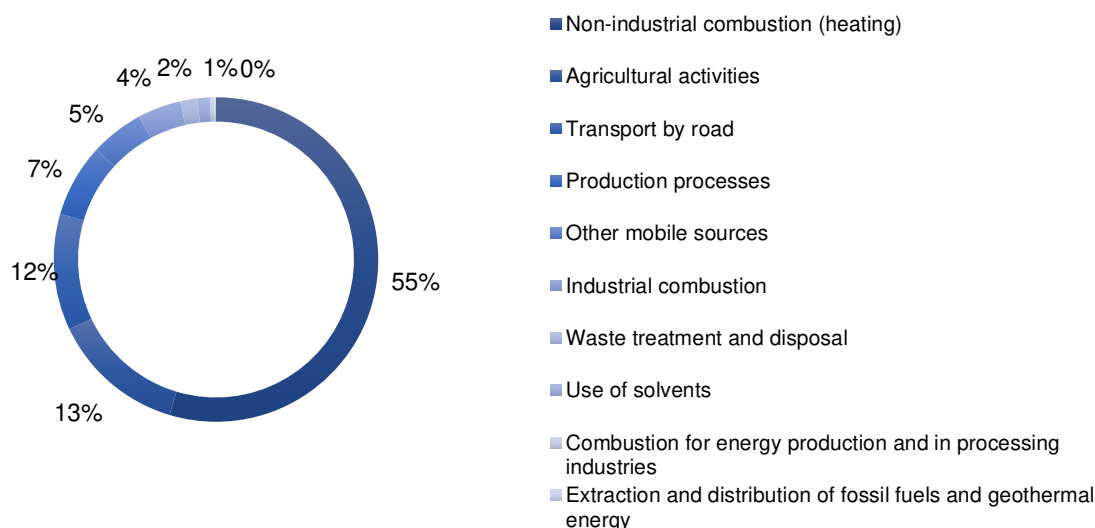
Studies on the environmental impacts of waste-to-energy plants

For many years, the waste-to-energy business has been the subject of **several studies and monitoring projects**, as well as of major **technical improvements** also related to the introduction of **increasingly stringent plant and management criteria** by European and Italian legislation. The technology has achieved very high performance levels in terms of **reducing emissions and environmental impact**.

If we consider the **total annual emissions of dioxins** into the atmosphere as the sum of all waste incineration plants in Italy from 1990 to 2019, we can see that as a result of regulatory and technological developments there has been a **99% reduction in emissions** (Source: Sinanet-Ispira-SNAP data bank). Putting the analysis of the different production sectors into context, since 2001, waste incineration has been the smallest source in terms of emissions of dioxins and furans, in contrast to the iron and steel industry, and the entire residential sector (e.g., domestic heating).

The PM₁₀ emissions of Italy's waste incinerators are around **three magnitudes lower than those of the residential segment**. The main sources of PM₁₀ at national level are in fact the residential sector, vehicle traffic, contact combustion processes (e.g. foundries) and agriculture, as the graph below shows.

PM₁₀ EMISSIONS BY SECTOR



Source: ISPRA, National PM₁₀ emissions by source sector from 1990 to 2019

Environmental supervision and air quality monitoring projects

According to the permits for the **waste-to-energy plants in Ferrara, Modena, Forlì, Rimini, Bologna, Padua, and Isernia**, the Hera Group must carry out studies on the potential impact that its plants have on the surrounding environment. A description of the studies underway in 2021 is given below and reference is made to previous sustainability reports for those already completed.

In the industrial area in which the **Forlì** plant operates, Hera has installed a station for monitoring air quality, activated since 2009 and run by ARPAE Forlì. This station provides a continuous stream of data that are validated by ARPAE and published on their website. Periodic campaigns are also carried out at the station to **identify micro-pollutants and metals in the particulate matter**. The results show that there is **no substantial difference** between a public area and the area around the plant, indicating the presence of a uniform environment, influenced significantly by the town rather than the presence of the plant. These results were **confirmed in 2021** when ARPAE Forlì made available the previous year's air and soil quality monitoring data.

For over a decade, environmental monitoring tests have been carried out at the **Modena** plant on various environmental media: air and soil quality, biomonitoring, total depositions. Since 2013, the monitoring

network has been operated by the local ARPA (now ARPAE), which carries out all the analyses required by the waste-to-energy plant's IEA.

Between 2010 and 2012, a genuine **environmental and health monitoring protocol** was carried out at the **Ferrara** waste-to-energy plant. Its details were defined by ARPA (now ARPAE), AUSL and the provincial government of Ferrara, and it examined several environmental media. We appointed institutions with proven experience in the sector (CNR and Universities) to handle the scientific coordination for these studies. The results of the first two-year study, which ended in October 2012, confirmed the preliminary evaluations made when the Integrated Environmental Authorisation was granted and showed that the **plant's contribution, in terms of air quality, cannot be distinguished from the environmental background levels**. In the light of the results that have been obtained, a subset of the monitoring was extended for a second period (2013-2015), to examine the aspects considered most significant: air quality and studies of soil pollutants. Air quality monitoring activities ended in early 2015, **confirming the results of the two previous years**. In particular, the study of the soil, repeated in the autumn of 2013, **showed no accumulation** of metals and micro-pollutants in the areas surrounding the plant, thereby confirming that the incinerator's emissions cannot be distinguished from the environmental baseline. Furthermore, in 2015, the monitoring guidelines for the coming years were agreed with the regulators. To this end, collaboration has been maintained with CNR-IRIA and La Sapienza University to **ensure the continuity of the air quality study**, which is carried out with **four monitoring campaigns each year** (winter, spring, summer and autumn).

In accordance with the provisions of the "Agreement for monitoring the effects 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, **air quality monitoring** is carried out in the area of the waste-to-energy plant in **Padua** through two fixed stations in Viale Internato Ignoto and Via Carli in Padua (APS1 and APS2). The results are then compared with the values measured at the Mandria (urban background) and Arcella (urban traffic) stations, which belong to Arpav's regional air quality monitoring network. The APS1 and APS2 stations, managed by Arpav, are equipped with **continuous analysers for the sampling and measurement of the chemical pollutants** identified by current legislation: carbon monoxide (CO), sulphur dioxide (SO₂), nitrogen dioxide (NO₂), nitrogen oxides (NO_x) and ozone (O₃), as well as instruments for the daily measurement of fine dust (PM10 and PM2.5), in which polycyclic aromatic hydrocarbons (PAHs, in particular benzo(a)pyrene) and metals (in particular lead, arsenic, cadmium, nickel and mercury) can be detected. The data is published by Arpav on the page dedicated to the waste-to-energy plant on its website; every year it also issues and publishes a report in which it summarises and comments on what has been recorded. The website has recently been updated, and it is possible to consult in real time the values of atmospheric emissions recorded by the instruments installed on the individual lines of the plant; periodic reports describing the management of the plant are also available.

Many environmental monitoring campaigns have been conducted in the area surrounding the plant site of the waste-to-energy plant in **Granarolo dell'Emilia** (BO). At the end of 2004, a memorandum of understanding was drawn up between the Provincial Administration, Arpa Bologna, the Municipalities of Castenaso and Granarolo dell'Emilia, Ausl Bologna, the University of Bologna and Fea Srl to carry out environmental monitoring of the area surrounding the plant. The monitoring, which continued until 2007, analysed the air media by monitoring the five sites. **Innovative bio-toxicological tests** have been performed on solid particulate matter samples to assess and estimate carcinogenic risk. The public health department of the local health organisation, following up on the work carried out in the previous campaign, also carried out an epidemiological survey on the causes of mortality, extending the research to include reproductive data. Lastly, the University of Bologna's experimental centre for soil study and analysis analysed atmospheric emissions and water discharges from the waste-to-energy plant and the presence of heavy metals and trace elements in the water-soil-plant system and in surface and groundwater. A study has also been carried out to assess and estimate the carcinogenic risk. The 2004–2007 campaign attested that concerning air quality, atmospheric emissions and the water-soil-plant system, the plant **did not determine significant impacts** on the area. The waste-to-energy plant in Granarolo dell'Emilia has also been included in the Monitor project (Monitoring of waste-to-energy plants in Emilia-Romagna), promoted by the Emilia-Romagna Region and Arpa, whose goal is to organise an environmental surveillance and epidemiological evaluation system in the areas surrounding the plants. The project, carried out between 2007 and 2011, has improved scientific knowledge on the quality and quantity of the substances emitted by waste-to-energy plants and the relative impact on the quality of the surrounding air; it has also studied the health effects with toxicological investigations and has assessed their correlation with exposure to waste-to-energy plants in epidemiological terms. The results of the Monitor project were presented to the public in 2011, and the related documentation (Quaderni Monitor) can be freely downloaded from the Arpa Emilia-Romagna website. Air quality is currently monitored in the area surrounding the plant through two fixed monitoring stations that determine PM10 and PM2.5 particulate matter, PAHs and metals.

Please refer to the previous sustainability reports for the completed projects on surveillance and monitoring of the impacts of the waste-to-energy plants in Rimini, Modena, Ferrara, Padua and Pozzilli.

District heating: an answer to air quality protection

District heating is a service that sells heat for customer home heating and domestic hot water. It is an alternative system to traditional autonomous or condominium-based boilers which makes it possible to **concentrate** the production of heat in **central installations, which are more efficient and better controlled** than home boilers. From these installations, the heat, in the form of hot water, is brought to customer homes through a distribution network made of insulated piping. The heat then fuels the domestic heating system via **non-polluting heat exchangers**. Users have the advantage of **greater safety** and **lower running and maintenance costs**, while maintaining the freedom to independently adjust the temperature of their homes.

District heating is an **answer to the city's air pollution problems** as it allows the replacement of domestic boilers, sometimes oil-fired, by using high-efficiency, renewable energy or energy recovered from other processes to generate heat.

In 2020, **certification was obtained on the carbon footprint** of the Ferrara district heating plant, which expresses in CO₂ equivalent the total greenhouse gas emissions associated directly or indirectly with the service. According to this certification, the system of Ferrara has a carbon footprint of **0.122 kg CO₂e per kWh of heating sold** to the end user. This is 56% lower than the calculation for a conventional domestic boiler using the same methodology. The figure is of significance and leads to an estimated **annual saving of more than 22 thousand tonnes of CO₂e** by the district heating of Ferrara.

New initiatives took shape during 2021: the main ones include:

- Ferrara: **interventions to improve efficiency and optimise the management of geothermal wells** in the Casaglia area, which led to an increase in production;
- Ferrara: **connection to the main district heating network** of the Corti di Medoro and Centro Diamante systems and of the former S. Anna Hospital;
- Bologna: first year of operation of **four heat pumps with thermal recovery** on the cogeneration cycle at the headquarter's Berti Pichat power plant.
- Bologna: revamping of Aer Barca's thermal power plant, with the start-up of two new **latest-generation boilers** equipped with economiser and expansion system from open to closed vessel.

The 2022-2025 plan identifies various initiatives for technical and economic efficiency and technological innovation aimed at reducing atmospheric emissions in terms of CO₂ and NO_x.

[302-5]

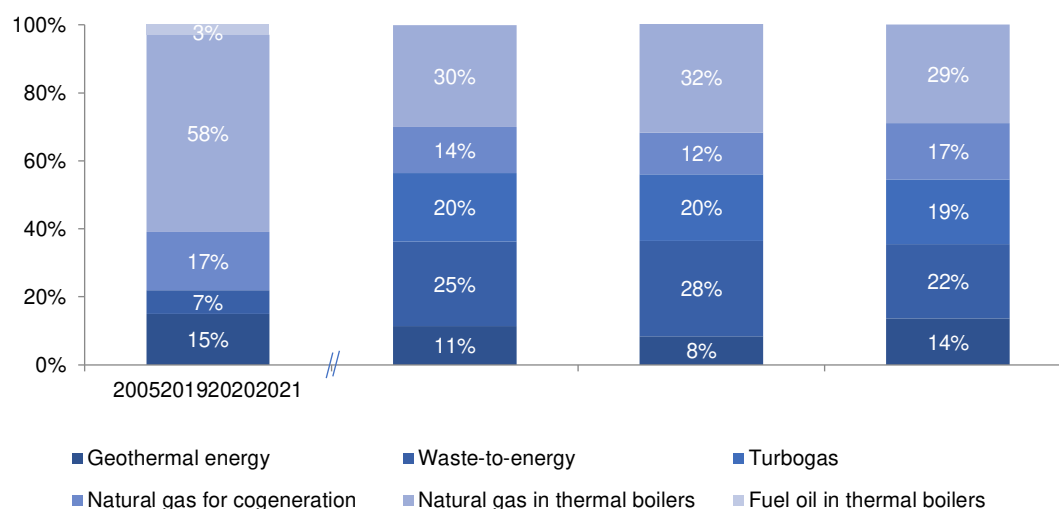
ENVIRONMENTAL ADVANTAGES OF DISTRICT HEATING

	2019	2020	2021
Primary energy saved (toe)	35,132	28,967	37,639
Carbon dioxide avoided (t)	119,639	103,125	121,811
Nitrogen oxides avoided (t)	281	202	249
Sulphur oxides avoided (t)	273	214	273

Calculated as the difference between a traditional system (existing boiler park comprising 65% natural gas-powered boilers and 35% diesel boilers with an average seasonal yield of 75% (Source: Comitato Termotecnico Italiano, 2009), and the Italian electricity grid with average Italian emissions and Hera's district heating systems for the same quantities of energy (thermal and electric).

Overall, in 2021 district heating **saved 37,639 tonnes of oil equivalent** and **121,811 tonnes of carbon dioxide**, an improvement on 2020 of 30% and 18% respectively. This is mainly due to fewer technical problems and subsequent extraordinary maintenance in 2021, which allowed the plants to operate more efficiently, as well as the efficiency and optimisation measures mentioned above.

SOURCES USED FOR DISTRICT HEATING



With regard to the **sources used for district heating**, it should be noted that the percentage of **thermal energy produced from renewable or high efficiency sources** (71% in 2021) has increased compared to 2020 (+3 percentage points). In particular, the **strong increase in geothermal production (+80%)** is due to the greater efficiency of the Casaglia plant, with a subsequent reduction in withdrawals from the Ferrara waste-to-energy plant (-22%, to which some technical problems at the end of the year also contributed). **The contribution of cogeneration plants also increased (+51%)**, in this case due to the lower maintenance requirements compared to the previous year.

DISTRICT HEATING: ENERGY SOLD AND VOLUME SERVED

	2019	2020	2021
Thermal energy sold (MWh)	481,510	453,318	510,040
Volumes served (thousands of m³)	21,194	21,700	21,938
Housing unit equivalents served (qty.)	88,307	90,415	91,410

The housing unit equivalents were calculated on the basis of an average apartment volume of 240 m³.

The thermal energy sold in 2021 amounted to **510,040 MWh, up 13%** from last year for the reasons explained above. The volume and equivalent households served, on the other hand, remain substantially stable (1% increase over the previous year, mainly in the Ferrara and Forlì-Cesena systems).

The **territories most covered by the district heating service** are the areas of Bologna (32% of the volumes served), Ferrara (30%) and Imola-Faenza (21%).

Cogeneration for district heating

Cogeneration is the **combined production of electricity and thermal energy** in a single integrated system, using a single fossil or renewable source. It is done in specially-designed thermoelectric power plants, which recover heat from the flue gas produced by an engine powered by any fuel. The process achieves **significant energy savings** (about 40%) compared to separate electricity and thermal energy production.

Thanks to their **connection with district heating networks**, Hera Group's cogeneration plants help **improve the air quality** of the towns where they are located. Thanks to them, many boilers have been replaced with **modern, efficient systems** to heat and supply hot water to buildings. With district heating, systems are monitored continuously, both in terms of combustion processes and atmospheric emissions.

Hera Spa operates ten cogeneration plants, of which three are trigeneration plants, for an overall nominal installed electric power of 27 MW. In 2021, they produced **217,9 GWh of thermal energy** for district heating in all our service areas, of which 120.1 GWh were generated in the Imola cogeneration plant.

Atmospheric emissions generated by district heating

In 2021, district heating plants produced a total of 952.2 GWh of electricity and heat, an increase of 20% compared to 2020 due to the reasons explained above. With this production, a total of 166.9 tonnes of nitrogen oxides were generated in 2021, an increase over previous years as a direct result of increased plant operation. These emissions, in relation to the energy produced, result in approximately **175.3 grams per megawatt hour in 2021**, a ratio that will increase by 12% due to the increased energy production and the different incidence of thermal and cogeneration plants in the two years.

[305-7]

ATMOSPHERIC EMISSIONS GENERATED BY DISTRICT HEATING

	2019	2020	2021
Nitrogen oxides (t)	134.2	124.2	166.9
Electricity and thermal energy generated (GWh)	925.8	792.8	952.2
Specific emissions (g NOx/MWh)	144.9	156.7	175.3

The data refer to the thermoelectric and cogeneration power stations that provide district heating (source of emission factors for NOx: Corinair 2004 for boilers and data from manufacturers for cogenerators). The data also includes the Imola power plant, which is discussed in greater detail in the next section.

Emissions of the Imola cogeneration plant

The **Imola** cogeneration plant, used for **the city's district heating**, stands out not only for its excellent performance in terms of energy production but also from an environmental perspective since it achieves its low atmospheric emissions while also saving a significant amount of energy.

In 2021, **213.8 GWh of electrical energy** and **120.1 GWh of thermal energy** were generated thanks to an installed capacity of 80 MW electrical and 65 MW thermal.. Compared to the previous year, production increased by 31% and 7% respectively, despite a period of plant downtime in the summer.

166,623 m³ of industrial water were consumed, of which 77,241 m³ were used to replenish the cooling tower, in compliance with the 210,000 m³ authorized by the EIA for that year. This replenishment was much lower than in previous years as the plant had a summer shutdown.

Again in 2021, the **absolute specific emissions** of the Imola cogeneration plant remained at **extremely low levels**. The environmental authorisation for the Imola plant requires pollutant limits 75%/80% lower than nationwide Italian regulations for the pollutants most present in flue gases (NOx and CO). In 2019, IEA amended the limits on airborne emissions by introducing compliance with the daily limit instead of the hourly limit for continuously monitored pollutants.

[305-7]

ATMOSPHERIC EMISSIONS FROM THE IMOLA COGENERATION PLANT

mg/Nm ³	National limit	Authorised limit	2019	2020	2021
Nitrogen oxides (NOx)	60	14.5	9.0	8.8	8.6
Carbon monoxide (CO)	50	9.5	2.1	2.1	0.6
Ammonia slip (NH ₃)	not required	2.0	0.38	0.25	0.0
Total particulate matter (PTS)	not required	4.0	0.01	0.01	0.01
PM10	not required	1.0	0.01	<0.01	0.01

The authorised emission limits for the Imola cogeneration plant refer to the Integrated Environmental Authorisation and subsequent amendments and integrations (with stricter limits than those set out in Legislative Decree 152/06). The values for CO, NOx, NH₃ and PTS correspond to the annual average values measured by the continuous monitoring system. The PM10 values are derived from the average of the values measured during the self-checks (quarterly). All authorised limit values are daily averages.

The company vehicle fleet and sustainable mobility

Corporate vehicles

In 2021, the strategy of rationalising and optimising the use of vehicles is confirmed, including through the purchase of technologically advanced vehicles powered by **fuels with a lower environmental impact** to replace obsolete vehicles, as shown by the data below on the vehicles managed by Uniflotte and Marche Multiservizi.

NO. OF VEHICLES

Number	2019	2020	2021
Diesel	2,780	2,899	2,940
Petrol	270	257	287
Natural gas	468	435	420
LPG	412	400	389
Electric	18	15	16
Total	3,948	4,006	4,052
<i>Of which with lower environmental impact</i>	<i>898</i>	<i>850</i>	<i>825</i>
Of which with lower environmental impact (%)	22.7%	21.2%	20.4%

Non-circulating vehicles being disposed of were not included.

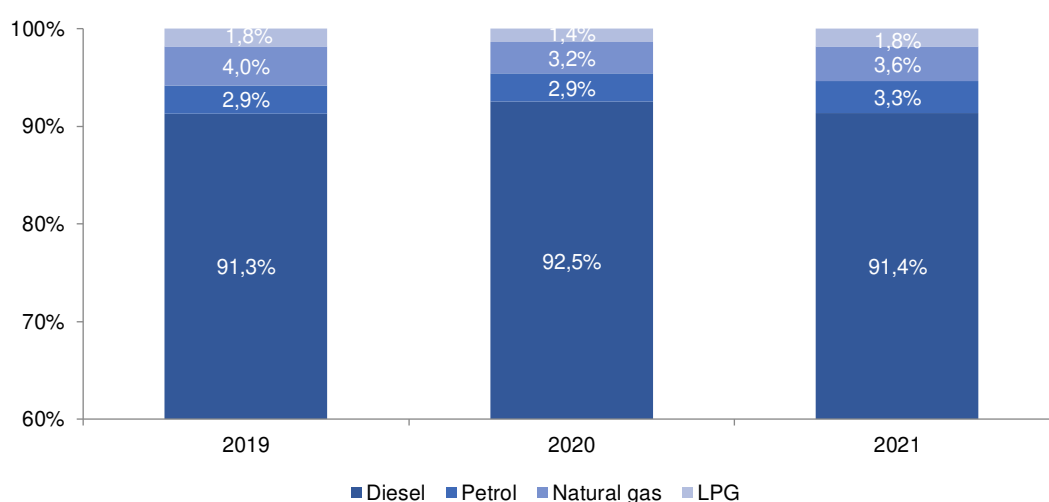
In 2021, the Group had 4,052 vehicles (46 more than the previous year), 825 of which were powered by fuel with a lower environmental impact (420 natural gas, 389 LPG, and 16 electric), accounting for **20.4% of the total**.

In 2021, a total of 479 vehicles were sold and/or scrapped, while 190 vehicles were registered, of which 78 were diesel, 36 petrol, 75 natural gas and one electric.

FUEL CONSUMED BY VEHICLES

toe	2019	2020	2021
Diesel	8,734	9,293	9,313
Petrol	275	295	335
Natural gas	384	322	362
LPG	177	136	185
Total	9,570	10,046	10,194

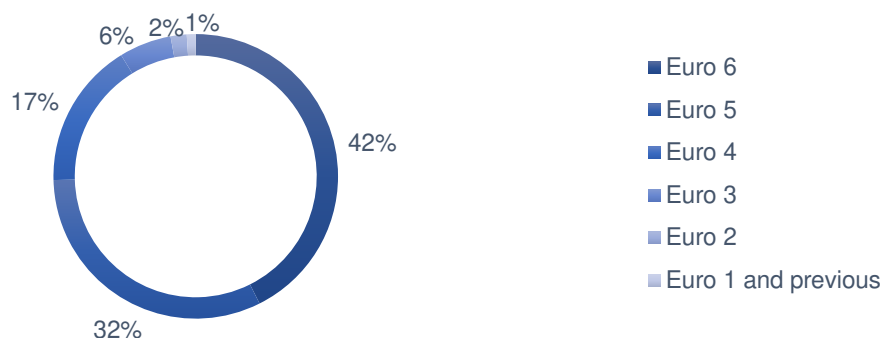
FUEL CONSUMED BY VEHICLES (%)



A comparison between the several types of fuel was made considering the primary energy present in the individual fuels.

At Group level, fuel consumption in 2021 amounts to 10,194 toe and remains essentially stable compared to 2020. Petrol consumption rose by 13%, natural gas by 12% and LPG by 36%, while diesel consumption remained stable.

BREAKDOWN OF VEHICLES FOR ANTI-POLLUTION DIRECTIVE (2021)



At the Group level, the **most recently registered vehicles** (Euro 4, 5, and 6) account for **91% of the total**, up 1 percentage points compared to the previous year. In particular, the number of Euro 6 vehicles increased by 15%.

The **average age of the Group vehicle fleet** in 2021 is **7.9 years**. For the Uniflotte perimeter, i.e. excluding AcegasApsAmga and Marche Multiservizi vehicles, the average age drops to 7.5 years, stable compared to 7.4 years in 2020 but still down compared to 2013 when the value stood at eight years. These results are the fruit of the company's investments to renew its vehicle fleet.

In addition to the fleet of company vehicles, there are also **leased cars** assigned to Hera Group sales staff and managers. In 2021, this fleet consists of 192 cars, of which 147 are allocated to managers and 45 are used by sales staff.

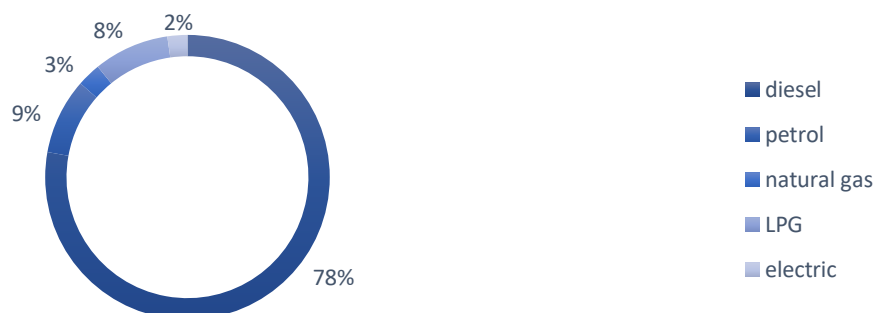
The cars allocated to the managers are 105 diesel, 10 petrol and 32 hybrid cars, all registered after 2011 and of **Euro 6 type**. The other leased cars are **all hybrids**, registered after 2011 and **Euro 6 cars**. In total, leased **vehicles with a lower environmental impact account for 40.1%**.

Suppliers' vehicles

Hera's commitment to sustainability and energy efficiency also affects the **supply chain**, and, in particular, the **criteria used to choose suppliers**. Given the high environmental impact of municipal waste management services, especially in terms of atmospheric emissions, the Group has decided to **reward the best-performing suppliers** in this respect, favouring those who use **low environmental impact vehicles**, giving a premium to these vehicles also in the tenders for waste management services called in 2021. The effects of this approach will be more appreciable from 2022, when the Atersir concession for the Ravenna - Cesena basin becomes fully operational after a two-year transitional period. This contract provides for the gradual replacement of the vehicle fleet, with the introduction of new vehicles mainly with low environmental impact engines.

In 2021, excluding Marche Multiservizi, the contractors' vehicle fleet consisted of 2,819 vehicles. Light vehicles increased by 6% compared to 2020, and their share of the total stands at 54%.

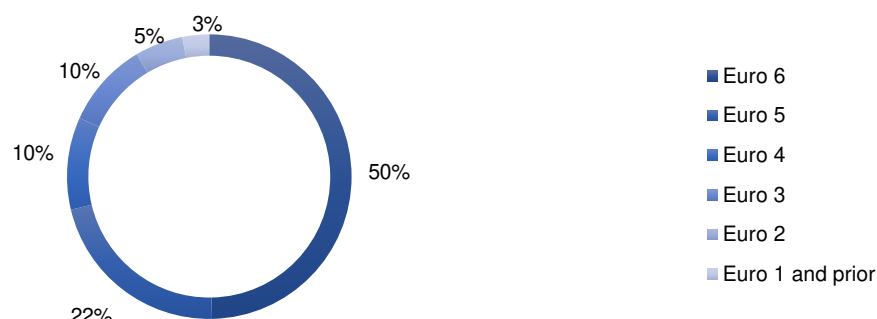
SUPPLIER VEHICLES BY TYPE OF ENERGY USED (%)



Excluding Marche Multiservizi.

As far as the anti-pollution directives are concerned, in 2021 **environmentally friendly fuel vehicles** (natural gas, LPG or electric) remain stable at **13% of the total**.

BREAKDOWN OF SUPPLIERS' VEHICLES BY ANTI-POLLUTION DIRECTIVE CLASS (%)



Excluding Marche Multiservizi.

In 2021, we also continued the process of modernising the fleet of our subcontractors, as reflected in the fact that the **most recently registered vehicles** (Euro 4, 5, and 6) account for 82% of the total, up compared to 2020 when the figure stood at 80%.

Mobility management

In 2021, we continued to raise awareness among workers to reduce the environmental impact of the **Group's employee's commutes**, also taking into account the regulations and restrictions due to the health emergency.

Among these, continuity was given to the **shuttle service** on the Bologna territory, which connects the railway station with the Viale Berti Pichat and Via del Frullo / Via Cristina Campo sites, and on the Imola territory, which connects the station with the Via Molino Rosso and Via Casalegno sites, guaranteeing the separation of passengers on board.

The **additional quota for sustainable mobility** included in the welfare plan to cover part of the cost of the public transport season ticket made available to all Group employees was used and appreciated by employees also in 2021: 171 employees took advantage of it.

Once again, in September, Hera organised the now-usual challenge among the Group's sites during the **European Sustainable Transportation Week**, inviting people to use non-polluting vehicles.

All major municipalities where Hera operates (9 municipalities) are covered by Home-Work Travel Plans, containing information on locations, main initiatives and future challenges.

Lastly, the Bologna office in Viale Berti Pichat has **five electrically assisted bicycles (e-bikes)**.

Hera for electric transportation

During 2021 the Hera Group, through the company Hera Comm, continued the development of its infrastructure network **of electric charging stations** through the installation of a further 90 public charging stations, **for a total of 194**. Through the awarding of new public tenders and the signing of additional memoranda of understanding, more than 30 charging stations have already been contracted, which will help reach the **target of 425 charging stations installed by 2025**.

2021 was a year of strong growth for electric mobility, the effects of which were reflected in the recharging stations managed by the Group, which saw a **steady increase in consumption** to over 480 MWh. This result derives from the evolution of the market, but also from technological developments on Hera Comm's infrastructures.

As a result of joining the Hubject European interoperability platform, it has been possible to offer **users from other providers** (including foreign ones) the possibility of recharging their vehicles using the HERA Group charging columns. Furthermore, thanks to the development of 'Direct Payment', access to top-ups is also possible for those who do not have a pre-signed top-up contract.

This is in addition to the more than **600 direct customers** of Hera's recharging service, which has doubled since 2020 and consumed more than 115 MWh in 2021.

Hera's activities in the field of electric transportation are not limited to public charging, but also involve **private charging** through offers for the public and companies to supply several models of wallboxes and charging stations up to 22 kW. These solutions are particularly well received by customers, as confirmed by the more than 395 private charging stations sold during the year, bringing the total to **864**.

Lastly, among the solutions aimed at private individuals, there is the **e-bikes and electric scooters initiative**: launched in 2020, this initiative was also a great success in 2021, with **more than 660** electric bikes and scooters sold in just six months.

Hera for land protection and biodiversity

Land reuse in infrastructure construction and re-use of excavated soil

From the preliminary analyses to the design of the works, Hera Group identifies technical solutions aimed at **reusing areas that have already been developed and/or preserving** the natural context of the land subject to the measures, in line with the objectives of the UN's 2030 Agenda. Some of the key design criteria include:

- for networks: extensions carried out using existing roads and/or urban fabric, improving the network layout by upgrading or reclaiming existing pipelines, laying new pipelines adjacent to existing services;
- for plants: reusing existing/already occupied infrastructure and areas; disposing of infrastructure and restoring/returning the area at the end of its life cycle, using technological solutions to reduce the overall size of the infrastructure.

Continuing along our path of sustainability started in previous years, the construction of infrastructures (networks and plants) completed in 2021 involved the **use of about 49,000 m² of land**, of which about **61% was already occupied** by existing infrastructures (about 30,000 m²). Considering the period from **2018 to 2021, 78%** (about 585,000 m²) **of the total area involved** in infrastructure construction was already occupied. It involves the construction of infrastructure with design by HeraTech.

Among the projects completed in 2021, the **best results in terms of soil reuse** were obtained through the following interventions: replacement of the secondary revamping at the Barca cogeneration plant in Bologna (100% of soil reused, 2,000 square metres), adaptation of the sewerage system at Porto San Vitale in Ravenna (100%, 1,960 square metres), renovation of the aqueduct and sewerage system in Piazza Malatesta in Rimini (100%, 2,000 square metres), and expansion of the water pipeline in Fratta in Forlì-Cesena (76%, 875 square metres reused).

In the period 2022-2025 most of the infrastructure works are expected to be carried out on land which is already occupied while continuing to limit the use of virgin soil: in fact, it is estimated that a further 290,000 square metres of soil will be used, bringing the amount of soil reused in works completed from 2018 to 2025 and designed by HeraTech to 70% (equal to about 878,000 square metres).

In particular, in Rimini, we will complete some of the measures of the seawater protection plan, involving the reuse of more than 20 thousand square metres of land. In the province of Bologna, the optimisation of the Castel Bolognese water supply system will lead to the reuse of more than 20 thousand square metres of land; the interconnection of the Frullo / Sede Berti district heating systems is also planned, which will reuse about 4 thousand square metres of surface area. In the province of Ravenna, the upgrading of some water treatment plants (Lugo, Lido di Classe and Cervia) will be tackled by reusing the areas already occupied by the existing infrastructures, allowing the reuse of about 24,000 square metres. In the Forlì area, we will carry out work on discharges by connecting minor urban areas to existing water treatment plants, reusing about 6 thousand square metres. In Ferrara, we will upgrade the Via Gramiccia water treatment plant, reusing approximately 7 thousand square metres of land already occupied by the infrastructure. Lastly, the province of Modena will be involved in upgrading the water network, reusing about 6 thousand square metres.

Biodiversity

As regards the protection and **conservation of habitats and wild species**, the EU issued two regulations, Council Directive 409/79, adopted in April 1979, on the conservation of wild birds (the "Birds Directive") and Council Directive 43/92, adopted in May 1992, on the conservation of natural habitats and wild flora and fauna (the "Habitats Directive"). These directives created a consistent ecological network of protected areas in the European Union, known as Natura 2000.

In the province of Ferrara, the two largest water collection plants, Pontelagoscuro and Stellata, on the Po river, are located within the special protection area called **"Fiume Po da Stellata a Mesola e Cavo Napoleonico"**. In the province of Ravenna, the Marina di Ravenna treatment plant is located within the EU Conservation Area **"Piallassa Piombone"** and discharges the treated wastewater into the **"Piallassa Baiona"** special protection area.

At these two plants, to protect biodiversity, Hera Group carries out **acute toxicity tests** on the water treatment plants.

In 2020, Herambiente launched an **innovative bio-monitoring** project to continue studying the environment around the Pozzilli waste-to-energy plant and any impacts it may have. The project aims to **use bees as bio-indicators** to assess the quality status of the environment around an industrial plant of the type operated by the Group. Please refer to the case study in the annex for details.

4. LOCAL AREA (AND BUSINESS) – ENABLING RESILIENCE AND INNOVATION

4.01 Objectives and performance

What we said we would do	What we have done	SDGs	Progress*
Innovation and digitalisation			
Continue to implement data analytics and artificial intelligence projects also to support the circular economy and energy transition. Continue to develop a system for reporting on digital transformation projects from a Corporate Digital Responsibility perspective, to highlight the risks mitigated and benefits achieved in the four dimensions: social, environmental, economic and technological.	Continued implementation of numerous data analytics and artificial intelligence projects in the areas of wastewater treatment, public lighting maintenance, gas leak detection, and waste disposal reporting. Continued reporting on digital transformation initiatives according to the Corporate digital responsibility framework (see page127).	9, 11, 12, 17	
IT security: ■ implement specific solutions in 2021 to monitor the security of IT infrastructure of business plants; ■ continue vulnerability assessment in 2021, and raise awareness among the user population through Security Awareness and Ethical Phishing campaigns.	Various interventions were carried out to strengthen the Group's cyber security, including the expansion to all potentially vulnerable systems, including through the introduction of network traffic monitoring probes in the management and industrial areas. Vulnerability assessment activity has also been extended to the industrial context. Cyber security culture has also been increased, including through regular Ethical Phishing exercises (see page145).		
Innovation for the energy transition and circular economy. Main objectives: produce bioplastics from sugars and optimise purification processes from an environmental and energy point of view.	The process of biopolymer recovery and purification has not been developed. The optimisation of depuration processes continued and was extended to 18 plants (15 plants in 2020) (see page129).	6, 9, 11, 12	
49% of customers will use electronic billing and 44% of customers will be registered for online services by 2024 (excluding Estenergy and subsidiaries). Promote the digitisation of the billing also through a new reforestation campaign.	31% of customers choosing to receive their bills electronically by 2021 (28% by 2020) and 27% registered with online services (23% by 2020) (including Estenergy and subsidiaries). The ECO Trees initiative aimed at planting 10,000 trees over the next three years was launched (see pages142 and 318).	11, 12, 17	
Economic development and social inclusion			
Supplier selection: continue to promote the employment of disadvantaged people in waste management services.	Over Euro 72 million were awarded to social cooperatives for waste management services, amounting to 29% of the Group's total awards for these services (See page 153).	8	
Continue to provide instalment payment for bills and other voluntary facilities for customers struggling to pay their bills. Propose to other municipalities to sign a protocol to preventing service disconnections.	187,955 instalments, worth €126.8 million, disbursed in 2021. 100 municipalities with active memoranda of understanding (85 in 2020) (see page153).	17	

What we said we would do	What we have done	SDGs	Progress*
Job creation and development of new skills			
2021 Learning Plan: set up projects and training actions to strengthen the Group's culture oriented towards sharing and active regeneration of knowledge and continue developing the new skills required in the three reference axes (technical-professional, managerial, technological). New skills include: new business and value-added services; decarbonisation, energy transition and climate change; green and ESG finance, EU taxonomy; risk management; resilience and stress tolerance; digital workplace tools. Achieve digital proficiency for more than 60% of the corporate population (meaning full "digital soft skills") by 2024, 90% by 2030.	Numerous new skills training initiatives were also developed in 2021, including: smart working, digital innovation (with a focus on the digital workplace, data analytics, cybersecurity), energy transition, climate change and EU taxonomy, environmental transition with particular reference to the circular economy, new business applications. In 2021, the Group implemented a training initiative aimed at providing basic tools and skills to the corporate population without a digital identity and reached 49% total Digital proficiency on more advanced digital skills (it was 44% in 2020) (see page166).	4, 8	
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).	22 tenders, among the most significant, included an employment protection clause. (See page153)	8	
Continue to raise awareness on the enhancement of diversity and inclusion through events and initiatives. (Inclusive language and STEM topics). Consolidate Hera Group's ranking in leading diversity stock indexes.	Awareness-raising activities on valuing diversity and inclusion continued, including through collaboration with external partners and the organisation of dedicated webinars. The positioning of the Hera stock was consolidated on the Bloomberg and Refinitiv diversity stock indices (see page163).	5	
Resilience and adjustment			
Electricity service resilience: carry out a further 13 measures in 2021, bringing the compliant network to 22 km (33% of the overall Electricity Resilience Plan). Build the Modena Est primary substation in 2021.	The implementation of the resilience plan for the electricity grids in Modena continued: 12 measures were implemented in 2021, for a total of 21 measures implemented out of the 54 planned, as well as 19 km of network upgraded (28% of the overall plan) The Modena Est primary substation was built (see pages173172).	9, 13	
Resilience of the water network service: ■ Innovative initiatives on water network leak detection (cosmic rays, radar on aircraft, predictive algorithms for breakage risks) in various areas; ■ Works to optimise withdrawals, interconnect the network and boost sources in various areas including Trieste and Bologna; ■ Development of a system for monitoring and forecasting water availability and emergency status to optimise source management.	The search for leaks in the water network with innovative initiatives was developed in 2021: search with acoustic methods, from aircraft, with cosmic rays and using predictive algorithms. A source monitoring platform for a better understanding of drought risk was developed with the University of Bologna and Arpae (see page171).	6, 12, 13, 17	
*  Result achieved or in line with plans.  Result with moderate deviation from planning.			
What we will do		SDGs	
Innovation and digitalisation			
Group data strategy: define guidelines to support the development of data analytics projects and support the transition to a "data-driven company".		8, 9, 11	
Cyber security: increase the level of Group cyber security in 2022 through the evolution of processes, tools, corporate policies and by increasing monitoring activities, preventing incidents and raising awareness among the user population through Ethical Phishing campaigns.		-	

What we will do	SDGs
41% of customers will use electronic billing and 41% of customers will be registered for online services by 2025 (excluding Estenergy and subsidiaries) (38.1% and 27.1% respectively in 2021).	11, 12, 17
Continue to develop initiatives in the three main areas of innovation: energy transition, circular economy and digital transformation. Define, develop and report on initiatives using the corporate digital responsibility framework.	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 guarantee instalment payments for bills and other voluntary facilities for customers in economic difficulty. Propose to other Municipalities the signing of a protocol to prevent the suspension of supplies.	17
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).	8
Target training sessions to the development of emerging roles and skills related to digital transformation (with a focus on Data Analytics, Machine Learning and Artificial Intelligence), energy transition (with a focus on decarbonisation and renewable energy) and environmental transition (with a focus on the circular economy, climate change and green finance).	4, 8
65% of the corporate population to achieve digital proficiency (understood as full possession of "digital soft skills") by 2025 (49% by 2021), 90% by 2030.	
Continue to raise awareness on the enhancement of diversity and inclusion through events and initiatives. (Inclusive language and STEM topics). Consolidate Hera Group's ranking in leading diversity stock indexes.	5
Resilience and adjustment	
1.2 billion euros in Group resilience investments by 2025 (31% of the total). Areas of intervention include:	
■ Resilience of the electricity service: 36.8 km of network upgraded by 2022, representing 54.5% of the overall Electricity Resilience Plan. ■ Water service resilience: development of predictive algorithms to intercept drought risk and adoption of new technologies to support leakage detection.	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 scalable 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 main **innovation areas** within the Hera Group can be summarised as follows, in line with its business plan and the renewed relationship between innovation and digital transformation:



energy transition: activities aimed at moving towards the use of more efficient and renewable sources of energy;

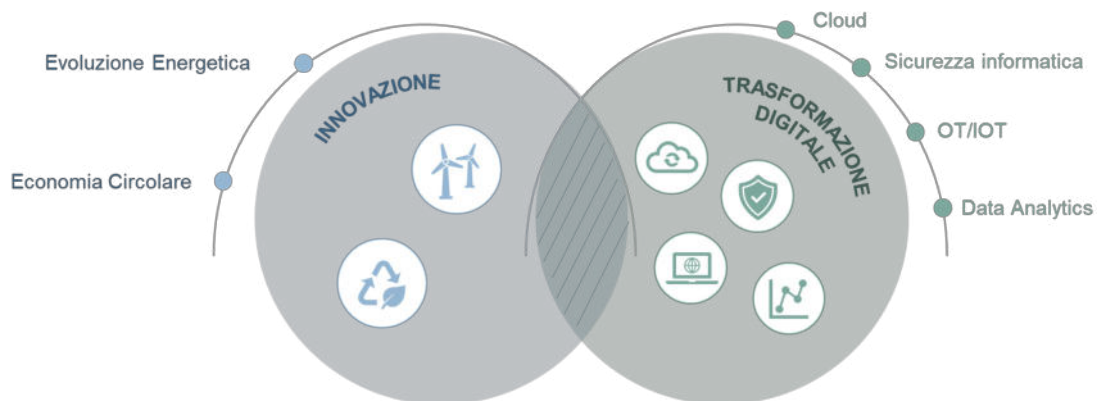


circular economy: aimed at environmental sustainability, optimisation of materials consumption, and maximising recovery of waste and scrap;



digital transformation: aimed at the implementation of new technologies abilitating digitalisation, automation, and flexibility of processes, and the enhancement and efficient use of data;

At Hera, **innovation** and **digital transformation** are two areas with elements that intersect without totally overlapping:



After several years of innovative projects that primarily saw the participation of the Development function of the Central Innovation Department, **the culture of innovation is now sufficiently widespread within the Group** to aim for a more evolved model of innovation, in which incremental innovation projects (those involving an evolution of the existing business) are **developed directly at business unit level**, aligning them with the corporate innovation strategy, while the renewed Ecological Transition function focuses on the development of radical projects, currently outside the current business lines. This requires a different management of innovation, aligning it with corporate strategies through the development of an innovation strategy, which in turn will be integrated with the innovation strategies of the individual business units.

The past year has seen strategic changes across Europe, linked to a multitude of factors: environmental, health, economic and geopolitical, with major **impacts in the energy sector**. The combination of these events highlighted the need for the Group to **strongly pursue new lines of growth in the ecological transition sector**, seeking to implement projects that can tap into both new market trends and new funding opportunities arising from the National Recovery and Resilience Plan.

To this end, innovation within the Hera Group has been reorganised, linking it more to **sustainability**. As a result, the Development function of the **Central Innovation Department** has been given the name **Ecological Transition**, leading to an orientation towards projects more focused on the combination of innovation and sustainability and a change in the approach to innovation.

To encourage and boost innovation in its businesses, the Group has also launched **social innovation initiatives**, involving both external and internal stakeholders e.g. through HeraLAB (see section, Dialogue with our stakeholders).

Investments in innovation [203-1]

In 2021, the Hera Group invested **over EUR 82 million** in innovation and digitalisation (-4,3% compared to 2020), a figure that is part of the total investments **aimed at creating shared value** (see the section, [Shared Value](#), in the chapter "Sustainable Strategy and Shared Value").

Corporate Digital Responsibility

In 2020, the Hera Group has started an internal reflection on the concept of **Corporate digital responsibility**, questioning itself on how it could be applied to the Group's activities and, accordingly, which approach to adopt.

Corporate digital responsibility refers to a set of **practices and behaviours** that help an organisation to **use data and digital technologies** in an **ethical and responsible way** in **social, environmental, economic, and technological dimensions**. These are keys points of a **unified analysis framework** to address sustainability and digitalisation in a coherent and complementary manner, able to anticipate and reduce future risks and **seize the many synergistic opportunities of the two trends**, laying the foundations for a new system of integrated reporting and responsible project development.

The dimensions of Corporate digital responsibility find a consistent declination with the activities carried out by the Group in detailed topics, each of which is able to identify risks to be mitigated and opportunities to be seized.

THE FOUR DIMENSIONS OF CORPORATE DIGITAL RESPONSIBILITY FOR THE HERA GROUP

Dimension	 Social	 Environmental	 Economical	 Technological
	Company's relationship with people and society	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 suppliers - Promoting digital inclusion and overcoming the digital divide for workers - Promoting digital inclusion and overcoming the digital divide for customers and citizens - Ensuring health and safety for workers and customers thanks to digital technology	- Ensuring recycling and responsible management of products at the end of their life - Developing digital innovation solutions to pursue carbon neutrality and regeneration of resources - 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

The **social dimension** concerns the company's relationship with people and society. For the Hera Group it is divided into four main themes: ensuring the privacy of customers, workers and suppliers data; promoting digital inclusion and overcoming the digital divide for workers; promoting digital inclusion and overcoming the digital divide for customers and the public, and ensuring health and safety for workers and customers thanks to digital technologies.

The **environmental dimension** concerns the link between digital technologies and the physical environment: main concerns identified here are the recycling and responsible management of technological products and the development of digital innovation solutions to support carbon neutrality and regeneration of resources.

The **economic dimension** encompasses the responsible management of the economic impacts of digital technologies. In the Group, it consists of the issues of managing the impacts on employment and sharing with stakeholders the benefits deriving from efficiency solutions linked to digital innovation.

Lastly, the **technological dimension** concerns the responsible creation of technologies and finds application in the Group with the issue of information security and the responsible use of technological tools.

In order to ensure a greater understanding of the framework and to thoroughly evaluate the detailed issues described above, the Hera Group has prepared several **guiding questions** which are useful in supporting the analysis and grasp the different facets of the four dimensions.

For the time being, the main objective of introducing the new framework within the Group is **reporting**, meaning analysing and describing in the Sustainability Report how the digital innovation initiatives that have already been launched and/or completed meet the four dimensions, and what is their impact on them. As a result, the new framework will also **respond to strategic objectives**, providing support for the definition of new initiatives 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.

Hera Group innovation initiatives

The main initiatives and the relative 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	WDF Dimensions
Water Treatment 4.0: use of predictive logic to optimise processes	  	 
Water Treatment 4.0: Energy Dep, the water treatment championship	  	 
Green loyalty: incentives for sustainable behaviour	   	  
Dashboards for environmental monitoring and smart service delivery	  	  
The development of the hydrogen chain (please refer to the dedicated section, "The development of hydrogen" on page 53 and the case study "Hydrogen in the gas distribution network in Modena" on page 302)	 	
Bioenergy from steam explosion	 	
Energy parks	 	
Consumption report: advanced analytics to improve the customer experience (see the dedicated case study on page 302)	  	 
Enhancement of connectivity and infrastructure (please refer to the dedicated section, "The role of Acantho" on page 142)	  	  
Predictive maintenance in public lighting	 	 
Resilient Water: water distribution networks more resilient to climate change	 	
Innovation in environmental services: upgrade of the Rifiutologo, waste recognition and container control room	  	  
Emergency Service Dashboard: Business Intelligence techniques to optimise emergency service management	 	 
Data community: development of engagement initiatives (please refer to the dedicated section, "The development of new skills in the HERA Group" on page 166)	 	
Group data strategy		

Main initiatives			Innovation areas	WDF Dimensions			
Genius bar							
Digital identity for all (see the dedicated case study on page 330)							
Artificial intelligence to reduce gas leaks (please refer to the dedicated section, "Safety and continuity of the gas distribution service" on page 224)							
NexMeter: 4.0 gas meter with advanced safety features							
New learning system (please refer to the dedicated section, "Training initiatives" on page 240)							
Optimising fugitive communications: data analysis to anticipate and mitigate hidden water loss events							
Forli remote control technology hub							
Geocall: platform for managing the field activity of network services							
Robotic & Intelligent Process Automation and artificial intelligence platforms for text recognition							
Salesforce: new CRM and multi-channel inbound							
IT security (please refer to the dedicated section, "Cyber security" on page 145)							
Alexa virtual assistant							

Water Treatment 4.0: use of predictive logic to optimise processes

The 4.0 "**Purification System**" project contains several initiatives aimed at stimulating and overseeing the change towards the digital management of plants, with the support of advanced tools such as on-line probes, monitoring dashboards and process controllers. In particular, the following projects are included:

- "Energy Dep" platform (see the following initiative for a more detailed explanation);
- installation of water line process control systems to optimise the management of treatment plants;
- installation of sludge line process control systems to allow automatic dosing of the polyelectrolyte in relation to the quality of the sludge to be treated;
- implementation of a social process management platform called Interacta, which allows operators to interact quickly, easily and effectively in the management processes of the "Register of treatment plant management";
- implementation of appropriate dashboards for monitoring consumption.

In this context, the installation of a **process controller** that uses **predictive logics for the optimisation of treatment processes** is of particular importance. The Modena water treatment plant has, in fact, been equipped with a leading-edge system, the only one of its kind in Italy, which uses predictive logic to further reduce energy consumption and improve the quality of the outgoing water. The project involved developing a control system based on predictive logics and artificial intelligence to **optimise the oxygen supply to the oxidation tanks**. The project has the following objectives:

- to improve the performance of total nitrogen abatement compared to the regulatory limits;
- to optimize oxygen delivery in the aerobic media;
- to minimise the energy costs of air blowers.

On line 1, in which this control system is present, the Modena treatment plant, which has the capacity to meet the needs of 500 thousand inhabitants recorded a **decrease in the amount of energy** needed for in line oxidation process **of 16%** compared to what was found in a similar situation with a traditional control system, and a **further 8% drop in nitrogen** in the outgoing water (parameter already below legal limits).

The innovative approach to energy efficiency goals was also positively assessed by the GSE, which approved the project's candidature for **White Certificates**.

In 2021, the ongoing project to develop a cycle controller with predictive logic on line 2 of the same plant was launched. Through the use of data analysis, the first phases of the project led to the **identification**

of the most significant variables and the subsequent **implementation of "optimised" dynamic cycle logics**, achieving **encouraging results** from the first field tests, in terms of energy and process.

Corporate Digital Responsibility

Environmental		Use of predictive logics to identify and implement actions aimed at minimising energy consumption and improving the quality of the water leaving the treatment plant.
Economical		Improved efficiency in the water treatment processes with positive economic returns.

Water Treatment 4.0: Energy Dep, the water treatment championship

In 2021, the Senseable Dep platform, used to **monitor water treatment processes** from the biological, hydraulic and energy points of view, evolved into **Energy Dep** to better exploit the data collected and bring water treatment plants together based on their **performance in the efficient use of resources**, as well as in terms of effluent quality, as was already the case in 2020. The initiative is part of a wider project to digitise the management structure called Water Treatment 4.0

In the second half of 2020, the 15 main plants with a capacity of more than 100,000 inhabitant equivalents measured themselves against each other in the first water treatment plant championship, designed to **stimulate the use of the dashboard** and as a tool to accompany the change towards water treatment plant 4.0 for both the plant and, above all, the plant managers and operations. In 2021, the second edition of the **water treatment plant championship** took place which, on the one hand, saw an **increase in the number of participants** (from 15 to 18) and, on the other hand, the **integration of new energy and chemical indicators** to improve comparability between plants even in the case of different operating conditions. The dashboard is accessible through a dedicated page and introduces functions to take into account factors such as the size of the plant or the type of water treatment process used, thereby reducing differences between plants.

Lastly, the efficiency indicators (treatment, energy and use of chemicals) are aggregated into a global ranking which, through the playful instrument of the championship, serves to stimulate technical **comparisons between plants** and suggest a useful basis for **planning investments** to improve the economic and environmental sustainability of water treatment plants.

The initiative, which is in continuous evolution with a view to increasingly reflect the management needs and areas of innovation of the HERA Group, **is confirmed for 2022**.

Corporate Digital Responsibility

Environmental		Reduction in energy consumption and chemicals used in the wastewater treatment service, with a view to progressive carbon neutrality and an ever increasing improvement in the quality of the water resource.
Economical		Optimising operational efficiency also has implications in terms of cost savings.

Green loyalty: incentives for sustainable behaviour

The **Green Loyalty** initiative aims to exploit digital technology to **reconcile its diffusion with the sustainability goals** outlined in the 2030 UN Agenda. The project is designed to **build a more sustainable society** together with customers and the public through engagement and active participation campaigns, in order to achieve common goals.

To this end, a technological platform was created that can **reward the sustainable behaviour of people** through the provision of small **economic incentives** in a digital **wallet**. The incentives received can be used as discount vouchers for participating products and services, **stimulating sustainable purchasing behaviour** and feeding an increasingly rich circuit of offers. The reference model is therefore to set up a network infrastructure that connects multiple users (customers or the public) and manages a plurality of services (business offers or regional services); the more the system is used, the more effective it will be, and the more significant the initiative will become.

The platform was developed using **blockchain** technology to ensure the highest levels of **security, traceability and immutability requirements of the managed** operations.

The first use of the platform was implemented in December 2021 as part of the **Smart Citizen Wallet** cashback initiative of the Municipality of Cesena, through the integration of the digital wallet. It is a **circuit aimed at promoting local commerce** so that people who make purchases at participating merchants can receive an incentive in the form of a digital token that can then be converted into discount coupons for subsequent purchases. Over the course of 2022, it is the intention of the Administration to expand the services offered, including behaviours related to **sustainable mobility** and integrating the welfare

contribution of municipal employees. The Smart Citizen Wallet could therefore be the **meeting point for all the sustainable behaviours** one wishes to envisage, registering the behaviour in the citizen's wallet and associating the wallet with a token that enables shopping with discount coupons at all the connected economic operators.

A second use of the blockchain platform has been developed as part of an initiative funded by the BL-REX Competence Center of Bologna to create an actual **Smart Sustainable Community** together with Hera Comm, Camst and Conad. Here too, it will be possible to reward the sustainable behaviour of customers through the provision of a token on the wallet which can then be used to purchase participating products and services. The initiative provides for a pilot test project planned for the first quarter of 2022 and Hera Comm customers who are involved will be able to obtain tokens by sending their gas meter reading, switching to electronic billing, savings on gas and electricity compared to the previous year and checking their consumption in the Consumption Diary.

In the future, the developed platform may be implemented in other regional contexts or extended to other partners, also acquiring new principles such as those related to the circular economy and energy transition, allowing the sustainable behaviours to be rewarded and incentivised, for example those linked to the correct disposal of waste or the flows of renewable energy produced and used.

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 sustainable development objectives, helping to reduce the environmental footprint of customers and the local area.
Economical		Creation of an economic incentive for the purchase of products and services in line with the sustainable development goals.
Technological		Use of innovative solutions such as blockchain for the secure tracking of the supply chain of sustainable behaviour.

Dashboards for environmental monitoring and smart service delivery

The PUNTONet dashboard is a **dashboard for analysing and monitoring the indicators for sustainability** and which provides an integrated, real-time view of the processing and correlation of data (big data) from various IoT services and sensors. The objectives that are monitored are based on the SDGs of the UN 2030 Agenda, Italian and international protocols or specific objectives of Administrations, Authorities or Companies that adopt the tool. The data that is monitored pertain to the three environmental, social and economic areas. Through a process of analysis, it is then possible to implement processes of improvement and change in the direction of sustainability.

The dashboard can also include the **Social media sentiment analysis service**, a platform that allows the near real-time monitoring of the interactions that take place on the web (newspapers, social networks, blogs, forums, etc.), categorised by different topics specifically chosen by the user, which activates monitoring.

The **first release** of PUNTONet Board for the Municipality of Cesena took place over the course of 2021, and developments for the first evolutions of the tool were also begun, in order to improve the integration of open source data through the use of Microsoft tools.

On behalf of Acantho, with regard to the initiative to extend the PUNTONet board solution to the Metropolitan City of Bologna and the Municipalities of Bologna, Imola, and Granarolo dell'Emilia, the areas and indicators to be monitored were identified. As part of the same project, the first site inspections were also carried out to identify the installation points for 10 IoT switchboards dedicated to **monitoring air quality and noise**.

In 2021, work also began on the dashboard dedicated to the **Air Break project**, an initiative funded by the European Union as part of the Urban Innovation Action programme for which the Municipality of Ferrara is the lead partner and HERA is the main technological partner, with the aim of **identifying actions to mitigate air pollution**. Data from existing databases and from new IoT sensors installed in the region to monitor air quality will feed the dashboard, which will provide **satellite processing, forecasting models and machine learning techniques** in order to identify the most critical and polluted areas, providing a support system for decisions taken regarding solutions aimed at the mitigation of pollution by the relevant public administration.

In 2022 the PUNTONet platform and related smart services (sustainability passport, IoT sensors, environmental mapping, sentiment analysis, etc.) are expected to be released for the Metropolitan City of Bologna (three platforms at municipal level and one at central body level), the University of Bologna (monitoring of the university campus in Cesena) and the Municipality of Ferrara (Air Break project).

Corporate Digital Responsibility

Environmental		Real-time monitoring of environmental indicators and implementation of strategies to achieve the reference targets.
Economical		Identification of strategic projects for sustainable development through the analysis of social, environmental and economic data collected and the assessment of the qualitative state of the territory.
Technological		Use of cloud-safe solutions and data analysis technologies.

Bioenergy from steam explosion

The aim of the **Life Steam** project is to develop an innovative prototype for the **pre-treatment of grass clippings and pruning waste** in anaerobic digestion processes to convert these organic matrices for use as **advanced biofuels** for transport (biomethane) and fertilisers for agricultural use.

This innovative technology uses the **steam explosion process**: it consists in the thermal treatment of pruning waste, using steam to break the bonds between lignin, cellulose and hemicellulose and make the material suitable for anaerobic digestion. In this way, biogas can also be produced from pruning waste, waste material collected and managed by the Group.

The project was started in 2021, when the authorisation process for the experimental plant was completed. Its construction will be completed by 2022 and then tested in 2023 over a period of six months. Once fully operational, it will be able to process up to 1.7 tonnes of lignocellulosic material per hour.

The innovative process of the efficient use 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.

Energy parks

Energy parks are a solution to the growing need to decarbonise the energy supply chain and make **cities resilient to the effects of climate change**. They aim is to achieve the **energy self-sufficiency of cities** through **modular and scalable solutions**, as well as to improve the well-being of local citizens through services aimed at increasing the quality of the urban environment:

- Solar farms, for the production of renewable energy through photovoltaic systems;
- Hydrogen platform, for the production and use of green hydrogen;
- Urban forests, a green belt in the urban area for carbon sequestration and the promotion of biodiversity, including areas with community services and the improvement of quality of life for those who live there.

Hera has identified an area north of **Modena** for the implementation of this type of integrated solution. The choice of the area is mainly linked to the **plants and infrastructures already present**: the area is bordered to the west by the waste-to-energy plant and the water treatment plant and to the east by a disused landfill site; the high-speed railway line crosses the entire area lengthwise, while the passage of the Terna high-voltage line to the east facilitates connection of the plant to the electricity grid.

Local energy production in **Solar farms** makes **zero-km generation** possible, shortening the distance between producer and consumer. To counteract the uncertainty of solar energy and make it available at any time of the day, **accumulation solutions** can be installed. The disused landfill site in the identified area would offer the possibility of installing part of the ground-mounted photovoltaic system here, thereby limiting the investment. The Solar farm will also consist of elevated **agri-voltaic systems** that allow the combination of photovoltaic energy production with agricultural activities. In this way, the principle of "**do no significant harm**" is respected as they do not take land away from agriculture; the plants also include systems for monitoring the impact on crops, water savings and agricultural productivity for different types of crops. The aim of the Energy park is also to **promote the development of more sustainable agricultural activities**, such as precision farming and organic farming.

The solar farm could be connected to the **Hydrogen platform** at the waste-to-energy plant or landfill site, partially converting renewable production into **green hydrogen**. Hydrogen can eventually be fed in low percentages into the gas distribution network, as well as being used as an energy storage system to balance the electricity grid and optimise the use of renewables when there is a mismatch between energy supply and demand. Another potentially implementable solution would be **power-to-gas**, which involves converting hydrogen into **biomethane** using carbon dioxide. The biomethane can then be stored, fed into the gas grid or power heat pumps that provide the thermal energy needed by the city during the winter months. In the process of converting methane into electricity, carbon dioxide is emitted, which can be stored and recovered in a closed cycle as part of power-to-gas.

Lastly, an essential element of the Energy park is the **Urban forest**, a true connective tissue that connects and contains the various plant and technological elements and extends the concept of the energy park to a wider, innovative dimension of interest to the community and the context in which the system is placed. The Urban Forest includes not only **green areas for reforestation, biodiversity protection and carbon sequestration**, but also **bicycle and pedestrian paths** for sustainable mobility and a wide range of public services to offer the city a new type of ecological park, such as urban gardens, botanical gardens and areas dedicated to beekeeping and honey production. **With a view to the circular economy**, the forest will be fertilised using **digestate** from the anaerobic digestion process for the production of biogas, compost and/or sewage sludge as soil improvers; the residues from the management of the forest and green areas can be used to produce **advanced biomethane**. Part of the Urban Forest will be dedicated to the **process of phyto-purification of domestic, agricultural and sometimes industrial wastewater**, a natural and entirely ecological process that does not involve the use of pollutants and indeed has several positive characteristics including simplicity and cost-effectiveness of construction, as well as reduced maintenance. Wastewater treated with this technology can be used for irrigation purposes **within the urban forest itself**.

In 2022 the design phases will be completed, in 2023 the authorisation phases of the project will start and by 2024 the construction phases.

Predictive maintenance in public lighting

Hera Luce has developed a pilot project for **predictive maintenance** of the state of deterioration and corrosion of public lighting supports.

Intelligent devices such as **sensors and advanced sensing systems** are being installed and tested to provide more and more information about the location, condition and availability of assets. The use of this data (**big data analytics**) will be a lever in the process of migrating towards a **circular business model**, as it allows us to **anticipate breakdowns** and put the company in a position to plan maintenance operations in advance, thus limiting extraordinary expenses. The increase in direct costs resulting from a greater number of smaller operations is thereby compensated for by the **minimisation of high risks** and a higher quality of the installations, returning more valuable **infrastructure to the area**.

Furthermore, this will **maximise the use** of components and networks, **ensuring their correct operation** even in the event of external stresses that could not be anticipated in the design phase.

Currently 91 municipalities have been included in the system, with a target of 10% increase by 2022.

Corporate Digital Responsibility

Environmental



Ensuring recycling and responsible management of products at the end of their working life.

Economical



Sharing with stakeholders the benefits obtained thanks to the efficiency processes given by digital innovation.

Resilient Water: water distribution networks more resilient to climate change

The study developed in 2020 with the University of Bologna aimed to **quantify the impact of potential climate change on water distribution networks** and identify **solutions to improve network resilience**. To determine the probability of occurrence of intensive or prolonged droughts in Emilia-Romagna and to interpret their impact on Hera's supply sources, it was necessary to carry out an analysis of the statistical characteristics of the precipitation series as well as the series of surface runoff and of groundwater levels. The analysis was aimed at defining both the methods (in a statistical sense) with which droughts occur, and the delay with which these affect the various sources of Hera's supply.

The results consist of **design indications** regarding, for example, the optimal balance between surface and underground supplies, network connections, the need for additional reserves or alternative supply sources.

Thanks to the data collected and the analyses carried out in collaboration with the University of Bologna and Arpa, a first step of development of the system called "**Resilient Dashboard**" was carried out in 2021. This system is able to collect, visualise and analyse data from different sources (surface water, groundwater and precipitation) in a single environment. To illustrate the aims of the project and the objectives achieved, a public event was organised in December 2021 entitled "The water to come. Climate change: new challenges and solutions for the water cycle"

In 2022, the prototype system will be transferred to Hera systems, enhanced with new field detection probes together with the development of more advanced predictive algorithms.

Corporate Digital Responsibility

Environmental



Implementation of a predictive model and a digital platform for monitoring the consistency of groundwater and surface water resources, aimed at the development of resilient water networks, reservoirs and supply sources.

Innovation in environmental services: upgrade of the Rifiutologo, waste recognition and container control room

The Hera Group has developed a series of innovative solutions to **support citizens in interacting with the operational service**, using the **Rifiutologo** app.

The Rifiutologo, which is now 10 years old, provides several functionalities:

- identify in which separate waste collection the different wastes should be placed;
- display the points of interest on a map (such as drop-off points) and their opening hours;
- make reports to request Hera's intervention in relation to container emptying, street cleaning, damaged bins and abandoned waste.

Furthermore, since 2020, Amazon's **Alexa** skill has given the Rifiutologo a voice, allowing the user to ask questions and obtain the same information available on the app.

Having said that, it was decided to **further enhance** the app by adding some new functions, such as the possibility of **booking the collection of bulky waste**: the public can now request the service by indicating the number and type of objects, receiving a notification of booking and a proposal for the day and time of collection. If the date is unsuitable, you can always cancel your reservation and make a new one, or call the call centre to arrange a suitable alternative with the operator. The aim is for this new functionality to fully meet the needs of customers, **thereby reducing cases of abandonment** due to difficulties in handling the pick-up contact: the reservation can now be made at a time and in a way that is most convenient for the customer.

Another project in progress is the use of **artificial intelligence to classify the type of abandoned waste** reported by citizens through the Rifiutologo, in order to understand, for example, whether it is bags of waste or bulky waste: this information is useful for automatically defining what type of team to send to remedy the problem (vehicles and operators), without the need to analyse the photos in the back office, thereby reducing the time needed to manage the case.

Lastly, the **innovative containers** in the **Smarty** family **are able to communicate the data collected in the field** to the proprietary platform, which is constantly operational 24 hours a day, 7 days a week. The containers have a single electronic system, based on product-specific firmware versions, which collects the container access data and **monitors its correct operation**, communicating the information and any anomalies found to a central organisational structure, called the **container control room**. Given the huge amount of data to be managed, the control room uses an information system based on Scada logic. The purposes of the control room are many, all **aimed at ensuring an increasingly punctual and efficient service**:

- technically validate the correctness of the provision in order to be able to share the certified data with the municipalities and use them for billing purposes;
- intervene promptly at the onset of faults in order to reduce possible inefficiencies, without the need to be activated by the public;
- inform the collection service of the degree to which the containers are full in order to optimise collection rounds.

Corporate Digital Responsibility

Social



Customer support through an increasingly interactive and easy-to-manage environmental service, and the development of new features that can be used via mobile apps (Rifiutologo).

Dematerialisation of processes and documents to ensure greater customer safety.

Environmental



Monitoring litter abandonment and identification of critical areas in which to intervene with initiatives to resolve reports.

System to support separate collection and optimisation of collection rounds.

Economical



Efficiency of the waste collection process and development of new digital skill assets for environmental operators.

Technological



Responsible artificial intelligence initiatives developed to provide the operator with support for the correct and safe execution of environmental services.

Dashboard Pronto Intervento: business intelligence techniques to optimise emergency management

The Rapid Response Gas service carries out activities to support the continuity and safety of the distribution service. The **development of technical reporting** in this area is the driver for strategic

choices and a wide-ranging vision of the operational context; to achieve this, an **internal data framework** has been defined using business intelligence tools.

The solution involves a data source from the Sap and Geocall environments being periodically entered onto Azure in the cloud and the creation of a transformation and aggregation process for the data collected that can be directly connected to Power BI, a data visualisation tool. Although the data is migrated to cloud infrastructures, it remains confined within the HERA Group perimeter, thereby complying with Group policies and ensuring **greater IT security**.

The use of Power BI as a visualisation tool allowed the creation of a dashboard and specific indicators useful for **monitoring the processes and activities** of the Rapid Response Gas Service from a data-driven perspective, made accessible to those responsible for gas operations who manage the operational departments and maintenance activities on the assets. Since Power BI allows the operator to **consult the collected data in an agile, dynamic and visual way**, it is easier to go into the details of individual activities (meter replacement, gas shortage situations, leak detection activities, etc.) allowing even an operations manager who is not familiar with the architecture of the data **to easily query it**.

The development of the product will allow Inrete Distribuzione Energia to have ownership of the data in a self-BI perspective. It can then draw from this for projects and Proof of Concept functions for predictive maintenance of the assets managed. This will enable Inrete to develop pilot projects built from the same database (cloud infrastructure on Azure with a solid and structured data architecture). The creation of this single repository for data from the SAP and Geocall environments with automatic and periodic updates of the database allows the user to collect the data from the same memory and avoid continuous extraction from the SAP and Geocall environments, thereby achieving a kind of **circular economy of the collected data**.

Corporate Digital Responsibility

Social		The monitoring dashboard based on the use of Power BI makes it possible to consult the collected data easily and, thanks to the dynamism of its visual objects, it is possible to go into the details of individual activities, allowing even the non-expert user to easily interrogate the data.
Economical		The use of a single repository for data from the SAP and Geocall environments with automation and regular updates makes it possible to achieve a circular economy of data.
Technological		Data remains confined within the HERA Group perimeter in compliance with Group policies, ensuring greater information security.

Group data strategy

The continuous digitalisation and the related growth of information are driving the Group to adopt a strategy for the efficient use of this information. The aim of the **data strategy** is to create value from all this information, supporting the group's transition to a truly data-driven company.

It was felt that the most appropriate response for the HERA Group was the **Data Mesh**, a paradigm that takes into account both the organisational and the more technological (platform and tools) parts. An innovative view of data as products in an extended marketplace. It is therefore essential to **formalise guidelines** for each business unit and for the technology partners that support project development. These are the basic reference on which the initiatives are based and which make it possible to circulate information so that they are quality products that can be reused by the whole Group. It is therefore a foundation project, enabling the development of data analytics projects from which the practical benefits (always data-driven) can be derived.

Corporate Digital Responsibility

Technological		Definition of guidelines regarding secure access to and use of data, avoiding costly and dangerous redundancies.

Genius bar

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 **Genius bar** was established in May 2021. The objective of the Genius bar is expressed through the following activities:

- on-demand support to users who need guidance in the autonomous implementation of digital solutions;
- implementation of projects through agile methodologies aimed at digitising business processes using the solutions available within the Power platform;
- addressing digitisation opportunities through standard processes of the Information Systems Directorate that cannot be realised solely by engaging the Genius bar.

The Genius bar therefore aims to be a **driver of innovation** in the digital transformation process undertaken by the Group, adopting a model that meets the need for agility.

In the first few months of the initiative's launch, meetings and webinars were held with the entire digital workplace support network, aimed at sharing the operating model of the new structure, which is part of the Competence Centre Process Automation. The promotion and awareness-raising activities, carried out in cooperation with the Central Directorate for Personnel and Organisation, enabled 46 potential initiatives to be identified, assessed and addressed, **resulting in 27 projects** that were started or completed.

The goal for 2022 is to **increase the number of projects** that will be managed through the Genius bar. During the year, the operating model of the Genius bar itself will be completed, introducing application monitoring and management tools via Microsoft Toolkit.

Corporate Digital Responsibility

Social		Promoting digital inclusion and overcoming the digital divide for workers through awareness-raising and training initiatives on tools to guide the digitisation of business processes through the support of a dedicated competence centre.
Environmental		Reducing the use of paper by digitising processes.
Economical		More efficient and effective use of personnel through the introduction of digital tools: resource savings in terms of process efficiency translate into cost-saving benefits.
Technological		Increased quality and security of managed data thanks to solutions implemented as part of the Power Platform (move from unstructured and insecure data sources and databases to more robust, and secure architectures). Ensuring responsible use of the new technologies introduced thanks to a competence centre dedicated to monitoring the solutions implemented.

NexMeter: the 4.0 gas meter with advanced safety features

The **new gas meter 4.0** not only allows gas users to **monitor their consumption in real time**, but also offers **advanced safety features**, an aspect of fundamental importance for the gas service.

The innovative meter is the result of the Group's experience and the application of its know-how in the management of the gas distribution service. NexMeter is equipped with an advanced technology that can monitor the pressure and flow conditions of the supply system and the network in real time, **immediately signalling any 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 made of materials which contain **recycled plastic** and is already prepared for **biomethane** and so-called **blended gases**, i.e. mixtures of methane and hydrogen.

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.

During 2021, **80 thousand meters were installed** in the areas of Ferrara, Modena and Udine, for a total target of 300 thousand installations by 2024, aiming to avoid an estimated **3,500 tonnes of greenhouse gas emissions per year**.

Corporate Digital Responsibility

Social		Greater level of safety for gas customers, thanks to advanced meter functions capable of detecting anomalies immediately and securing the system.
Environmental		Fewer 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 technological product.

Corporate Digital Responsibility

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.

Optimising fugitive communications : data analysis to anticipate and mitigate hidden water loss events

The project to **optimise communication to customers** about possible water leaks downstream of the meter consists of revising manual checks and adding new algorithms, based on innovative machine learning technologies, to the standard automatisms already implemented in the system.

The manual checks consist of viewing the photo of the meter to verify the correctness of the numerical data reported, evaluating the customer's consumption history and, where a possible leak is detected, sending notifications to the end customer. The positions managed by the operators are selected in the first instance by standard automated systems that assess the plausibility of consumption on the basis of historical reference parameters, highlighting potentially critical situations.

These positions are added to those identified through a **classification algorithm**, selected through machine learning techniques. Two solutions were compared: differentiated models (separate algorithms per historical depth) and a single model (a single algorithm for all historical depths). The approach that intercepts the greatest number of water leaks is the model that uses a **single algorithm for all historical depths**. Compared to manual certification, the algorithms are **improved both in terms of water losses intercepted and alerts sent correctly**.

Corporate Digital Responsibility

Environmental		Reporting leakage in advance helps to safeguard the water resource.
Economical		Optimised water leakage communication relieves pressure on the leakage fund.
Technological		The introduction of a classification algorithm based on machine learning technology further improves the performance of the process.

Forlì remote control technology hub

The **Forlì remote control centre** is a multi-specialised centre, unique in Italy and at the forefront on a European level: a **remote control, remote management and 24-hour emergency technical call centre** of almost 400 square metres, with a giant screen of 60, a 3D system to represent the main systems, 160 monitors, 50 stations, a team of 70 operators, double fibre optic communication lines and an autonomous gas fire-fighting system. The Hera Group's **aqueduct, sewer and gas distribution and district heating network is remotely controlled in real time**, extending across all the managed territories of Emilia-Romagna, the Triveneto area and three Tuscan municipalities.

The centre is constantly growing, in terms of both quality and size: in 2021 a total of **7,146 connected plants** was reached (786 more than in 2020). In terms of signals managed, the overall total is 657,094 (44,209 more than in 2020).

Among the main innovative development and evolution projects implemented in 2021:

- Implementation of the **expert decision support system** for the Rimini wastewater drainage system: automations were created and data from the meteorological radar installed at the Santa Giustina wastewater treatment plant in Rimini were integrated (finalising a project already started since 2018);
- Confirmation and further extension of the **Senseable Dep** tool and implementation of a sewage treatment plant championship in order to develop a comparison of best practices in the sector;
- As part of the ongoing development of **Cybersecurity Operation Technology** issues, a specific meta-project was approached that fully defined its concept during 2021, outlining the whole objective and strategic direction for OT Cybersecurity in industrial environments. A series of actions have been planned in a systemic way for a **structured and procedural management with an enterprise approach**: this is a set of actions and tools (including the creation of a virtual programming environment) which, besides favouring an intrinsic security approach, creates a great opportunity for the evolution of the work organisation by creating the enabling conditions to operate with a remote management of processes;
- As part of the **Container Control Room project**, management of the proprietary firmware has been completely internalised and the first step of integrating the data flow from Smarty containers into the remote control (SCADA) has been completed, **enabling management of the end-to-end process** of container measurement and alarms within the remote control. In

2021, the **analysis model for all processes related to the container** (measurement acquisition, asset management, alarm and signal management) was set up, and the following results were achieved: management of product development, debugging and alarming, data analysis on deliveries, a reduction in missed readings **from 30% to 3%**, and a limitation of errors on the network to less than 0.4%;

- Implementation of **artificial intelligence projects**.
 - in collaboration with AcegasApsAmga, a project was completed for the management of the Padua aqueduct waterworks to replace classical automatic logics with **machine learning logics**;
 - odorizer management tool to monitor the **correct introduction of odorizer into the gas network** with the further extension to 49 plants and consolidation of the model, which led to a significant improvement in the estimation of the odorizer tank emptying calculation;
 - virtual assistant integrated with the company SCADA to allow specific **processing of multiple reports** in a very short time and without human error, to make available real-time information of significant parameters of the plant processes; in addition to the return of the voice information, an e-mail is sent with a detailed summary of all the data related to the analysis/requests made;
- The design for the **integration of Marche Multiservizi's remote control** into the Group's remote control was completed: it made it possible to issue the technical-economic feasibility assessment to plan the migration methods to the Forlì remote control in line with the Group's standard. During 2021, the secure access mode of Marche Multiservizi's current systems was set up to ensure consistency with the transitional policies, and the sample system migration project was completed;
- **sewerage system in the Province of Ferrara**: a summary map was prepared to monitor the sewerage flow in various sections of the territory with a focus on all the remote-controlled pumps at PVSS with the real-time situation of the various states (pumps, levels, anomalies) and sewerage flow (dynamic animation of the pipes);
- Implementation of the **Hera Trading optimiser** which involves refinement of the software for correct management of the MSD market: this activity shows the evident gap between the remuneration at cost and the value of a proprietary software, fully customised and functional. The introduction of alarm systems for programming facilitation allows the MSD operator to define potential extra power to be produced in case of a BDE call;
- Consolidation of the **Man Down** app and introduction of a Fleet Management alarm for operational fleets with a black box that communicates potential accident situations to the remote control.

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.
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.
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.

Geocall: platform for managing the field activity of network services

Since 2018, the **Geocall IT platform** has been introduced to manage the field activities of networked systems, such as operation and maintenance, technical assistance and emergency service response. The system immediately **increased the efficiency of the emergency services, by simplifying and standardising operations** of network services (gas, electricity, water and district heating), providing an easy graphical interface and all the features made possible by smartphones.

Geocall has been integrated with our IT systems based on SAP and Esri technology, and overcomes the previous operational inefficiencies linked to the impossibility of inserting attachments related to the operational activity, due to cumbersome consultation of documents offline, persistence of paper documents, the need for frequent phone calls with assistants, the possibility of accessing data only from fixed locations, the need to use multiple devices for a range of functions and reporting of the activities in the office.

Below is a summary of the **main features**:

- immediate access to technical information of user facilities;

- data entry and search with direct access to company databases (e.g. technical specifications of the instrumentation supporting a specific activity);
- possibility to create, update, assign, report directly from mobile the different work steps, currently for internal staff;
- optimisation of the monitoring and scheduling of work orders, thanks to the quality of data on the traceability of individual activities (time and space);
- direct, in-field readings of meters;
- online and offline access to maps;
- access and visibility of the data concerning the staff in service (e.g. on-call time, unavailability bands, work calendars) in order to optimise the management of activities to be carried out on the area;
- road navigation to the address of the service call;
- acquisition and consultation of multimedia documents (images, pdfs, CAD files, etc.) which can be attached to the work order;
- booking management.

All this translates into efficiency, performance and satisfaction.

In 2021, **190,000 emergency service reports** and **135,000 management and maintenance interventions** were managed, involving approximately 1,500 employees.

At the end of 2020, the management of appointments was started, allowing optimisation of the resources involved in the work order management.

The deployment path will proceed in 2022 with the management of activities related to the operation and maintenance process to be assigned to third party companies and to meter activities. The real element of discontinuity and progress that is being made is that of conceiving, designing, configuring and administering a "*field management*" application solution that can also be installed and used by personnel from outside HERA Group in full alignment with company policies on data security and privacy.

Corporate Digital Responsibility

Social		The solution is in line with the privacy and data security policies of the HERA Group. It increases the number of employees who manage and transfer information from the field via digital media, therefore promoting digital inclusion and overcoming the digital divide.
Economical		Efficiency of emergency response activities and optimisation in monitoring the field activities of network services and scheduling of work orders.
Technological		Use of an IT platform and information systems for the management of all field activities for protection and support for the correct functioning of gas, electricity, water and district heating services.

Robotic & Intelligent Process Automation and artificial intelligence platforms for text recognition

The foundation of the **Robotic & Intelligent Process Automation** platform was completed at the end of 2019, a system designed to **automate processes** that involve interaction with information systems characterised 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 aforementioned pilot initiatives** have, over the last two years, made it possible to make a progressively more extensive use of **digital automation** on the processes which were initially mapped. In addition, it was possible to extend these technologies to **a further six new processes** (automation of the process of acquiring active invoices from the Ministry of Economy and Finance, automation of the process of accounting for work packages for Inrete, integration with Anac and automation of the process of checking the criminal records of suppliers, automatic management of rejects when contracting new Hera Comm customers, automation of the process of issuing invoices for Hera Comm's value-added services, integration with the Inland Revenue Agency for the automated acquisition of passive invoices in the tax drawer).

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 Center perspective to support all the Group's Business Units. The findings collected in the years 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 business processes that could potentially be re-engineered with a view to automation and digitisation, a multi-year **plan was defined for the implementation of opportunities** that ensure the highest efficiency levels among all the identified initiatives. This plan, which started in 2021, will also continue in 2022 and 2023.

As part of the adoption of artificial intelligence solutions and natural language processes, the first **text recognition** project was completed to activate dispositive actions on back-end systems (Multichannel inbound in support of Hera Comm). This project enabled the implementation of a corporate asset called Read Elaborate Organise (LEO). Several opportunities to extend LEO to other processes are foreseen over the timespan of the Plan.

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.
Economical		Digitalisation of business processes through advanced IT solutions and greater efficiency of massive, highly manual processes with a beneficial impact on overall efficiency in regulated services as well. Involvement of workers in activities with greater added value.
Technological		Use of digital automation tools capable of guaranteeing data consistency and security.

Salesforce: new CRM and multi-channel inbound

The aim of this initiative is to equip itself with a **new customer relationship management (CRM)** platform that pursues customer centricity, ensuring a single view and end-to-end management of the CRM environment.

The omnichannel approach underpinning the new system allows for consistent management of customer contact moments, through an integrated approach across traditional and digital channels and a personalised customer experience. The initiative consists of the implementation of an **artificial intelligence mode** to support the **automatic classification** of customer requests received by email from Hera Comm. The use, on the part of operators, of innovative tools integrated into the CRM system with a view to solving problems during the **first contact makes it possible to reduce** response times for customers, who may then feel more encouraged to use the digital channels offered by the Group to find answers and solutions to their questions and problems.

In addition, the new system simplifies and automates certain operational processes through flexible, rapid and integrated management of practices, allowing the company to pursue the objective of operational excellence capable of creating an ever-improving relationship with its customers and the reference territory.

In the long term, this will lead to the creation of a scalable application infrastructure capable not only of understanding customer needs, but also of responding automatically to specific types of practices, thus improving the company's relationship with its customers.

Corporate Digital Responsibility

Economical		The new omnichannel platform allows the reduction of response times and the management of files in a fast, flexible and integrated manner.
Technological		Application of artificial intelligence to provide customers with rapid and customised support in answering their questions.

Alexa virtual assistant

The **Virtual Assistant Alexa channel** has recently been opened for requests from Hera Group customers. Using Alexa, Hera Comm customers will be able to communicate their self-readings, receive information about their previous bill and receive useful information regarding their consumption.

The integration of Hera Comm services with technologies already widely present in the homes of its customers, such as Alexa, will make it **easier for them to interact** with the company as a result of this important and innovative listening and communication point. Ease of communication and promptness in solving problems will lead to an increasingly better relationship between the company and its customers, also creating value for the reference territory.

Corporate Digital Responsibility

Social		Alexa virtual assistance will make it easier for customers to interact with the company, providing a personalised and user-friendly service and leading to an increasingly better customer-company relationship, ultimately also creating value for the reference territory.
Economical		The ability to access information about their consumption and communicate their self-readings using simple voice commands will help customers interact more frequently with the company to monitor their consumption habits in order to save money.

Digitalisation for our customers and the local area

The role of Acantho

Acantho is the digital company of the Hera Group that serves the main cities of Emilia-Romagna and Triveneto with a proprietary **fibre optic network approximately 4.400 km long**. The company has been developing an ultra broadband fibre-optic network for more than 20 years, on which it offers next-generation **telecommunications services**. Their data centres in Imola and Milan offer cloud services to our customers, providing high levels of service quality and data security.

Acantho's range of services covers four macro areas: Data & Voice Communication, Hybrid Multicloud, Cybersecurity, and Smart City.

In 2021, with the aim of improving access to information systems, Acantho continued to **upgrade the Hera Group network**, increasing available bandwidth to 10 Gbps for the Bologna and Modena sites and other increases for a further nine sites. In addition, a direct interconnection with AWS (Amazon Web Services) was set up to support the cloud journey of the Group.

As a consequence of the health emergency and the massive use of remote working, the way of working of many Group employees has changed, with an increased use of distributed collaboration solutions to the detriment of the use of telepresence systems. To **support the growing use of these tools**, aggregate internet access for the Group's sites was increased to 5 Gbps. A Proof of Concept was also initiated for the introduction of high-performance Wi-Fi 6 (IEEE 802.11ax) at Group premises.

There are numerous innovative projects led by other HERA Group companies and business units and supported by Acantho and its innovative services. In terms of **Corporate digital responsibility**, particular mention should be made of the following:

- environmental services and fleets: continued technological **development of collection centres** and newly opened collection centres (impact on the environmental dimension);
- innovation and information systems: **new computing infrastructure** for the zero-based billing project (impact on technology dimension);
- innovation and information, and cyber security management: implementation of **IT network security** (impact on the technological dimension);
- market: continued **technological evolution of customer help desks** and newly opened desks (impact on the technological dimension);
- corporate services: **physical security of premises and production facilities** (impact on the social dimension);
- **digital newsstand**: for several years now, Acantho has been coordinating the needs expressed by the companies and business units and providing a service that allows newspapers and magazines to be used in digital format, with additional search and content sharing functions. In 2021, this service was used by 53 users from 12 separate budget units belonging to four Group companies (impact on environmental and technological dimensions).

Furthermore, with the aim of **further improving the energy efficiency of its systems**, Acantho has adopted a solution involving the use of special paints to improve the efficiency of the cooling system of the Imola data centre. This initiative is in addition to a series of interventions that have **greatly increased the energy performance** of Acantho, in terms of electricity consumption for the Imola data centre.

In the market context and for business customers in particular, the connectivity services offered are based on fibre-optic technologies, radio links, and copper. The aim for the future is to increase the number of customers throughout the country by integrating the broadband infrastructure opportunities offered by other operators. In addition, the SD-WAN service was released at the end of 2021, allowing the service portfolio to be offered to customers where Acantho connectivity is not available. In the second

half of 2021, the **Voice4Teams** service was made available for sale, enabling the provision of telephony for Teams customers, a collaboration tool with a strong market presence among Business customers.

With its fibre optics Acantho can bring **ultra-wideband connectivity** (with connection speeds of up to ten gigabits per second) **to more than 20,000 companies** in the business segment out of the approximately 35,000 companies surveyed in the area where Acantho has a fibre optic presence, thus ensuring a **coverage of 59%** for the companies surveyed (54% in 2020).

The expression "**digital divide**" indicates the lack of technological infrastructure which characterises an area or local territory, in terms of both public infrastructure and private technology. Digital divide is synonymous with technological backwardness and, more specifically, indicates the lack (or slowness) of connection to the web. In 2021, Acantho continued along the path taken in previous years, expressing formal interest in taking part in the integration with fibre-optic networks of other regional operators in the local area in order to reach business users based in areas with a digital divide, with its own commercial services. Through integration with the regional public operator, the number of areas in the digital divide potentially covered by Acantho became 230.

In 2021 Acantho signed a contract with the Metropolitan City of Bologna for the supply and operation for one year of a system to **acquire and monitor environmental, social and economic data and trends** in the metropolitan area of Bologna. The system will be delivered in 2022 and will initially involve the municipalities of Bologna, Imola and Granarolo dell'Emilia. With reference to the sustainable development objectives of UN 2030, the contract with the Metropolitan City of Bologna represents an **application of the Hera Group's Smart City** paradigm, which aims to collect, monitor and correlate data of various types generated by the city in order to obtain signals that can be reused by other systems and indications for stakeholders. For the above-mentioned initiative, the Metropolitan City of Bologna uses funds made available by the Ministry for Ecological Transition.

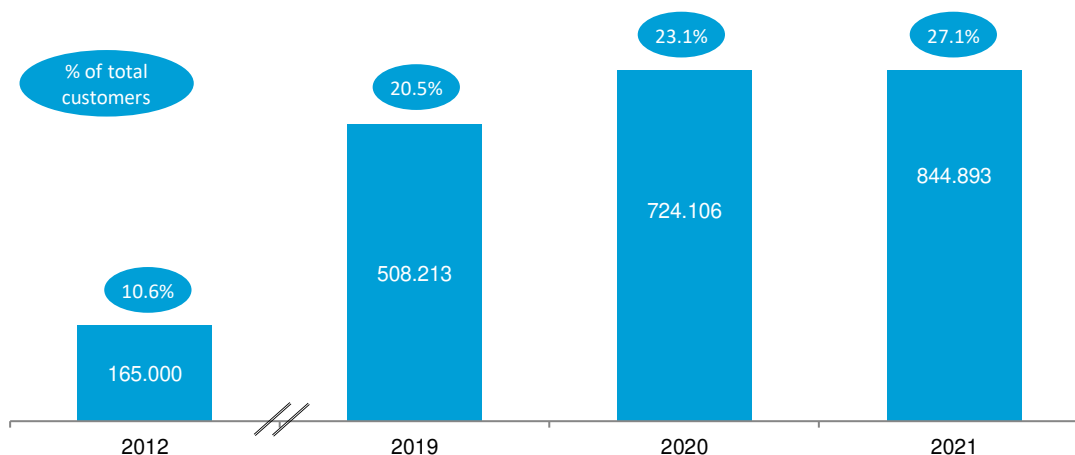
Corporate Digital Responsibility

Social		Guaranteed quality of cloud services for customers and the responsible and secure data management. Improvement of connectivity, in order to reduce the digital divide for workers and companies. Support provided to initiatives for the physical security of offices and production facilities.
Environmental		Support for the technological evolution of separated waste collection centres. Energy savings as a result of the implementation of efficiency solutions and the acquisition of green energy for the part exceeding self-production. Paper savings thanks to the digital newsstand and electronic billing services.
Technological		Creation of works and services in favour of greater connectivity of the territory (companies and the public), capable of integrating agile working and promote smart city services within an inclusive digitalisation process. Activities to ensure and increase the security of IT networks.

The 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

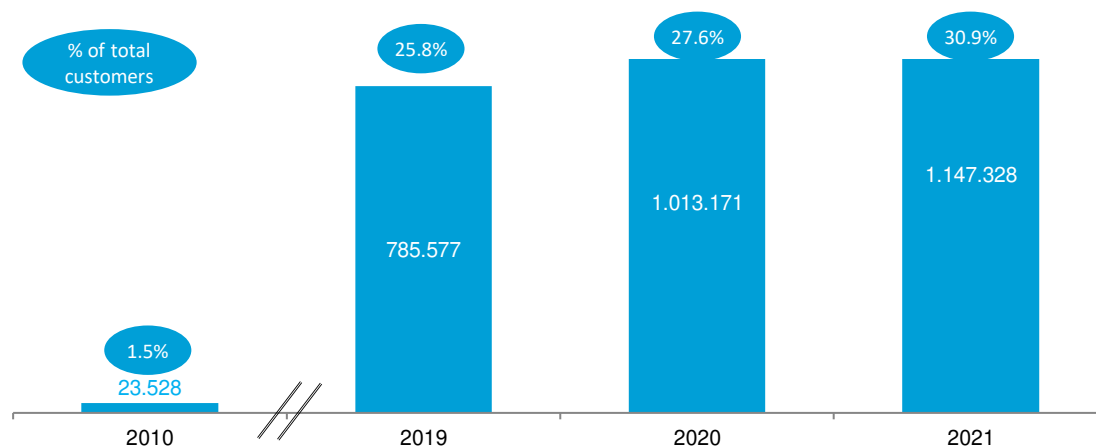


The figure does not include data on the company Eco Gas and Aresgas.

In 2021, **27.1% of customers registered for online services at Group level**, an increase of four percentage points on the previous year (23.1%).

In detail, there was 10.5% growth in users registered for Hera Comm's online services in 2021, reaching 555 thousand customers (34.0% of the total). Customers registered with Estenergy's online services account for 29.3% of the total, 24.6% for those of Hera Comm Marche, and 18.9% for those of the more recently acquired trading companies. The growth trend towards digitalisation is also continuing for AcegasApsAmga with 10.3% of customers registered for online services (+45.2% compared to the previous year) and 9.0% (+25.0%) of customers for Marche Multiservizi.

CUSTOMERS WITH ELECTRONIC BILLING



The figure does not include data on the company Eco Gas and Aresgas.

As of **2021, 30.9% of Group customers chose to receive their bills electronically via email**, an increase of 13.2% compared to 2020 when they accounted for 27.6% of the total.

More specifically, customers who have chosen the electronic format for their bills represent 38.1% of Hera Comm customers, 30.4% of Estenergy, 24.7% of Hera Comm Marche, 21.2% of AcegasApsAmga and, lastly, 19.6% of customers of ASCOs Group companies, and 8.1% of Marche Multiservizi.

The bills of Hera Comm, Estenergy and AcegasApsAmga customers who have not chosen electronic billing are **printed on 100% recycled paper**. From 2022, paper-based billing on recycled paper will also be extended to Marche Multiservizi and the other more recently acquired commercial companies.

In 2021, actions to **promote the digital behaviour of Group customers** continued.

For the 2021-2022 scholastic year, the **"Digi e Lode" project** has been extended to Lombardy, Veneto, Friuli-Venezia Giulia and Apulia (see case study in Appendix). 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 2021, the participation of Acantho customers in the digital billing service, made it possible to avoid printing approximately 155 thousand sheets of paper. Acantho does not print paper reports on its customers' electronic traffic, but customers can view them online on the customer portal. In addition, the management of administrative communications is gradually shifting to the use of Certified Email Address (PEC), representing 28.8% compared to paper. Overall, the digitalisation of these three processes resulted in a savings of approximately 38 kg of CO₂ per year.

HERA Group 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, thirteen 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 therefore easily pay directly from their own internet banking service, without waiting in queues, and with an 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 will also be able to pay bills by simply entering their mobile phone number using **Bancomat Pay**, without having to enter their credit card or bank account details.

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 the initiative contribute to responsible digital transformation? The benefits achieved in the Corporate digital responsibility dimensions (please refer to the dedicated section "Corporate digital responsibility")

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 paper is used to print the bill and fewer movements are needed due to the digitisation of the payment process.
Economical		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

2021 saw the growing trend of confirmed cyber security attacks, in terms of both numbers and impact severity. As a direct consequence, at the global level, there has been a dramatic increase in losses arising from this situation. In this context, it is therefore essential to continue to deploy all available technological skills and resources to counter threats and minimise possible consequences, increasing both the level of protection and attention given to cyber security risks.

The cyber security initiatives implemented in 2021 in the HERA Group can be grouped into **three main macro-groups** concerning: **technologies**, **processes** and **people**. This division is a response to the decision to keep the balance of interventions between the different areas of cyber security under control.

Cyber security interventions were also distributed in the traditional Information and communication technologies (ICT) area as well as in Industrial control systems (ICS) and Operation technology (OT). In fact, in addition to what is required by national regulations in the field of OT, the HERA Group has adopted a cyber security management paradigm that **expands the perimeter to all potentially vulnerable systems**, and not limiting itself to the traditional sphere of management application and network infrastructures, but rather extending it to the industrial plants which deliver Group services. In this sense, in 2021, the **convergence of cyber security monitoring in the IT and OT spheres was launched**, which saw the activation of a first **probe to analyse anomalies in industrial protocols** dedicated to the OT context, in addition to the introduction of new network traffic monitoring probes in the management sphere.

With reference to the global context that sees an ever-increasing number of cyber attacks, the **ICT security incident management procedure was updated in 2021**, with a view to increasing the ability to react to cyber security events, and to integrate centralised and cross-cutting monitoring capabilities in the IT and OT contexts.

Another activity that was extended to the OT context, as well, was that of **Vulnerability assessments** which, in the 2021 activity plan, saw the cyber security analysis of several of the main plants at the base of delivering Group services.

In 2021, work continued on the activities to **protect digital identities** by extending authentication to more factors (**Multi-factor authentication**) for all services presented online. The initiative, launched in 2020 through the activation of preparatory functions (*conditional access*), has allowed the introduction of access protection methods which have the least impact in terms of user experience and the balance between easy access to resources and the adequacy of cyber security.

A further area of intervention, in continuity with previous years, was that of increasing the **cyber security culture**, through a dedicated online training platform extended to the entire corporate population, and through **monthly adaptive ethical phishing exercises**, which was also extended to the entire corporate population.

CYBER SECURITY 2021 MACRO-ENVIRONMENTS

Cyber security infrastructures and systems (Technologies)	Cyber security monitoring (Processes)	Cyber security culture (Personnel)
Interventions that introduce or improve the tools dedicated to the protection of computer systems and networks, in both a management or industrial context. This includes measures that affect all systems, such as the extension of MFA (Multi-factor authentication) to all Cloud-based services, or the extension of intrusion prevention system (IPS) controls and web application firewall (WAF) controls in corporate networks. This also includes the positioning of IT and OT probes within management networks and industrial plants, respectively.	The context of the processes mainly involves the monitoring and management of cyber security events and, in 2021, involved the formalisation of the cyber incident management process as well as the implementation and extension of the monitoring services of the Security Operation Centre (SOC). In 2021, integrated monitoring was extended to the on premises and cloud domains.	Within this category are interventions that act on the so-called human factor . In the chronicle of cyber incidents over recent years, in most cases, it was the weakness resulting from a poor culture of cyber security that has been exploited. In this area, monthly online courses were offered to all employees and regular ethical phishing exercises were carried out in 2021.

Main initiatives in 2021

Main initiatives in 2022

Implementation of the security operation centre (SOC) evolution model based on the transition from a reactive to a proactive model and subjugation of available onpremise and online sources	Continue the implementation and extension of the security operation centre (SOC) monitoring service by subjecting new sources and integrating IT and OT probes with a view to convergence of the two areas.
Activation of a first probe dedicated to the security monitoring of operation technology in industrial environments.	Activation of new probes dedicated to the security monitoring of operation technology in industrial environments.
Extend the number of network traffic monitoring probes in the management area to the entire Group.	Improve the cyber security of corporate mobile devices (smartphones and tablets) through specific initiatives.
Extension of access via two-factor authentication (Multi-factor Authentication) to all services available online.	Identification of a threat intelligence service to monitor the main open and closed sources (darkweb) in relation to the presence of information relevant to the Group.
Training activities in the field of cybersecurity with regard to general training topics.	Activation of a specific training course for the context of Cyber Security, in the field of OT, dedicated to personnel affected by the topic.
Implementation of ethical monthly phishing campaigns to test and raise employee awareness of phishing	Continued vulnerability assessment and raising awareness among the user population through security awareness and ethical phishing campaigns.
Standardisation of the threat intelligence service at Group level, to monitor the main bulletins provided by the various private and public authorities	
Formalisation of the cyber incident management procedure with the aim of making it more effective and operational, also with respect to the new company organisation.	
Vulnerability assessment and pen testing activities, in order to identify in advance any vulnerabilities present on systems exposed to the internet or present on the company intranet	

[418-1]

CYBER ATTACKS

	2019	2020	2021
Incidents of cyber attacks and breaches to information systems	3	3	1
<i>of which: breaches involving the personal data of customers</i>	0	0	0
Customers affected by the 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 cyber attacks in the last three years shows they have decreased. More specifically, only **one cyber security incident** was detected in 2021, classified as medium criticality, caused by an incorrect system configuration. No business activities were interrupted as a result of the incident, **nor was any personal data breached or compromised**.

How does the initiative contribute to responsible digital transformation? The benefits achieved in the Corporate digital responsibility dimensions (please refer to the dedicated section "Corporate digital responsibility")

Social		The dedicated cyber security training platform aims to increase user awareness and reduce the risks associated with cyber attacks, both at work and at home.
Technological		All the IT security initiatives are developed to strengthen the processes and skills necessary for the correct use of technologies. In addition, the Security by Design process, applied to all IT projects, aims to ensure the identification and implementation of appropriate security measures that underpin the protection of information and data, including the personal data of employees.

4.03 Economic development and social inclusion

Hera's contribution to the local economic development

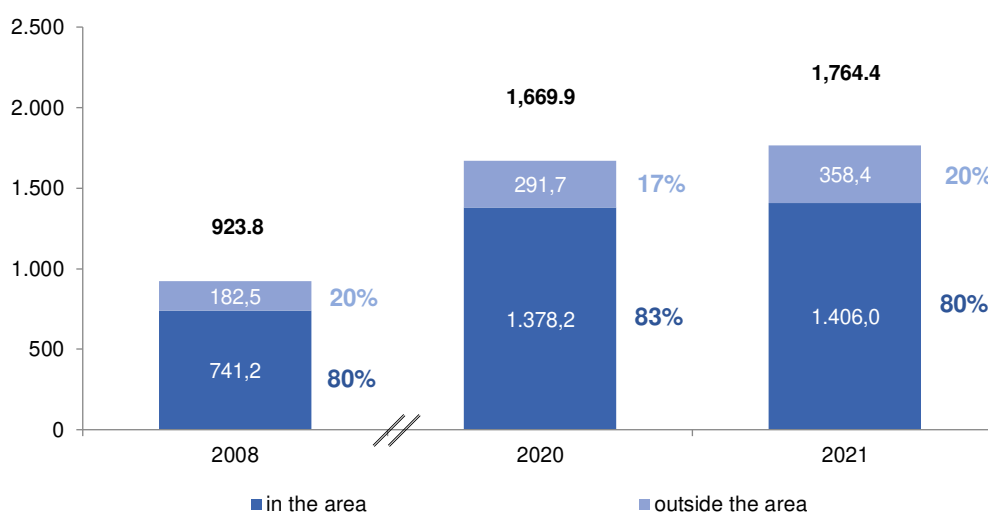
The economic value distributed to stakeholders

In 2021, the **added value distributed to local stakeholders** was Euro 1,406.0 million (+2.0% compared to 2020).

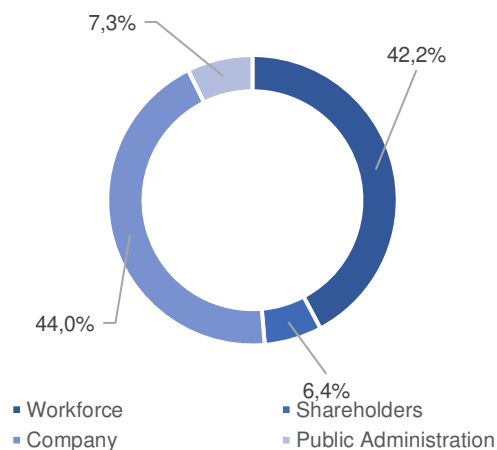
It includes:

- resources re-invested in the company (44.0% of the total);
- employee salaries (42.2% of the total);
- duties, taxes and fees to local authorities (7.3% of the total);
- dividends to local Hera Spa shareholders (6.4% of the total);
- donations and sponsorships (0.2% of the total).

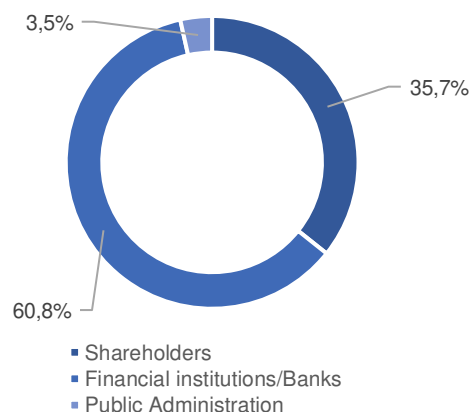
VALUE ADDED DISTRIBUTED (MILLIONS OF EURO)



ALLOCATION OF ADDED VALUE TO LOCAL STAKEHOLDERS (2021)

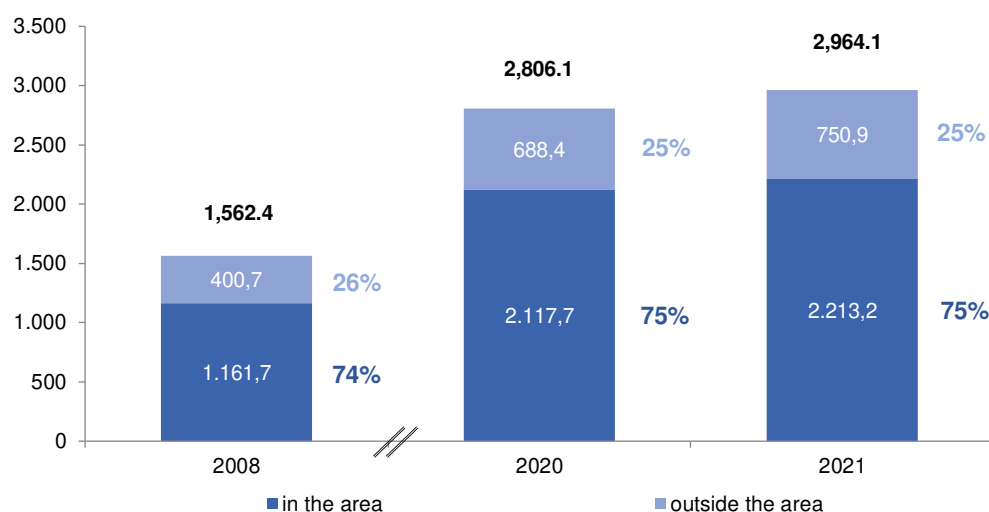


ALLOCATION OF ADDED VALUE TO NON-LOCAL STAKEHOLDERS (2021)



If we add to the added value distributed to the area the amount of supplies from local suppliers (which at consolidated level represent 67% of the Group's total supplies, worth Euro 807 million), the **economic value** that was **distributed to the local area** in 2021 can therefore be estimated at Euro 2,213.2 million (+4.5% compared to 2020), equal to 75% of the total wealth produced, which was Euro 2,964.1 million.

[201-1]

ECONOMIC VALUE DISTRIBUTED (IN MILLIONS OF EURO)

If we consider the share of economic value to stakeholders outside the local area, 52.3% is distributed to suppliers, 29.0% to financial institutions, 17.0% to shareholders and 1.7% to the Public Administration.

The minority shareholders of the subsidiaries have not been taken into account to calculate the value added distributed to the local areas; as to the distribution of Hera Spa's dividends, reference is made to the share composition as of the 2020 dividend payment date.

Economic value distributed to suppliers
[203-2]

Over 60% of the companies enrolled in the supplier register are **based in our service area** (Bologna, Ferrara, Forlì-Cesena, Modena, Ravenna, Rimini, Triveneto and Tuscany).

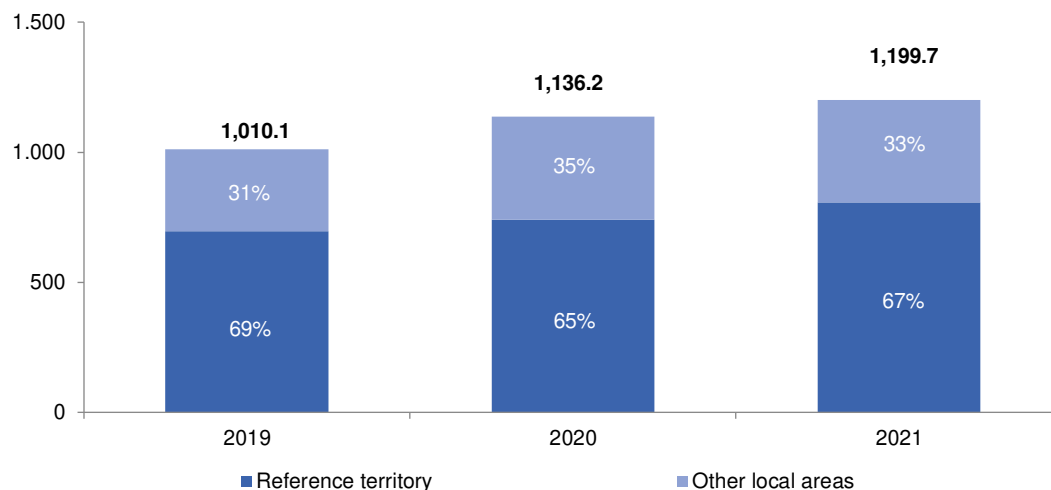
In terms of **economic value**, Hera issued purchase orders for Euro **807 million** (+9% compared to 2020) to business location **in the local area** of reference (equal to **67% of the total**, a percentage slightly above that recorded in 2020).

SUPPLIERS, BY GEOGRAPHIC AREA

Number	2019	2020	2021	2021 (% of total)
Bologna area	585	579	583	9.8%
Ferrara area	144	128	130	2.2%
Forlì-Cesena area	226	230	239	4.0%
Modena area	246	238	249	4.2%
Ravenna area	245	225	242	4.1%
Rimini area	168	155	154	2.6%
Emilia-Romagna Region (excluding provinces managed)	-	-	152	2.6%
Triveneto	1,258	1,236	1,226	20.7%
Marche	280	372	394	6.7%
Molise	-	21	24	0.4%
Tuscany	-	275	302	5.1%
Total reference area	3,152	3,459	3,695	62.4%
Other Italian regions	1,985	2,033	2,092	35.3%
Other European Union nations	95	80	76	1.3%
Other	169	30	58	1.0%
Total	5,401	5,602	5,921	100%

The figures do not include the companies Acantho, Hera Trading, Aresgas, Aliplast, ASA, Biorg, Feronia, Recycla, Vallortigara, Amgas Blu, Eco Gas, Estenergy, Hera Comm Marche, Wolmann, Marche Multiservizi Falconara, Green Factory; intercompany purchases are excluded.

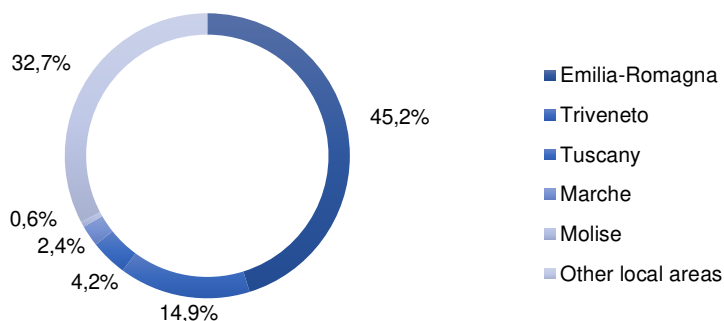
[204-1] VALUE OF SUPPLIES: BREAKDOWN BY GEOGRAPHIC AREA (MILLIONS OF EURO)



The figures do not include the companies Acantho, Hera Trading, Aresgas, Aliplast, ASA, Biorg, Feronia, Recycla, Vallortigara, Amgas Blu, Eco Gas, Estenergy, Hera Comm Marche, Wolmann, Marche Multiservizi Falconara, Green Factory; intercompany purchases are excluded.

Purchases outside the European Union were made from suppliers based in Great Britain, Switzerland, the United States, San Marino, Canada, Israel.

VALUE OF SUPPLIES: BREAKDOWN BY GEOGRAPHIC AREA (2021)



The figures do not include the companies Acantho, Hera Trading, Aresgas, Aliplast, ASA, Biorg, Feronia, Recycla, Vallortigara, Amgas Blu, Eco Gas, Estenergy, Hera Comm Marche, Wolmann, Marche Multiservizi Falconara, Green Factory; intercompany purchases are excluded.

Focus on distributed economic value with donations and sponsorships

As in 2020, the year 2021 was also a period during which **events and initiatives** were **rethought** to reflect the measures needed to contain the pandemic.

If, in many cases, the limitations introduced to contain the epidemic forced a delay or cancellation of the event, in other cases it was the opportunity to rethink its boundaries. **Digital** has, in fact, become a place for meeting and sharing many experiences which are capable of involving and welcoming new targets.

In this sensitive context, the presence of the HERA Group assumes even greater significance: the multiutility represented not only a **valid support of the excellences of the local area** which contribute to guaranteeing a socio-cultural growth of the communities, but also a carrier of trust in the potentiality of an area which, despite a moment of great uncertainty, does not stop expressing and developing new prospects and languages.

SPONSORSHIPS

thousands of Euro	2019	2020	2021
Recreational activities	767	342	378
Culture	1,047	1,031	816
Sports	429	489	420
Social	71	114	73
Environmental	179	74	155
Other	129	158	191
Total	2,622	2,208	2,033
<i>of which in areas served</i>	<i>2,520</i>	<i>2,167</i>	<i>1,965</i>
<i>of which in areas not served</i>	<i>99</i>	<i>41</i>	<i>68</i>

Despite the critical scenario, the HERA Group **shadowed** and **supported over 180 initiatives**, with a total contribution of over Euro 2 million in favour of sectors hit hard by the healthcare emergency such as exhibitions, theatres, music, cinema and sports. Through social media campaigns and a dedicated communication plan, the multiutility promoted the partnership initiatives, encouraging participation and making them available to the greatest number of users.

Exhibitions. During 2021 the HERA Group brand was combined with the most important exhibitions in the area. Among the main sponsorships: support for **MAMbo** in Bologna, a modern art museum that has taken contemporary art out of museums with "Art City"; the exhibition "Antonio Ligabue: una vita d'artista" at the **Palazzo dei Diamanti in Ferrara**; the **"Artù" and 'Restart' street art festivals** in Porto Maggiore (Ferrara) and Imola respectively, which enabled interventions in the urban landscape; promotion of the **"Si Fest"** in Savignano sul Rubicone (Forlì-Cesena) and, in particular, of the **photographic exhibition "Polarnight"** by Esther Horvath, which documents every phase of MOSAiC, the greatest polar expedition of all time, aimed at collecting data on the atmosphere, ocean, sea ice, ecosystem, biogeochemical processes and the development of global climate models; exhibition **"La Forma dell'Infinito"** at the Casa Cavazzini museum (Udine), which displayed masterpieces from the world's great museums;

Music, theatres and festivals. The theatre sector was undoubtedly among the hardest hit by the restrictions introduced to contain the health emergency: many theatre seasons did not take place and some of their programming was postponed until the summer. Among the main sponsorships: support for the **"Crinali"** cooperative, which brought surprise theatrical and musical performances to the evocative setting of the Bolognese Apennine woods; partnership with the Bologna-based **Fondazione Musica Insieme**, which streamed concerts from historic and unseen locations in the city; support for the street festival, **Ferrara Busker**, the international festival of street musicians held in Ferrara; the **A Cielo aperto festival** in Cesena, which features artists from the Italian and international independent music scene; promotion of the **Ravenna Festival**, which promoted a rich calendar of events dedicated to Dante's celebrations and with which it promoted an environmental enhancement operation, the event **"I Giardini d'Estate: di sera con HERA Group"**, more than 30 shows staged in Modena; **Festival della Filosofia** in Modena dedicated to the theme "Freedom"; **50th Festival of Santarcangelo** (Rimini), celebrated also with an exhibition, a documentary and a book; **"Pordenonelegge 2021"** in Pordenone, one of the most important literary festivals in the North-East; **"éStoria"** in Gorizia, an international history festival and meeting place for scholars, experts and enthusiasts.

Cinema. Among the successful partnerships, Hera confirms its support for the promotion of film culture, capable of stirring involvement and excitement. Among the main collaborations: support for the Cineteca di Bologna for the festivals **Il cinema ritrovato** and **Sotto le stelle del Cinema**; the partnership with **Biografilm Festival**, also in the Bologna area, which was back in presence in 2021; promotion of further initiatives in the Imola, Ravenna and Rimini areas; support for **"ShorTS"**, an international film festival in Trieste dedicated to short films.

Environment, sport and electrical mobility. After last year's success, the HERA Group partnership was renewed on the occasion of the **Italian Road Cycling Championships** held in the local area of Imola; support for the **Padova Marathon** event, which promoted sustainable behaviour and lifestyle choices that pay attention to resource consumption; participation in the historic **Barcolana** international sailing regatta in Trieste, where the Group participated in promoting a more sustainable energy future for the city.

DONATIONS

thousands of Euro	2019	2020	2021
Recreational activities	29	1	4
Culture	70	140	56
Sports	24	5	9
Social	276	765	201
Environmental	1	26	40
Other	12	169	124
Total	412	1,106	434
<i>of which in areas served</i>	<i>301</i>	<i>655</i>	<i>303</i>
<i>of which in areas not served</i>	<i>110</i>	<i>451</i>	<i>121</i>

In 2021, the Group donated over Euro **434,000**, 70% of which to its reference territory. About 70% of donations are for cultural, social and environmental purposes.

The donations are a further opportunity to show **closeness and support for the local area**. Proposals from organisations able to promote the principles of solidarity and social inclusion, to disseminate the culture of participation and to promote social cohesion, including through projects aimed at enhancing the environmental heritage, were highlighted.

This sensitivity has also been extended to employees of the Group through the **HeraSolidale** initiative, which provides support from the HERA workforce to a number of associations through monthly donations withheld from their wages. The Group is also contributing to the initiative, through its own sales company Hera Comm, which acknowledges and donates 1 euro for every new customer who joins the free market offers for electricity and gas. For more details on this initiative see the case study "Thanks to HeraSolidale 250,000 euros were raised for seven organisations" (see "[Personnel](#)").

Solidarity, inclusion and closeness are themes largely centred in the **"Basic Psychologist" project**, promoted by the "Associazione Centro Studi e Ricerche in Terapia e Psicosomatica" and supported by the HERA Group. This is a project to promote people's health, wellbeing and quality of life, which offers a free desk for the public to arrange conversations with psychologists, at no cost, in GP surgeries in the local area of Bologna. An experimental service whose ever-increasing demand has made it possible to provide concrete support to over 100 users in recent months alone.

In 2021, the multiutility confirmed its support for other organisations involved in inclusion and socialisation activities, including the **AiAsport non-profit association** that offers an equestrian activities service for people with disabilities, and the **Mus-e project** for artistic courses aimed at schools located in difficult contexts, designed to accompany children to discover themselves and others, by experimenting with several artistic disciplines together with classmates and teachers.

Herambiente also renewed its support for the **Ageop Ricerca** association, which supports scientific research in the fight against childhood cancer and dedicates itself to caring for young patients and their families through projects involving care, assistance, paediatric psychology, psychosocial rehabilitation and awareness-raising, and which deserves special mention for its commitment and dedication in pursuing its objectives. In Veneto, on the occasion of the renewal of the Pieve di Soligo branch, Ascotrade donated a contribution to Caritas of Vittorio Veneto for the purchase of food vouchers for the **Counselling Centres** of the Diocese.

PHILANTHROPIC CONTRIBUTIONS

Type of contribution (thousands of euros)	2021
Cash contributions	2,823
Time: employees volunteering during working hours	805
Donations in kind: donations of products or services, projects/collaborations, or similar	756
Total	4,384

Cash contributions refer to sponsorships and donations, HeraSolidale and Digi e Lode. The category "Time" refers to the hours spent by employees to train their own colleagues. The category "Donations in kind" refers to the CiboAmico and FarmacoAmico projects.

It can be confirmed that the overall charitable activities of the HERA Group in 2021 will amount to approximately Euro 4.4 million, when considering not only sponsorships and donations, but also disbursements related to the HeraSolidale project, in-kind donations from the CiboAmico and FarmacoAmico projects, and efficient use of the hours in economic terms that employees have spent training their colleagues.

Hera's contribution to social inclusion

The social bonuses for the family in economic and physical difficulty

The **social bonus** is the facilitation that **reduces the cost** incurred by the residential customers for the supply of electricity and gas. Residential customers with an **ISEE indicator not exceeding Euro 8,265**, or Euro 20,000 for families with more than three dependent children, are entitled to the reduction as defined by the Government in the Ministerial Decree of 28/12/2007.

The **Electricity Bonus** was designed to provide savings on the annual electricity expenditure for two types of households: those experiencing economic hardship and those where a person lives in serious health conditions and is kept alive by household electromedical equipment. For families that are struggling to pay their bills, the electricity bonus provides annual savings ranging from Euro 125 to 173, while for families facing physical hardship, it provides savings of Euro 185 to 663.

The amounts of the **Gas Bonuses** are determined differently depending on the climate areas. They provide savings ranging from Euro 32 to Euro 264.

GAS AND ELECTRICITY BONUSES ISSUED

	2020	2021
Number of bonuses issued	113,164	109,506
Value of bonuses issued (thousands of Euro)	12,692	10,781

In 2021, the **gas and electricity bonuses** issued to Hera Group customers amounted to 109,506 for a total of Euro 10.8 million (-15% compared to 2020).

The percentage of the electricity and gas contracts that received at least one bonus is equal to 3.9%. The percentage is a little higher for electricity contracts (4.4%) compared to the gas contracts (3.5%).

As far as the **water service** is concerned, starting 1 January 2018 a **social bonus** for the **supply of water** to residential users facing social and economic hardship was established by Resolution Arera 897/2017 of 21 December 2017. With subsequent Resolution Arera 3/2020/R/idr, the Integrated Text of the application methods of the water social bonus (TIBSI) was updated in order to further reinforce the previous mechanisms of support for the vulnerable consumers. In this regard, starting 1 January 2020, the right to request the bonus was extended also to those receiving the citizenship income. The calculation of the bonus recognised in the bill, which for 2018 and for 2019 only concerned the aqueduct component, has been applied since 1 January 2020 also to the cubic metres of sewerage and purification, where that service is dispensed.

Through resolution no. 63/2021, with a view to simplifying the disbursement mechanisms, a process was launched whereby users need only request an Isee certificate to obtain automatic disbursement of the bonus without the need to make any formal request to the manager or other body. However, this method has not yet been perfected and, during 2021, the Authority did not send data relative to those entitled to the bonus for that year. Therefore, in 2021, bonuses were paid almost exclusively to users with a direct

contract with Hera Group, therefore the reimbursement was recorded on their bill, which started in 2020 and ended in 2021, as well as adjustments for water purification and sewerage charges not previously paid. Also confirmed for 2021, was the maintenance of a supplementary bonus established by Aterisr as an additional protection measure (Resolution Camb 45/2018), in the local areas managed by Hera Spa. Meanwhile, as far as AcegasApsAmga is concerned, the new per-capita tariff structure for residential domestic users came into force in 2019 (Resolution no. 665/2017 - Ticsi) valid starting 1/1/2018. Both ATOs with territorial jurisdiction (Ausir and Consiglio di Bacino Bacchiglione) have set a more favourable regime than that established by the Authority, of 18.25 m³/year. In fact, a consumption of 24 m³/year per resident household member is applied to calculate the reduced rate.

In 2020 there were 444,423 **water bonuses** distributed to the customers of the Hera Group for a total of **Euro 3.6 million**.

For **waste management services**, a total or partial exemption from the payment of TARI or the Punctual Corresponding Rate may be granted to subjects facing severe social and welfare hardship. The municipalities allocate the funds for this aid, according to the income of the applicants. In some areas of Emilia-Romagna, discounts apply to individuals living alone that are affected by over 66% of permanent invalidity.

HERA introduced **on a voluntary basis**, starting in 2010, a **bonus** to compensate for the cost for the remote heating **service**, to be allocated to customers with income needs with the same methods with which the compensation for the costs of gas and electricity services is granted. The bonus for 2021 is worth Euro 179.6 per year for families up to 4, and Euro 247.2 per year for larger families. At the date of approval of this report, it is estimated that, for the year 2021, approximately 1,030 applications were filed (991 in the previous year) for a total economic value of approximately Euro 202 thousand, an increase of approximately 66% compared to the amount paid in 2020. In particular, this increase reflects the introduction by Arera of the "supplementary compensation" aimed at residential customers in a state of economic hardship in the natural gas sector for the fourth quarter of 2021 (Resolution no. 396/2021/R/com). This additional compensation has therefore been recognised by Hera, on a voluntary basis, even for eligible district heating customers, and has increased the value of the 2021 bonus as initially determined, therefore contributing to determining the amounts per household as indicated above.

Per capita tariff rewards water savings and helps large households

In its Resolution 665/2017 of 28 September 2017, Arera introduced a **per-capita tariff for all resident residential users**, to be gradually applied in all municipalities starting in 2018, and to be completed by 2022. In fact, a transitional period has been set, during which the Water Service Operator, lacking information on the actual number of components, can invoice according to a standard criterion (i.e., considering a typical three-member resident domestic household user) although the user may provide a self-declaration.

As of 2021, **Hera Spa** will apply a per-capita tariff structure to resident households based on the actual number of components for 100 municipalities. For the other 63 per-capita tariff municipalities, Hera applies the tariff structure based on the number of standard components (equal to 3).

At 2021 all the 16 municipalities of the **Triveneto** and the 47 managed in the **Marche** changed to the per capita type tariff.

Hera's initiatives to support users facing financial hardship: the payment in instalments of the bills

Hera allows customers **dealing with challenging financial** circumstances to pay their bills in instalments. **Households experiencing financial hardship** (but that are not behind with any payments, including any previously-granted instalments) are allowed to pay their bills in **three instalments**, applying an interest rate equal to the official reference interest rate at which the European Central Bank grants loans to other banks equal to 0% since 16 March 2016), increased by 3.5%. For amounts over Euro 2 thousand, Hera reserves the right to carry out more accurate checks before granting an instalment plan. This procedure also applies to the **professionals** and **small condominiums**. In certain cases of financial hardship (customers using the temporary state unemployment fund, or on unemployment benefits, beneficiaries of the income support fund provided by Ente Bilaterale Emilia-Romagna, or customers who are unemployed as a result of the reduction or termination of their employment or workers with defensive solidarity contracts, with reduction greater than 30%) the number of **instalments** is increased to **six**, interest-free.

For the **business segment**, a request can be made to Hera Group for payment in instalments, which grants it with similar features, following a check on solvency conditions. In the case where a customer is in a particularly difficult financial situation, and in close cooperation with the social services of the institutions that assist them, the **instalments** may be extended to **nine** subject to a contribution from the institution of 10% of the total debt, with a minimum of Euro 150.

In addition, as a result of an agreement drawn up between consumer associations and HERA Group in February 2022, Hera Comm group customers in financial difficulty can request **instalments and**

repayment plans as an alternative to those provided for by industry regulations, as described below. In compliance with the regulations, customers with bills issued in December 2021, until the end of April 2022, may request to pay their bills in instalments for up to ten months, interest-free. Alternatively, Hera Group confirms its willingness to assess for the first instalment payment of only one third of the bill without interest, instead of 50%, also interest-free, as provided for by the regulations. Lastly, for bills of more than Euro one thousand and at the request of the customer, Hera Group also offers the possibility of evaluating instalment plans of more than ten months. The instalment policy described above will also be applied to multi-service bills, where water and environmental services are included, in addition to energy services.

AcegasApsAmga grants, if requested, the instalment payment of the bill. The instalment payment may be requested through the contact channels listed on the bill. Should the request be made for bills already in default, the instalment plan will have a minimum term of 12 months with non-cumulative instalments and a frequency corresponding to that of invoicing. Possible customised instalment plans must be requested in writing or in another way that can be documented, as provided by Article 5.1 of Resolution Arera 311/2019 (Remsi).

In the local areas managed by Marche Multiservizi, Resolution no. 655/2015 and subsequent amendments states that the operator is required to grant, at the request of the customer, an instalment plan for the bill if the latter exceeds 80% of the value of the average debit referring to bills issued over the previous 12 months. This request can be forwarded to the call center, the customer service office or to the credit office.

At the discretion of the company, in cases of particular hardship, the request for an instalment plan may be granted under the following conditions:

- the request must be received by the tenth calendar day of the expiry of the bill;
- there must not be any ongoing instalments for other bills;
- the customer must have paid all the previous bills.

It is not possible to authorise the instalment plan for expired amounts under Euro 50 if they concern residential supplies, for expired amounts under Euro 500 for VAT numbers and condominiums.

The number of instalments granted varies, based on the amount divided into instalments, between two and six for residential customers and between two and three for those with VAT numbers and condominiums.

In 2021, **187,955 instalment plans were granted** (-12% compared to 2020), of which 178,390 were mass-market customers and 9,565 were business customers. Overall, the amount paid in instalments amounted to Euro 126.8 million (-1.9% compared to 2020). At a **territorial level**, 109,220 bills were paid in instalments in the local areas served in Emilia-Romagna, 11,106 in Triveneto, 10,846 in Marche and 56,783 in other unserved local areas, for a value of approximately Euro 52.3 million in the local areas served in Emilia-Romagna, Euro 6.5 million in Triveneto, Euro 4.2 million in Marche and 63.8 in other unserved local areas.

Customers who requested **at least one bill to be paid in instalments** during the year accounted for 5.0% of total customers, slightly down on 2020 (5.2%). In particular, 4.9% of residential customers asked for at least one instalment compared to 5.3% in 2020, and 8.5% of business customers, compared to 2.8% in 2020.

Compared to 2020, the number and value of instalments granted to mass market customers decreased, while there was a sharp increase for business customers as a result of the regulatory instalments granted in the last quarter of the year to newly acquired customers for the graduated safeguard service.

NUMBER AND VALUE OF BILLS PAID IN INSTALMENTS

	2019	2020	2021
Bills paid in instalments (qty)	223,431	214,604	187,955
<i>of which mass market (qty)</i>	<i>217,607</i>	<i>208,729</i>	<i>178,390</i>
<i>of which business (qty)</i>	<i>5,824</i>	<i>5,875</i>	<i>9,565</i>
Bills paid in instalments (thousands of Euro)	129,471	129,266	126,829
<i>of which mass market (thousands of Euro)</i>	<i>92,958</i>	<i>85,686</i>	<i>71,679</i>
<i>of which business (thousands of Euro)</i>	<i>36,513</i>	<i>43,580</i>	<i>55,151</i>

Figures do not include the companies Eco Gas and Aresgas.

Hera's initiatives to support users facing financial hardship: the prevention of the suspension of the supplies

The Group's attention on the weak social segments continued in 2021 with the application of the **Agreements** aimed at preventing the suspension of services for assisted persons, reported by the social services of the Municipalities and the Bodies dealing with personal services. The collaboration carried out through these protocols with the social services of the municipalities and with the organisations that provide services to the public is a distinctive aspect that sets Hera apart in the context of multiutilities and sales companies: a dedicated channel with operators that offer **support and counselling to social workers** through structured forms of relief for the most economically fragile portion of society. Collaboration with such authorities makes it possible to avoid **service disconnections or reactivation of the service if it has been stopped, optimising the** management of economic contributions by social services. A total of 100 municipalities have signed a Memorandum of Understanding. All the municipalities in the provincial capital city of Emilia-Romagna are involved except for Rimini, where energy contracts have a lower incidence. In 2021, following referrals from social workers, the number of managed requests was over 24,000 (+15.5% compared to 2020) and **the percentage of suspensions avoided was 63%**. The protocols with the municipalities of Trieste and Padova were also updated.

For 2022, in line with what has already been started with the Metropolitan City of Bologna, it is planned to extend the adoption of the protocols to new local areas and municipalities in Bologna. There is also a provision to strengthen the promotional actions of the Protocol in several areas of the province of Modena that are particularly active in the management of contributions in support of the weakest groups.

As regards **Hera** and **AcegasApsAmga**, the contracts state that if the **bill is not paid**, the **service may be suspended**.

In the case of **gas, electricity and district heating** customers, the procedure anticipates that an initial reminder be sent approximately 20 days after expiry of the bill, only in the case of customers who are good paying customers and have debts of less than Euro 150, and a subsequent reminder is sent by registered mail after an additional 20 days, to inform customers that the service may be suspended. In the event of non-payment, the supply is suspended 40 days after the reminder is delivered by registered letter with acknowledgement of receipt (or 25 days for customers with a low-voltage electricity supply). If due payment is not made for amounts less than Euro 150, the supply is suspended, usually two months after the bill's due date. If the invoice in respect of which the reminder is issued exceeds Euro 150, a single reminder is then sent by registered letter with acknowledgement of receipt or PEC if available, advising of the risk of suspension of the supply. Also in this case, the supply may be suspended 40 days after delivery of the registered letter with acknowledgement of receipt (or 25 days for customers with a low-voltage electricity supply) about two months after the invoice is due.

If it is not possible to suspend the service (e.g. the meter cannot be accessed) customers are sent an additional notice to inform them that the service will be disconnected (connection cut off) should they fail to pay their bill in the specified timeframe. If disconnection is also not technically feasible, the selling party may terminate the contract and activate the last resort services.

In accordance with the Regulation governing late payments, contained in the Integrated Water Service Arrears Regulation (Remsi), in all the local territories served in Emilia-Romagna and Triveneto, with regard to the supply of **water**, the procedure provides for the sending of an initial reminder by registered letter with return receipt or PEC if available, after approximately 12 days from expiry 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 Group, on the basis of the provisions of the Remsi and the regulations, once 40 days have elapsed from receipt of the reminder, for domestic users will proceed to restrict the supply, and if restriction is not possible for technical reasons, which must be reported to the user in a special letter, it will proceed with suspension; in the case of non-domestic users, it will proceed directly with suspension or closure of the road valve if suspension is not possible.

The customer may request to pay the bill in instalments, up to the time the supply is suspended.

All the initiatives supporting families in financial difficulty are summarised in the **SOSTegno Hera guide** available on the Group's website and periodically updated. The guide contains all the information necessary on the opportunities of reducing expenses for energy and water services, available to Hera Spa and Hera Comm Spa customers in difficult economic and/or physical conditions. It also provides information on how to pay bills in instalments and what to do in the event of late payments. SOSTegno Hera Group explains how users can benefit from the social bonuses for electricity, gas, water and district heating, and who to contact in the event of water leaks on the network downstream from the meter. Lastly, advice is given on good practices to reduce consumption.

Placement under supply contracts with social cooperatives [203-2]

In 2021, the **value of supplies** by types of work or services requested by the Hera Group to social cooperatives was more than **Euro 72 million** (+8% compared to 2020.)

Around Euro 71 million was assigned for **waste management services**, corresponding to 29% of the Group's total awards for these services. Supplies involved 61 cooperatives or consortia of social

cooperatives overall (+22% compared to 2020), with the hiring of 882 disadvantaged people (pursuant to Art. 4 of Italian Law no. 381/91): 686 with an open-ended employment contract and 361 with a full-time contract. At territorial level, 717 people were hired in the Emilia-Romagna area, 110 in Triveneto and 55 in Marche.

SUPPLIES FROM SOCIAL COOPERATIVES

	2019	2020	2021
Social cooperatives or consortia (no.)	51	50	61
Value of supplied goods/services (thousands of Euro)	66,390	67,143	72,253
Disadvantaged people hired (no.)	875	864	882

Workers employed for less than one year were also counted among the disadvantaged people hired.

The "Valoris" economic evaluation model developed by the University of Brescia in 2013 provides a measurement of the value created by social entrepreneurship of job placement, based on the results of empirical research. In particular, the model makes it possible to quantify the **economic impact for the Public Administration** of the social integration of type B social cooperatives. The research showed that the benefits essentially are a result of lower welfare costs and greater tax revenues due to the payment of income tax on the employment of disadvantaged individuals. The lower revenues for the Government due to tax and contribution exemptions which type B social cooperative benefit from have been deducted from the benefits. All of this ends up being a benefit for the Public Administration and amounts, on average, to Euro 4,209 in the year for each disadvantaged person. The economic benefit for Public Administrations due to Hera Group awarding contracts to social cooperatives can, therefore, be considered to be around Euro 3.7 million, for 2021.

Hera contributed to the inclusion in the national collective labour agreement for waste management services (renewed in July 2016) of a specific protection clause for outsourcing to social cooperation. This clause stipulates that a portion of outsourcing for the street sweeping, collection, waste transportation activities, septic tank cleaning and bin washing, is exempted from the requirement to apply the national collective labour agreement for waste management services, by defining socially inclusive projects. This portion is 5% and can be raised to 15% at the company level. Hera applies 15% on the basis of an agreement entered into in March 2012 with the trade union organisations and with the Group's union co-ordination.

In all the provinces it serves, Hera complies with Law 68/1999, which requires that personnel belonging to protected recruitment categories **be hired in the proportion specified by that law**.

According to the regulations on the rights to work of people with disabilities, companies that, due to the special conditions of their business, cannot provide jobs to the entire percentage of those entitled (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 Disabled People a sum equal to Euro 30.64 for each worker not employed and for each working day not worked; the maximum percentage allowed is 60%. Hera also uses this option, which requires payments to the provincial governments by the individual Group companies if they employ fewer disabled people than required by law.

This regulation, that promotes the recruitment and integration into the working world of certain categories of people (disabled people, orphans, etc.), also requires that the worker's employment placement must abide by solutions agreed among the company, the regional employment office and the worker.

At the end of 2020 there were **357 people working in the companies of the Group belonging to the categories protected by Law 68/1999** of which 305 (219 in Hera, 60 in AcegasApsAmga, 26 in Marche Multiservizi) present pursuant to Art. 3 of the Law (persons with disabilities).

PERSONS BELONGING TO THE CATEGORIES IDENTIFIED BY LAW 68/1999

Number	2019	2020	2021
Persons belonging to the categories identified by Law 68/1999	396	369	357

The figures do not include the following companies: Aliplast, Hestambiente, EstEnergy, Ascopiave Energie, Ascotrade, Blue Meta, Etra Energia, Wolmann, Amgas Blu, Vallortigara, Recycla and Eco Gas. 10% of Group employees work in these companies.

Protected categories among Hera's workforce

4,04 Job creation and development of new skills

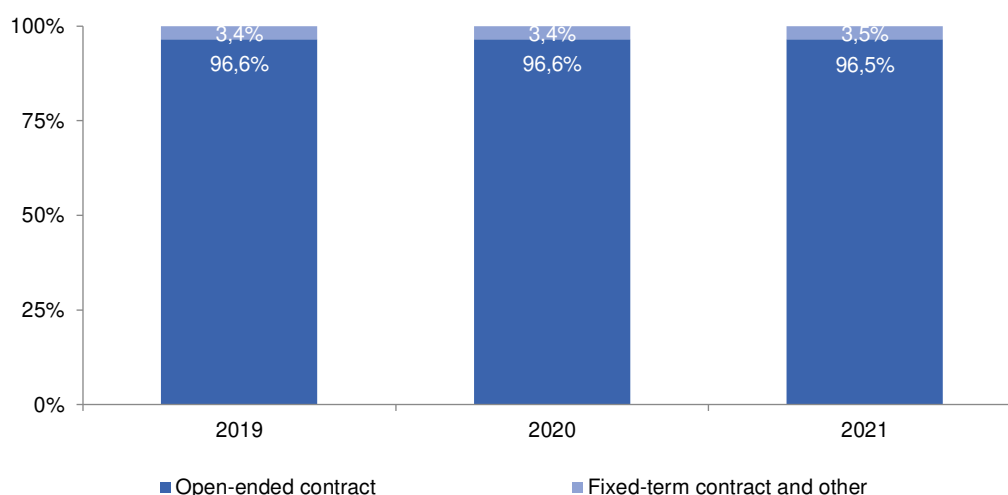
Hera's contribution to creating jobs

The importance that the Hera Group attributes to employment development, as highlighted in this paragraph, is not only reflected in the number of employees of the company itself, but also in indirect job creation and development of social responsibility initiatives in tenders. Adding to the Group's average number of workers the workforce employed by its suppliers, the total employment **impact** is approximately 19 thousand employees.

Stable
employment and
turnover
[401-1]

Of the Group's average workers, 96,5% have open-ended contracts. A **substantial stability** was recorded in the average number of open-ended contract employees compared to 2020, thanks to the completion of consolidation processes for employees previously on fixed-term contracts within the Group.

WORKFORCE FIGURES (AVERAGE)



The total average number of workers of the Hera Group was 9,389, of which 9,061 were employees on **open-ended contracts**, 238 were **fixed-term employees** (2.5%) and 92 were **non-hired employees** (equal to about 1%), hired with other employment flexibility instruments (staff leasing contracts).

We hereby reiterate the Group's will to reduce the use of **flexible employment contracts, applying them only for urgent situations** (seasonality, extraordinary and temporary work peaks, substitution of workers who are absent temporarily). However, the employees hired under flexible contracts are given priority for hiring under open-ended contracts.

PERSONNEL HIRED DURING THE YEAR, BY POSITION

Number	2019	2020	2021
Managers	0	0	1
Middle managers	10	7	15
White-collar workers	266	286	321
Blue-collar workers	261	291	324
Open-ended contract workers	537	584	661
Fixed-term contract employees	331	393	301
Staff leasing contracts (temporary workers)	106	89	109
Seasonal workers and apprentices	2	1	0
Workers employed on a non-permanent basis	439	483	410

New employees are generally **hired from outside** the company for top-ranking professional positions (both specialised and operative), which are difficult to cover with internal personnel. Most of the clerical and operational roles are normally covered by internal personnel.

In 2021 there were **661 open-ended contract hires**, of which 185 are hires following changes in scope (entry of the companies, Eco Gas, Recycla and Vallortigara in the scope of consolidation). In addition, there have been 211 consolidations of fixed-term contract employees.

Over the past three years, overall **1,782 open-ended contract employees were hired**, 744 of which following initial hiring within the Group under fixed-term contracts.

WOMEN HIRED UNDER OPEN-ENDED CONTRACTS DURING THE YEAR, BY POSITION

Number	2019	2020	2021
Managers	0	0	0
Middle managers	2	0	3
White-collar workers	115	121	144
Blue-collar workers	2	3	2
Total	119	124	149

In 2021, 149 **female workers were hired under open-ended contracts** (25 more than in 2020). The percentage of newly-hired female managers, middle managers and employees was 43.6% of the total of 337 hired under open-ended contracts.

PERSONNEL HIRED WITH OPEN-ENDED CONTRACTS DURING THE YEAR, BY AGE AND GENDER

Number	2019			2020			2021		
	F	M	Tot	F	M	Tot	F	M	Tot
Under 30 years of age	46	131	177	50	154	204	42	137	179
Between 30 and 50 years of age	69	254	323	71	286	357	101	321	422
Over 50 years of age	4	33	37	3	20	23	6	54	60
Open-ended contract workers	119	418	537	124	460	584	149	512	661

Among the hires, 179 were for new, open-ended contract employees **under 30 years of age** (25 fewer than 2020), 422 between 30 and 50 years of age (65 more than 2020) and 60 over 50 years old (37 more than 2020).

OPEN-ENDED CONTRACT EMPLOYEES LEAVING, BY REASON

Number	2019	2020	2021
Voluntary resignations	147	96	182
Retirements	292	415	326
Deaths	11	11	12
Dismissals	19	22	17
Inabilities	13	7	10
Transfers to other companies/demergers	97	4	1
Total	579	555	548

In 2021, 548 terminations were recorded, a decrease of 1.3% compared to last year, 60% of which is due to **retirements**. There was a slight decrease compared to 2020, while there was a marked increase in **voluntary resignations**.

WORKERS LEAVING, BY AGE AND GENDER (2021)

	Number	Men	Women	Total
Under 30 years of age		19	2	22
Between 30 and 50 years of age		101	23	123
Over 50 years of age		335	68	403
Total		455	93	548

In 2021, the over-50 age group was most likely to leave their employment.

TURNOVER RATE FOR WORKERS, BY ROLE

	%	2019	2020	2021
Managers		4.5%	5.2%	5.9%
Middle managers		5.0%	5.4%	4.3%
White-collar workers		5.6%	4.8%	5.4%
Blue-collar workers		7.7%	8.5%	7.3%
Average		6.3%	6.2%	6.0%

TURNOVER RATE FOR WORKERS, BY GENDER

	%	2019	2020	2021
Men		7.3%	7.2%	6.8%
Women		3.6%	3.4%	3.8%
Average		6.3%	6.2%	6.0%

TURNOVER RATE FOR WORKERS, BY AGE

	%	2019	2020	2021
Under 30 years of age		4.6%	3.2%	3.7%
between 31 and 50 years of age		2.8%	1.6%	2.7%
Over 50 years of age		10.1%	11.3%	9.5%
Average		6.3%	6.2%	6.0%

The **turnover rate** is calculated by dividing the number of employees leaving during the year by the number of employees at year end: in 2021, it was 6.0%, basically in line with the previous year.

The cluster most subject to turnover is the male workforce over 50 years of age, phenomenon due to the increase in retirements over the past years.

The **hiring rate** is calculated by dividing the number of hires that occurred during the year by the number of workers at the end of the year divided by age, gender and geographic area. For 2021, this index is equal to 7.2% (7.7% for men, 6.0% for women, 29.8% for workers under 30 years of age, 9.4% for those between 31 and 50 years and 1.4 for those over 50).

Lead-on employment of the suppliers

In order to globally assess Hera Group's social repercussions on the country however, we should also take into account the **lead-on employment at our suppliers** who supply goods, services, professional performance and works which can be estimated in the part of the workforce of the suppliers who perform activities for the HERA Group.

In 2021, lead-on employment generated an estimated **9,321 jobs** of which over 3,318 were in Emilia, 2,004 in Romagna, 1,204 in Triveneto, 220 in Marche and 2,575 in other local areas not served. 72% of lead-on employment was generated in the Group's reference territories. This figure was obtained by analysing the financial statements of the Group's leading suppliers which cover 80% of the volume purchased in 2021. To estimate the lead-on employment of the suppliers generated, we considered the **ratio between the value commissioned by HERA and the total turnover of the supplier**: this percentage was multiplied by the total number of employees declared in the financial statements of the suppliers.

The actions for social responsibility in tenders

Hera Group's employment impact is also due to concrete actions of **social responsibility in tendering**, which the Group continued to implement in 2021, consistently with the principles set out in the Group's **Code of Ethics** and attention towards the work conditions in the supply chain.

Also in 2021, we applied the **Memorandum of Understanding on tenders**, entered into on 26 October 2016, by the Hera Group and the Italian trade union organisations. This protocol is mandatory between the Hera Group and the unions, which implies an obligation for the Group to incorporate the protocol's requirements into the tendering rules.

The Tender Protocol, in addition to specifying the sector national collective labour agreement to apply to the main business sectors, the procurement protocol also governs aspects related to **employment continuity**, requiring the application of the **social clause**, which is of "voluntary" application (i.e., when not directly due to the specific labour agreement), in particular in the area of regulated and labour-intensive sectors, in labour agreements and services for activities after the initial measure on networks and services related to the management of the relationship with the end customer (meter reading and auxiliary metering activities), for new contracts for services that have been already outsourced. This social clause requires that the new contractor must make a **job offer that is consistent with the overall conditions in force at the time of the contract** change such as retribution, professional requirements and duration of the contract to the personnel that is employed on a permanent basis and employed directly and mainly in the activities covered by the contract in force at the operator leaving the company in the period of 90 days prior to the start of the new management. In all other cases of succession of contracts, where the contract replaces a corresponding contractual relationship that is expiring and objectively similar to the existing one, with the incidence of labour costs exceeding 50% of the total amount of the contract itself, the obligation was established to activate a prior meeting between the assignor, the assignee and the trade unions with territorial responsibility, aimed at assessing every possible solution aimed at **safeguarding employment (employment absorption project)**.

It should also be noted that, over the course of 2021, the consolidation of the provisions relative to protection of the personnel of the contracting companies also continued, following the publication of the **ANAC Guidelines No. 13 of 13/02/2019** regarding "**The discipline of the social clauses**". Thanks to the document prepared jointly by the Central Personnel and Organisation Department and the Purchases and Tenders Department during 2019, we pursued the intent of increasingly **directing** the activity of the referent contract staff and **standardise** as much as possible the behaviours of those subjects, also by using special standard tender specifications, which in the article relative to the **salary compensation and contract terms** of the personnel of the contracting company anticipate five types of occupational social clauses in case of take-over contract of an expiring contractual relationship, from which the one adapted to the specific case must be identified. All this also in the light of the provisions of Art. 30, paragraph 4, of the Procurement Code, which establishes the obligation to apply in contracts the sector's "leader" National Collective Labour Agreement code, signed by the comparatively most representative trade unions, whose scope of application is closely related to the activity covered by the contract, in conjunction with the provision of Art. 50 of the Code itself, which establishes the obligation, with particular regard to labour-intensive contracts, to include in the tender documents specific social clauses aimed at promoting the employment stability of the personnel employed.

There were 22 significant tenders where the above-mentioned rules set out in the Procurement Protocol were applied. Those with an amount in excess of Euro 10 million are listed below:

Type	Description	Legal entity	Amount (Euro/mln)	Duration (years)	National collective labour agreement	Clause
Competitive subcontracting procedure	Urban and similar waste collection and transport services in the territorial catchment of Ravenna and Cesena (after the concession has been awarded)	HERA Spa	40	3	Waste Management Services	Social (all personnel)
Open procedure	Emergency service on the gas network in the local area managed by Inrete Distribuzione Energia Spa	Inrete Distribuzione Energia Spa	39	2	Construction and related	Voluntary application*
Open Procedure	Mass replacement and recruitment / affiliation service on gas metering groups, distributed in the local territories managed by companies of the HERA Group	HERA Spa	16	2.5	Utilitalia Gas-Water	Voluntary application*
Competitive subcontracting procedure	Roll-off transportation service in the territorial catchment of Modena (after the concession has been awarded)	HERA Spa	15	4	Logistics, Goods Transport and Shipping	Employment absorption project
Open procedure	Service of auxiliary activities on gas, water, electricity and heat metering groups (district heating) relating to the services provided in the local areas managed by HERA Group companies.	HERA Spa	15	2	Utilitalia Gas-Water	Voluntary application*
Restricted procedure	Electrical and switchboard maintenance service for waste-to-energy plants	Herambiente Spa	11	4	Metalworking	Employment absorption project

* The application concerns at least 51% of staff employed in the HERA Group contract.

It is hereby also pointed out that in the following tenders a **clause limiting the discount percentage was also introduced**, worded as follows "having taken into account the technical specificities of the tender and the economic analysis which underlies the price items which make up the unit price list under tender, the contracting body deems that reductions of the tender base higher than 25% may present critical elements of sustainability and reductions higher than 30% may be difficult to accept":

- tender for the mass replacement and recruitment / affiliation service on gas metering groups, distributed in the local territories managed by companies of the HERA Group, divided into three lots (InRete, AcegasApsAmga, Marche Multiservizi);
- tender for the mass replacement and recruitment / affiliation service of second-generation electronic meters for low-voltage electricity distribution networks managed by Group companies, divided into two lots (InRete, AcegasApsAmga);
- tender for emergency services on gas networks and scheduled maintenance works, network expansion, connections and accessory services in the gas sector in the local area managed by Inrete Distribuzione Energia Spa., divided into four lots (the entire Emilia-Romagna region);
- tender for services relating to volume conversion devices associated with Gas Metering Groups, mechanical meters ≥ G16 and integrated meters, periodic checks and metrological controls pursuant to Ministerial Decree no. 93/2017 as amended, divided into three lots (InRete, AcegasApsAmga, Marche Multiservizi).

In 2021, in the standard specifications for the work and services categories used in the tender procedures, we maintained both the **clause that requires requesting authorisation to use temporary manpower**, and the clause that **prohibits using accessory work services** (so-called vouchers) under contracts for work or services.

Lastly, it should be noted that, as part of its corporate social responsibility, the Hera Group pays constant attention to **checking regularity of social security payments** through the automated and centralised tool that came into operation in 2018, which responsibly involves the entire corporate supply chain

involved in the management of supplies, so as to make this control even more systematic and widespread.

Diversity and inclusion

Hera Group's commitment in the area of **inclusion policies and protection of diversity** started way back and was strengthened in 2009 with the **signing of the Charter for equal opportunities and equality at work**, through which the company committed itself, together with other public and private parties, in the fight against workplace discrimination. Furthermore, the introduction in 2011 of the **Diversity Manager** was essential, aimed at further encouraging processes for developing inclusion and diversity enhancement policies. A **working group** was also set up in 2011 composed of Group company employees of different ages, roles, professions and training which under the coordination of the Diversity Manager deals with diversity and inclusion projects, activities and initiatives.

In the previous year, Hera also signed the "**Patto Utilitalia - Diversity makes the Difference**", a programme of principles and tangible commitments to promote inclusion in corporate activities. Promoted by Utilitalia (the Federation of Water, Environmental and Energy Companies) to its associates, the agreement supports: inclusive policies at all levels of the organisations; work/life balance measures; transparent management of merit that is neutral with respect to gender, age and culture; the adoption of progress monitoring systems; and internal and external awareness-raising policies.

Hera received **important recognitions** from the principal financial, national and global indices, dedicated to investors who pay particular attention to policies of inclusion and enhancement of diversity: In 2020 Hera was confirmed for the third time in the **Bloomberg Gender-Equality Index**, the global index which, by examining 11,700 companies in the world committed to the promotion and creation of equitable and inclusive workplaces, is a fundamental reference for the responsible financial community. Overall, it achieved a score of 80.1%, a strong increase on last year and better than the average for both its sector and the Italian companies analysed.

Further evidence of the Group's attention to diversity issues is the score obtained in the "**Diversity & Inclusion Index 2020**" by Refinitiv (formerly Thomson Reuters), in which Hera ranks 42nd worldwide, third in Italy and second overall in the multi-utility sector out of a sample of over 11,000 listed companies globally.

In 2021, the Hera Group collaborated with Valore D on a research project on the **professional development of women** with **STEM** backgrounds, making available the experience of female colleagues and helping to understand and bring positive examples that can stimulate the corporate world both internally and externally.

During 2021, the **collaboration with Auticon continued**, through which two people with Asperger's syndrome carried out activities for the Group, therefore also contributing to raising awareness and creating an inclusive culture with respect to cognitive differences.

In order to make the tools inclusive and accessible to all, a **mapping of the accessibility of corporate platforms** was carried out, which will lead to a process of adaptation and cultural change.

With the aim of contributing to the spread of an inclusive culture also in society and among the citizens Hera addresses, a **video has been produced for customers** that will be broadcast at the counters to **raise awareness about diversity**, this first example focused on the focus was on the hearing impaired.

The awareness raising activity, focused on an approach oriented to respect personal and individual characteristics continued through moments of reflection which, again during 2021, was carried out online. In particular, a number of internal webinars were held in 2021: "**Do you speak diversity? Let's discover it together**" a meeting to examine the role of language as an element of inclusion, emphasising the importance of words in everyday relations and the attention to be paid to using them with respect for others, "**Growing up in the time of Covid**" a meeting on understanding the dynamics of children and young people during the pandemic and sharing useful strategies for adults, a "**Reading group on Simone de Beauvoir's book 'The second sex'**" with four encounters dedicated to sharing and discussing the fundamental concepts contained in the book, a "**Day against violence to women: Carlo Lucarelli talked about the Foundation for the victims of crime**" with an encounter between Hera's CEO, Stefano Venier, and the writer Carlo Lucarelli and extended to all Group employees.

Outside company boundaries, the collaboration begun in 2020 with 4weeks4inclusion continued, with the participation of leading Italian companies on the subject of inclusion; the HERA Group contributed to the initiative by producing an interactive webinar to raise awareness about physical and psychological violence against women "**The nuances of complicity**".

In 2022, the Group's commitment to STEM issues and collaboration with ValoreD will continue. Continuity will be given to the use of respectful and inclusive language, including through understanding and raising

awareness of various characteristics that may be thought of as "different", and to this end collaboration with Auticon will continue.

The Group's commitment to spreading an inclusive culture outside company boundaries will continue in 2022, contributing to the 4weeks4inclusion initiative aimed at companies, activating inclusion projects aimed at local area schools, and producing and distributing new inclusive videos aimed at customers.

[405-1]

WOMEN STAFF (BREAKDOWN BY POSITION)

%	2019	2020	2021
Managers	19.7%	21.7%	22.1%
Middle managers	32.7%	32.2%	32.8%
Total managers and middle managers	29.9%	29.9%	30.5%
Management employees	34.2%	34.0%	35.7%
Total managers, middle managers and management employees	32.8%	32.6%	34.0%
Non-management employees	45.2%	45.4%	45.9%
Total employees	42.1%	42.2%	43.0%
Blue-collar workers	2.9%	2.6%	2.5%
Total	26.6%	26.7%	27.3%

Data as at 31 December.

At the end of 2021, the proportion of women among open-ended contract employees was 27.3%.

Among managers and executives, the incidence on the total stands at **30.5%**, an increase compared to 2020. The increase involves all contractual qualifications that provide for a **managerial role** (managers, middle managers and management employees), where women comprised 34.0% in 2021. To complete the picture regarding roles of responsibility, 29.4% of women were involved in career advancements (middle managers and managers) in 2021 and 40.1% in the career advancements of managers, middle managers and employees. Finally, with regard to the composition of the Board of Directors, members are appointed in full compliance with the equal balance of gender required by Italian Law No. 160/2019: the share reserved to women is **2/5 of the Board of Directors in office**.

Of the 575 promotions in 2021, 148 involved female workers; excluding blue-collar workers where female workers account for around 2.5% of the total, promotions involving female workers accounted for 40.1% of the total. 29.4% of new middle managers e managers are women.

The 2021 Sustainability Report drawn up by the Utilitalis Foundation on behalf of **Utilitalia**, the Federation of water, environment and energy companies, presents the sustainability performance of 90 utility companies. Considering the percentage of female managers in 2020, HERA Group's value (21.7%) is about 5 percentage points higher than the average of the companies analysed (17%). Considering the percentage of female middle managers in 2020, HERA Group's value (32.2%) is about 4 percentage points higher than the average of the companies analysed (28%). Considering the total percentage for women in 2020, HERA Group's value (26.7%) is about 4 percentage points higher than the average of the companies analysed (23%).

PERSONNEL BY AGE GROUP

%	2019	2020	2021
Under 30 years of age	5.0%	5.8%	6.4%
Between 30 and 50 years of age	48.1%	49.0%	48.2%
Over 50 years of age	46.9%	45.2%	45.4%
Total	100%	100%	100%

Data as at 31 December.

There are 4,234 workers who are over 50 years of age, representing 45.4% of the total number of employees. The proportion of staff under 30 years of age increased to 6.4%.

PART-TIME CONTRACTS

	Number	2019	2020	2021
Men		49	45	52
Women		351	349	349
Total		400	394	401

Data as at 31 December.

WORKFORCE BY GENDER AND TYPE OF CONTRACT (2021)

	Number	Men	Women	Total
Full-time		6,737	2,197	8,934
Part-time		52	349	401
Total		6,789	2,546	9,335

Data as at 31 December.

Part-time arrangements, as regulated by current labour agreements, are considered a valid tool for responding to labour flexibility **needs** both in terms of organisational and employee needs. They are characterised by the voluntariness, reversibility and compatibility with the technical, organisational and productive needs of the company and the needs of workers. Family and health needs, the need to help others with disabilities, and cases of serious illness (duly certified as such) are our priority considerations in assessing applications. The persons to whom staff members report must consider how viable the contracts the applicants seek are in terms of corporate needs: if it is concluded that the contract is viable, the changes will be made.

In 2021, there were 124 requests for part-time work, all of which were accepted. Preference towards part-time work among female workers continued to be strong.

[405-2]

RATIO OF THE BASIC SALARY OF WOMEN TO MEN (2021)

	%	2021
Managers		86.6%
Middle managers		97.1%
White-collar workers		92.5%
Blue-collar workers		101.1%

The **salary gap between women and men** within the management class is significant (86.6%), however this figure is influenced by the number of female directors (5 out of 40). Much lower salary gap for middle managers, white-collar workers and blue-collar workers. The salary gap between white-collar and blue collar workers is due to the fact that 64% of management employees are male. With regard to middle managers, white-collar and blue collar workers, the ratio between the salary of women to that of men is equal to 97.1%, 92.5% and 101.1%. The gap is obviously influenced by the level of seniority as well as - as regards the qualifications of the workers and white-collar workers - by the level of classification.

The total wage differential between women and men is 102.5% due to the higher presence of men in blue collar jobs; this figure is higher than the European average (85.9%) and Italy (95.3%) (Source: Eurostat 2019). The average for the Energy, Utilities and Environmental Services sector is 106% (Source: Job pricing 2021).

The Group's remuneration policy system is based on the ability to recognise the most appropriate remuneration package depending on the individual performance achieved, skills put into practice, organisational position held and specific comparison on the market. Any remuneration gap between individuals can be attributed exclusively to these factors and is in no way influenced, except as provided for by the relevant NCLA, by other elements (age, gender, culture, etc....).

[401-3]

MATERNITY, PATERNITY AND PARENTAL LEAVE

Number	2019	2020	2021
Maternity leave taken	138	148	185
Paternity leave taken	267	556	355

The number of mandatory maternity and paternity leaves taken in the Group during 2021 amounted to 185. The number of paternity leaves taken amounted to 355 and the average duration per capita was 9 days per year for men and 38 for women.

The percentage of women returning from maternity leave amounts to 100% like the percentage of women who are still employees 12 months following their return.

Development of new skills within the Hera Group

Starting in the past few years and with a further acceleration in 2021, the HERA Group has developed various training projects an initiatives for its employees in order to support their needed development of **new skills** and to embrace the **digital transformation**.

Every year, we update the "map" of our skills is updated by analysing the evolution (new skills and those in transformation and declining); among the **principal initiatives** already launched or in progress regarding new skills and those skills in "transformation", the following are cited:

- delivery of training content aimed at supporting the improvement in practices relating to **smart working**, with specific focus dedicated to the scheduling of activities and remote collaboration, and the delegation and management of the teams by remote (for the managers);
- launch of **HER@futura** training initiatives, the HERA Group's digital transformation project, following the HER@futura 2020 survey, which revealed the new "Hera Digital DNA" based on three areas of relevant skills ("soft, hard and job-related skills", supplemented by specific views on Organisational Agility and Data Analytics); between 2018 and 2021, over 9,000 resources were involved in at least one HER@futura training initiative;
- a change management plan related to the implementation of the **Digital Workplace - Office 365**, continuing to provide training content focused on the use of digital instruments and application workshops designed for the digitalisation of operational micro-processes;
- vertical training initiatives on advanced skills related to **cybersecurity** for resources in the field of security and environmental quality and in the field of information systems; also on the subject of cybersecurity, the start of the Cyber Guru program aimed at raising awareness and the widespread training of the entire corporate population;
- specific training initiatives on skills in the areas of **data analytics**, **data visualization** and **data governance**;
- subscriptions and participation in initiatives specific to the **Digital Innovation Observatories** of the Politecnico di Milano for resources involved in innovation projects in the Group's various Business Units;
- Action Learning initiatives with **Design Thinking** and **Lean Start Up** (Digital Lab) approaches, aimed at the development of prototypes by transversal groups, for resources with high potential and strong propensity to digital innovation (two projects with 12 resources involved);
- initiatives to strengthen skills in the area of **energy transition** linked to business opportunities in the hydrogen sector and the impacts related to the Fit for 55, Task Force on Climate-related Financial Disclosures and EU taxonomy;
- initiatives to strengthen skills in the field of **environmental transition** with particular reference to the development of the "Circular Economy Manager" Community and other widespread initiatives related to Circular Economy issues;
- transversal training initiatives to strengthen **influencing and negotiation** skills, in particular for managers (leadership model, and speeches on advanced management negotiation techniques, institution training);
- training on **new core corporate** applications (such as: Geocall, Salesforce, Oracle, YuBSC, inHera).

Further initiatives are planned for 2022 such as for example:

- Training initiatives linked to the development of new skills related to ongoing global transitions (energy, environment, digital): new business with focus on renewable energy and photovoltaics,

decarbonisation, energy transition and climate change, green and ESG finance, EU taxonomy, risk management, resilience and stress tolerance, digital workplace tools;

- programme of widespread initiatives related to the circular economy;
- consolidation of digital transformation and data analytics initiatives of the HER@futura programme, with further evolution towards aspects of Intelligent Automation and focus on Corporate Digital Responsibility;
- continuation of the change management programme related to the Digital Workplace– Office 365 project with evolution towards the Power Platform;
- programmes dedicated to the development of new ways of working, with particular reference to the evolution of performance management processes;
- change management programmes connected to the gradual implementation of the new CRM application (Salesforce) and the development of skills relative to the "digital operator 4.0" in the Network environment;
- programme to further raise awareness and generate awareness of cybersecurity;
- initiatives to further disseminate the culture of innovation;

Development of digital skills

The principal initiative launched in the area of new digital skills continues: the **HER@futura** path, focused on the development of the dimensions of culture, processes, skills and tools through the identification, examination and enhancement of the needs and peculiarities of the various segments of the corporate population, considering the current context of reference and the relative complexity. The initiatives anticipated include: training pills, webinars, participation in projects with application workshops and sessions, Action learning projects (digital lab and virtual factory), as well as participation in external master classes and interventions in Massive Online Open Courses (MOOC) mode, envisioning events and celebration of the results. In particular, as part of change management in relation to the Digital Workplace, a support network for the digitalisation of working methods and processes was set up, consisting of 28 guides and more than a thousand tutors whose experience and knowledge are collected in a sharing environment called Knowledge Platform, the Tutor Support Network of the Digital Workplace evolves further through multiple channels, environments and digital tools and, above all, as a result of the improvements ensured by the establishment of the Genius Bar, a pool of experts in the Information Systems are who capable of ensuring advanced support and the development of automation. From 2018 to the present, **over 8,000 resources** have been involved in at least one training initiative.

In tandem with the HER@futura path, **internal meetings were held between the Group's top management**, coordinated by its CEO, to update senior management on the progress of the initiatives underway in the various business units concerning digitalisation and data analytics. These internal meetings involved dozens of people within the HERA Group. During the year, the work team met three times and monitored the progress of 13 projects, both as operations and as customer management. The main projects, some of which are still in progress, concern:

- development of a preventive maintenance system for gas networks that uses Internet of Things technologies and data analysis tools to collect present and past data and make future forecasts;
- business intelligence systems for energy efficiency and process quality of water treatment plants;
- use of deep learning and natural language processing technologies for the proper classification of emergency calls, to support the technical call centre operators;
- remote analysis and optimisation of assets by using augmented reality and experimentation with drones;
- use of RPA (Robotic Process Automation) artificial intelligence systems to automate processes that involve repetitive and time-consuming activities, in particular in administrative work and back-office customer management;
- use of advanced analytics to improve customer service quality and customer experience through customer base clustering models and value extraction from consumption data to promote energy savings (Diario dei consumi).

The monitoring of priority initiatives in the field of digitalisation and data analytics is supported by the activities and events of the **data community** which had 343 participants from across all Business Units of the Group and aimed at the spread of data culture and skills; for the 2021, the topics were:

- Quantum Optimisation: Quantum Computing applications for problems of optimisation - What is Quantum Computing? One of the many "Hypes" in marketing made more appealing by esoteric words such as "entanglement, non-locality and superposition of states" or one of the computational technologies of the future? And how far into the future is this? Or is it already present for some specific applications?
- Data Governance: the value of data - experiences and methods to build a path that sees the identification and control of key information, the governance of processes, data modelling, the

constant monitoring of their quality and the management of metadata, transforming the data itself into a true key asset.

- Explicable AI - computer vision: the technical evolution and transformative advent of artificial intelligence, the exponential progress in recent years and the refinement of techniques up to stereoscopic vision and the ingredients needed to make it possible.
- Intelligence Science: how does the human brain perceive reality? Why is the interaction of the human brain with the environment defined as intelligent? Where does the peculiarity of human intelligence reside? How does our brain make decisions? How do human intellectual and cognitive capacities differ from intelligence transferred to machines? How and why make a machine intelligent? And what does that mean, really? What practical repercussions can this process have?
- DCAM application for the Italian Market: the provisions of the DCAM framework, its applications in Italy and best practices.

How does the project contribute to responsible digital transformation? The benefits achieved in the Corporate digital responsibility dimensions (please refer to the dedicated section "Corporate digital responsibility")

Social		Improvement of the data community is aimed at propagating and learning digital skills, thereby promoting the digital inclusion of workers.
Technological		Corporate awareness of the importance of disseminating data culture among workers is a sign of a responsible digitalisation strategy aimed at transparency of processes and strengthening the Group's identity.

Hera Educational for school-work alternation

In 2021, the Group continued its activities with the "Hera Educational" system with the creation of the **Pathways for transversal skills and orientation**, previously called joint school-work experiences, based on the joint design of company skills and educational plans for the individual courses of study. In 2021, a total of 72 transversal skills and guidance pathways were implemented in the Emilia-Romagna region, of which 36 individual pathways were in-company, 19 were remote project work, 11 remote training pathways on digital skills and 6 work orientation meetings.

In the second half of 2021, the Group's focus was on **replanning, for the 2021/2022 school year**, of the annual offer of 81 transversal skills and guidance pathways, of which 75 are individual in-company pathways and 6 are work orientation meetings for class groups.

In 2021, work was also carried out on the **"Hera teaches you a trade... at school"** initiative, reconfigured to remote mode due to the health emergency, with the participation of HERA Group employees as teachers and the Guglielmo Marconi Technical Institute in Forlì and the Nullo Baldini Technical Institute in Ravenna.

In 2021, the implementation of the **three-year curricular integration pathways** continued with a view to strategic workforce planning, which provides for a teaching phase carried out by Hera personnel at the institute - for 2021 carried out in remote mode due to the health emergency - and, from the second year of the project, the implementation of pathways for transversal skills and orientation designed in line with the topics dealt with in the teaching phase. More specifically, the following continued:

- the co-design and implementation of the training contents for classes III, IV and V of the 2020/2021 school year for the curricular integration pathway started in 2019 with the Copernico-Carpeggiani Institute of Ferrara concerning the "Energy" structure, which was followed by the activation of 5 PCTO pathways in companies involving students of the fifth year of the above-mentioned institute;
- the co-design and implementation of the training contents for classes III of the school year 2020/2021 for the curricular integration paths started with the Belluzzi-Fioravanti Institute of Bologna concerning the "Mechanics, Mechatronics and Energy", and structure of "Automation".

Lastly, in 2021, the Group's activities continued, with a successful outcome, in the international Erasmus+ project **"GrEnFin - Greening Energy Market and Finance"**, funded by the European Commission and carried out by a broad international partnership of universities and companies, coordinated by the University of Bologna. The project aimed at the implementation of knowledge and skills in support of the **transition to renewable energy sources and the decarbonisation of the European economy**, promoting the emergence of a new professional figure, the "Sustainable Energy Expert", according to an innovative and interdisciplinary approach. With particular reference to the design of an international training course for professionals led by Hera, the First GrEnFin Summer Training took place in 2021 - remotely, due to the health emergency - during which it was possible to test the contents and methodology of the course designed by the HERA Group and realised thanks to the contributions of experts, both from within the Group and from the partnership.

Sustainability among the "new skills" of young people: HERA Group's contribution

Environmental education

For over 15 years, the HERA Group has been promoting numerous **free of charge environmental education projects** aimed at schools in the local areas it serves, to raise awareness among young people about respect for the resources of the planet and sustainability. The commitment also continued in 2021. There were numerous educational pathways offered with **La Grande Macchina del Mondo**, for schools ranging from pre-school to secondary school, which are renewed and updated every year in terms of content and methodology, always involving and interactive, with scientific workshops, meetings, graphic-creative workshops, role-playing games, debates, challenges and guided tours of Group plants, activities that classes have been able to carry out in person or remotely according to their needs.

La Grande Macchina del Mondo programme, in its eleventh year as of 2021, has involved schools ranging from kindergarten to lower secondary school, with 26 new, highly educational courses designed to help teachers guide, enrich and complete the school curriculum for young people. Over time, it has become an important reference point for increasing children's knowledge and awareness of **environmental issues** (water, energy and waste), the **circular economy** and the most topical **social issues**, offering incentives to make behaviour and lifestyles more sustainable for the planet.

There were **many new features in 2021**: the completely new Cartoon Heroes created by HERA Group for children on the topics of water, energy and waste; three live green events to coincide with World Water, Earth and Energy Savings Day, with important testimonials such as Giovanni Caviezel and Gek Tessaro; three training webinars on the 2030 Agenda aimed at teachers; an app designed to play with and discover environmental themes with augmented reality in the classroom and at home, using a language that young people can better relate to.

The HERA Group website for schools has been enriched with a **new section to support teachers**, with educational kits, in-depth multimedia resources that can be consulted or downloaded, and which are also useful for carrying out classroom activities independently. There is also a new section with challenges and games for young and old to enjoy the environment as a family.

The science outreach programme **A well of science**, which HERA Group has dedicated to secondary schools, offers interdisciplinary activities designed to arouse young people's curiosity about current issues, stimulate their desire for knowledge, critical thinking and ability to react to change in order to face the challenges of the future as protagonists, thanks to technology and innovation applied to sustainability, and also to highlight the central role of correct scientific information and communication. Re-Active! is the theme for the fifteenth edition, which included in-person and remote activities on topics related to the **objectives of the 2030 Agenda**: These included science workshops and meetings on water, waste and energy; interviews with scientists, including Stefano Mancuso and Roberto Battiston, and testimonials of innovative thinking, technological development and sustainable business visions; online events, including a link with researchers from the Concordia base in Antarctica and Green Jobs to find out about the jobs of the future; a webinar by Telmo Pievani; and debates on environmental and current affairs topics. Many topics were covered: the green professions of the future, research at the ends of the earth, artificial intelligence, sustainable consumption, innovative technologies and solutions to combat climate change, how to communicate science between opinions and scientific truths, the risks of the web and fake news.

AcegasApsAmga also played an active role in promoting a culture of sustainability to the benefit of quality of life and safeguarding of resources. In fact, the company continues to strongly pursue its commitment to environmental education for children in kindergarten, primary and middle school. The proposed teaching activities build on the skills acquired during the last few years of the project but also on the awareness gained from the experience of the pandemic, which required immediate and effective reaction and innovation. New ways of approaching teaching and connecting with both institutions and pupils were tried out, and which were useful for promoting the development of an environmental and social awareness in students, and aimed at sustainability, which are all fundamental to achieving the objectives of the 2030 Agenda.

The offer is rich and varied, with flexible ways of exploiting it, to meet the real needs of schools and classes that have been constantly evolving as a result of the pandemic.

ENVIRONMENTAL EDUCATION PROJECTS

Number	2019	2020	2021
Participating students	118,788	93,053	82,178
Schools involved	1,440	1,281	818
Teachers involved	10,128	8,039	6,350

Compared to 2020, there was a further reduction in the number of students, schools and teachers involved in environmental education projects in 2021 as a result of the continuing health emergency which has caused a major disruption to the organisation of schools. For this reason, some schools chose not to engage in extracurricular activities.

In the local area managed by **HERA Group in Emilia-Romagna** 74,322 students and 5,811 teachers were involved in 699 schools, which ranged from kindergarten and primary school to upper secondary. Approximately 1,700 activities were carried out between January and June, involving some 59,800 pupils aged between 4 and 13 years, designed to be used in person, remotely, or in a hybrid form, in order to meet the needs of the school. The science outreach programme, A well of science, involved 14,500 children in 311 interdisciplinary activities from February to May. In the local area managed by **AcegasApsAmga**, about 7,900 students and 119 teachers were involved.

4.05 Resilience and adjustment

Resilient aqueduct and water source management

[303-1]

The **use of innovative technologies in leak detection** helps to increase the resilience of the water supply system. **Leakage detection, using acoustic methods**, was developed in 2021, with a focus on the benefits that can be achieved, also in terms of the ability to scale up the project to the whole local territory. The **search by aircraft**, carried out in the Ravenna area, made it possible to find an adequate number of leaks during the leakage localisation phase, but the technology is very costly and the pre-localisation performance was not always satisfactory across the area flown over. The **search using cosmic rays**, on the other hand, confirmed its effectiveness in terms of speed of service: this instrument is capable of detecting the concentration of neutrons and can be installed on vehicles, allowing potential locations with water underground to be detected quickly. Refining the technology with specific calibration algorithms will lead to a further improvement in productivity. Alongside these technologies, **pressure transient monitoring** will also be developed in two critical districts between Bologna and Modena, using **new-generation sensors** capable of detecting sudden pressure variations and investigating their origin. In addition, **smart meters** capable of "listening" to the network and pre-locating any losses will be tested in a district of Conselice.

The use of **predictive algorithms to guide these activities** has also been consolidated in order to **minimise the dispersion of the water network** and to carry out an **active search for leaks and the renewal of the network** with ever greater efficiency, adopting variables which are typical of the reference area, both those specific to the aqueduct infrastructure and those more characteristic of the environment (soil, salinity, ground subsidence, temperature). The project will continue with the development of an internal Hera algorithm, with the support of the University of Bologna and the Group's data intelligence expertise.

In 2021, a number of projects were consolidated to improve understanding of the **drought risk** in the relevant local areas by implementing specific monitoring and analysis actions and strengthening the engagement of different stakeholders who can actively contribute to this end. With particular reference to the **monitoring of underground sources**, carried out to prevent the risk of multi-year low water, a collaboration with the University of Bologna and Arpae has been initiated. This has allowed the creation of a first **dashboard for the continuous integrated monitoring** of significant quantities acquired by field sensors managed by Hera or Arpae (well level probes, rain gauges, hydrometers), with the aim of developing **predictive algorithms on the state of aquifers**. The project will be integrated with other variables, importing the signals and development logic of the forecasting algorithm on Hera systems. In the Bolognese Apennines, the scientific contribution of the University of Bologna is aimed at a better understanding of the state of the springs in order to **identify new scenarios of optimisation and enhancement of the catchments** through in situ investigations, hydro-geological and chemical monitoring and numerical modelling.

In relation to the **integration of supply sources** in the Emilia area, the upgrading of the water supply system of Castel Bolognese (Ra) and other municipalities in the Imola area is in the design phase; it will also interconnect the current aqueduct systems, guaranteeing an important water reserve. In particular, the technical services conference approving the construction of the new 160-litre-per-second water purifier and the optimisation of the water treatment section for industrial use was completed in 2021. As for the adduction and distribution of treated water, the contract for the construction of the first section of the network up to Imola has been awarded and the authorization and expropriation procedure for the second section of the network, from Imola to Castel Bolognese, has substantially progressed. In addition, an analysis of the potential of the aquifers of the systems of the springs in the Bolognese Apennines, and in particular in the municipalities of Gaggio Montano and Vergato, is underway in order to evaluate scenarios for the optimization or enhancement of underground captures.

In addition to the new work described above, we would like to mention what we have done **in recent years**, which has made it possible to cope with a particularly dry summer in 2017, an exceptional condition that could occur again in the future. In the Apennines, the **Modena area** has been equipped over the years with infrastructure designed to manage the water requirements and the original municipal aqueducts have been interconnected so that the physical integration of each of them makes up an infrastructure system capable of mutuality and subsidiarity. In the **Apennines area near Bologna**, on the other hand, the interconnection with the Modena system, the construction of two new storage and pumping plants made it possible to reduce reliance on tanker trucks to supply water tanks in the mountains in situations of particular criticality regarding the sources. In **Romagna**, where Hera operates mainly as a distributor, Romagna Acque Società delle Fonti built the "Standiana" drinking water plant (capable of treating a flow of 1,100 l/sec) in response to the problem of the water reserves in the area of the Adriatic coast, a major tourist destination, supplementing the Ridracoli feeding system.

The construction of the **Reno-Setta feeder channel**, in 2010, was a fundamental measure for the Bologna area, the substantial results of which can now be quantified. As requested by the Regional Government of Emilia-Romagna among the offsetting measures for the construction of the Variante di Valico, the feeder channel conveys part of the water from the Reno river to the Sasso Marconi drinking water plant, in order to supplement the abduction from the Setta torrent, increasing the volumes of drinking water purified from surface sources and thus reducing groundwater withdrawals from well fields in the plains. The analysis of past data on the water table levels in the Bolognese plain (average static levels of the five stations of Borgo, Tiro, S. Vitale, Mirandola, and Fossolo) and the monthly volumes taken from the water table, from 2002 to 2018, shows an **increase in the water table level** after 2010 and a **substantial decrease in volumes withdrawn**. In particular, it is noted that before 2010 the average static level was about -50 meters from the ground level, while from 2010 to 2018 the average was around -42/-43 meters, with an average level increase of 7/8 meters. With regard to the volumes before and after 2010, the difference corresponds to 531,000 cubic meters/month less withdrawn on average from the aquifers (6,370,000 cubic meters/year). It is therefore possible to estimate that about 50 million m³ less groundwater has been withdrawn in well over eight years, a volume equivalent to about seven months of the total production of the primary system. This is a **decisive contribution** from an **economic point of view of the circular economy of the water resource that benefits both the environment** (reduction of subsidence) **and the service** (increase in groundwater storage).

In the areas managed by **AcegasApsAmga**, the **Padua** and **Trieste** catchment systems both draw from a mix of deep water aquifer, sub-aquifer and surface water, capable of ensuring a diversification of production to guarantee the reliability of the system. In addition, **sensors** have been installed in all the catchment systems in Padua which, connected to the Forlì remote control system, guarantee continuous quantitative monitoring of the resource; a periodic sampling campaign is also carried out to guarantee qualitative control of the resource, as required by the monitoring plans. Since 2003 (the year of the historical minimum aquifer level), the main wells in the **Vicenza** area have been equipped with pumps on the well heads to guarantee collection even in critical aquifer conditions. In addition, in the two-year period of 2019/2020, two interconnections were made in the Piovese network in the towns of Martinelle and Comunanze, with the aqueduct system of the Veneto Region which will guarantee a further supply of up to 100 l/s.

Within **Marche Multiservizi**, an agreement was signed with Marche Polytechnic University for the critical and experimental analysis of ageing and wear phenomena of materials and infrastructures with the ultimate aim of supporting the design, construction and management of new distribution and drinking water systems.

As part of the plan (2022-2025), plant automation and **pressure regulation systems** will be increasingly consolidated and extended to make the Hera Group's water networks even more resilient to environmental stress. Adaptive grid management, regulated on the basis of variable demand profiles, will evolve towards **smart water grids**, making it possible to actively control the grid remotely with the ability to act on pressure. The initiatives that contribute to this development include the **smart meters** that the Group is installing at the most water-demanding users. Monitoring of these consumptions on a daily and hourly basis allows for a dynamic evolution of the network district metering and the calculation of water balances, while at the same time making the end user increasingly aware of their consumption and involved in virtuous water efficiency processes.

How does the initiative contribute to responsible digital transformation? The benefits achieved in the Corporate digital responsibility dimensions (please refer to the dedicated section "Corporate digital responsibility")

Environmental		Use of artificial intelligence and sensor algorithms for the monitoring of water sources and the implementation of intervention strategies to strengthen the operational response to drought events.
Economic		Development of predictive algorithms on the risk of breakages that can more effectively orient the search for losses, aimed at greater efficiency of interventions, and a consequent reduction in operating costs.

Interventions in gas and electricity networks to deal with hydrogeological instability

In the face of the adverse climatic events and **hydrogeological instability** situations encountered in the Emilia-Romagna area, in recent years an intense **collaboration** has been undertaken between the company Inrete Distribuzione Energia, the Region of Emilia-Romagna and the Civil Protection Department with the aim of allocating some funds to restoring emergency situations and increasing synergies between infrastructure managers and public bodies.

In particular, the Civil Protection Department is responsible for carrying out a preliminary reconnaissance phase to intercept any problems on the regional territory. Following the collection of reports, which may come from infrastructure management bodies, municipalities, public authorities and reclamation

consortia, the proposed interventions are examined and, if successful, financed. Inrete Distribuzione Energia manages electricity lines and about 2000 km of gas network in the foothill-mountain area, often subject to instability phenomena; this makes it necessary and desirable to collaborate closely with the bodies responsible for **safeguarding the territory**.

Numerous interventions are implemented in this context. In the last three years, a total of **22 interventions** (19 in the gas sector and 3 in the electricity sector) have been submitted to the Emilia-Romagna Region for a possible overall approval of Euro 3.9 million of funding covered by the Region. Of these interventions, **18 have been approved** for regional contribution, for a total amount of 2.7 million. Of these 18 interventions:

- **seven were completed in 2020** and settled with a payment of Euro 1.1 million;
- **three were completed in 2021** and settled with a payment of approximately Euro 460,000;
- Of the remaining eight funded interventions, four have been completed and are the subject of ongoing claims for approximately Euro 420,000, while the remaining four will be completed by 2022.

Of the four interventions not financed by the Region for which a request for a contribution was made with recognition in the years 2020 and 2021, two interventions have been completed and two are in the planning stage.

Resilience of electricity grids

Inrete Distribuzione Energia has developed the work plan to **increase the resilience of the electrical system** in accordance with Arera Guidelines. The plan takes into account the risk factor arising from the **formation of ice and snow sleeves**.

The scope of the plan was defined on the basis of the mechanical stress and the mechanical characteristics of the conductors, the geometric characteristics of the lines and their geographical and altimetric location. It includes the **Modena area municipalities** of Fanano, Fiumalbo, Guiglia, Lama Mocogno, Montecreto, Montese, Pavullo nel Frignano, Pievepelago, Polinago, Riolunato, Sestola and Zocca. We analysed the medium-voltage distribution network, identifying the secondary substations included in the perimeter of the plan that supply the most **critical users** and considering the best power supply route for them, along which all the sections of overhead conductors with an unsuitable section were identified and which must therefore be replaced.

The type of measure planned to address such critical issues consists mainly in **replacing** the sections of bare overhead conductors whose sections are not suitable to withstand the stresses considered, **with overhead cables with spiral reinforcements of an appropriate section**, initially expected to follow the same route of the existing lines. The plan consists of **54 interventions** on 15 medium voltage distribution lines to optimise activities, giving priority to the most critical areas and with a view to minimising the impacts on the distribution service, aimed in any case at reducing the risk of disruption and the strengthening of the electric power lines.

To date, the planned preparatory work on the primary and secondary substations has been implemented, increasing the possibility of improving service continuity, and **18.8 km of the network have been renewed**. In 2022, another **9 interventions are envisaged** in addition to the first 21 completed by 2021 (12 over the year).

Furthermore, among the various projects defined over the course of the plan (2022-2025) in favour of the resilience of the electricity grid supply chain, there are also new operational methods of **inspection** and **remote 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, more frequently intercepting potential problems on infrastructures. The **robotic** interventions and **remote control extension** of the secondary substations and their fibre optic connection will allow remote intervention without the activation of the operating teams, 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.

Managing the healthcare emergency

Implementing the Italian national protocol signed by the labour unions in the presence of the Government, a regulatory document was developed that represents the set of prevention and protection measures adopted by the HERA Group to counter the spread of the virus. This document has been subject to

several reviews by the competent authorities (Ausl/Ispektorato del Lavoro), which have confirmed the validity of its contents, and was presented and signed by the national trade unions on 15 May 2020. The protocol is continually updated on the basis of the progress of the pandemic, to maintain it consistent with the development of the national regulatory framework and the changes in prevention and protection measures.

Considering the specific nature of its business and its geographical presence, the Group has established criteria for identifying risk scenarios due to the spread of the Covid-19 virus using an Enterprise Risk Management approach. We used these criteria, together with the measures established in the Group's protocol to update the risk assessment document. The decision 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 synergic approach to the ongoing pandemic emergency. After the protocol was drawn up, the measures adopted and their implementation are periodically monitored. In this respect, a specific check list was developed for periodic monitoring by the heads of the various organisational units. At the date of preparation of this report, approximately 7.000 checklists had been completed and managed.

In accordance with the indications of the health authorities and in order to safeguard and protect employees, we defined a specific procedure to deal with workers with particular frailties, i.e. those with current or previous illnesses that make them prone to particularly serious consequences in the event of illness. The company physicians cooperated to develop this procedure while fully respecting personal data privacy.

In order to cut off any chains of virus transmission in the workplace, rapid tests to detect asymptomatic positive persons are also provided for under certain conditions. Forty-two accredited laboratories have been identified in the areas where the Group operates, that can be called upon if necessary with the active collaboration of the company physicians.

The Group has implemented additional cleaning and sanitising measures (compared to the standard ones) for its corporate premises, including the use of disinfectants, and has intensified the frequency of such measures. All our people that work in the field were constantly issued the personal protective equipment required to deal with the health emergency (e.g. respiratory protection masks, disinfectant gels, gloves, and disposable overalls). Disinfectant gel dispensers were placed in the company's premises at entrances and near common areas, and surgical masks were distributed to all employees. We defined rules of conduct for company cafeterias and other common areas that entail staggered entry times and specific space management logistics that leave an adequate distance between people.

Lastly, the methods to carrying out services in the field have been defined by introducing health and safety regulations for workers, including the reduction of travel (also by extension of the "vehicle at home" method for maintenance workers) and eliminating of the use of changing rooms or, if not possible, reviewing the shift schedules to reduce the overlap of operational teams. Lastly, fully borne by the company, Hera has activated a Covid-19 insurance policy to cover all employees who are infected by the virus. The policy provides, as an additional benefit, a package of guarantees and services and, in particular, provides hospitalisation allowances, convalescence allowances and post-hospitalisation assistance.

In spring 2021, the Group developed an additional campaign to prevent the spread of the Covid-19 by giving employees the opportunity to be vaccinated at their workplaces or facilities agreed and authorised by the competent regional health authorities. More than 400 colleagues signed up for this initiative.

With the drivers of change

5. GOVERNANCE AND CREATION OF VALUE

5.01 Objectives and performance

What we said we would do	What we have done	SDGs	Progress*
Sustainability and risk management			
Proceed with the growing attention towards the anticipation, mitigation and coverage of risks arising from climate change, also to guarantee ongoing service.	Continue with the management of risk connected with climate change, also in order to guarantee continuity of the service. Update the Risk Committee functions, which now have to consider risks stemming from climate change as part of relevant risks (see page177).	13	
Economic value for the stakeholders			
About Euro 1,900 million. Value added to stakeholders by 2024 (+14% compared to 2020).	The value added to the stakeholders in 2021 was Euro 1,764 million (see page 183).	8	
Euro 3.2 billion. Investments completed in the period 2020-2024.	Euro 588.7 million. Investments completed in 2021 (+16% compared to 2020) (see page 186).	8	
Dialogue with our stakeholders			
Continue to listen to and involve the local area's stakeholders by updating the HeraLAB model. Complete the five local HeraLAB initiatives in the Rimini area and the three initiatives in the Bologna area by 2022.	Modena and Cesena HeraLABs concluded and the new HeraLAB model updated. Two initiatives designed in Rimini LAB implemented and the remaining six re-planned (three initiatives in the Rimini area and three in the Bologna area) (see page196).	6,11,17	
*  Result achieved or in line with plans.  Result with moderate deviation from planning.			
What we will do		SDGs	
Sustainability and risk management			
Purpose-driven code of ethics: update the Code of Ethics (fifth update) based on the corporate purpose stated in the Articles of Association and involving all workers		-	
Economic value for the stakeholders			
Roughly Euro 2 billion. Value added to stakeholders by 2025 (+13% compared to 2021).		8	
Euro 3.8 billion. Investments completed in the period 2021-2025.		8	
Shareholders and financial institutions			
Increase ESG debt instruments		-	
Dialogue with our stakeholders			
Continue to listen to and involve the local area's stakeholders by launching the new HeraLAB model for the two areas in June 2022. Complete the three local HeraLAB initiatives in the Rimini area and the three initiatives in the Bologna area.		11; 17	

5.02 Sustainability and risk management

Company governance

[103-2] Hera is a multi-utility company with public sector majority shareholders and a markedly diversified shareholder base. Regarding corporate governance, the Group has adopted statutory procedures, with specific attention to the adoption of the principles contained in the Code of Corporate Governance prepared by the Corporate Governance Committee of Listed Companies.

[102-18] 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 Italian 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.

[102-20]

[102-22]

[102-26]

[405-1]

All detailed information concerning the Group's corporate governance and the functioning of its main bodies is dealt with in the corporate governance report approved by the Board of Directors on 23 March 2022.

The Ethics and Sustainability Committee

[102-17] The Ethics and Sustainability Committee, appointed by Hera Spa's Board of Directors on 13 May 2020, has the task of monitoring the **dissemination** 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.

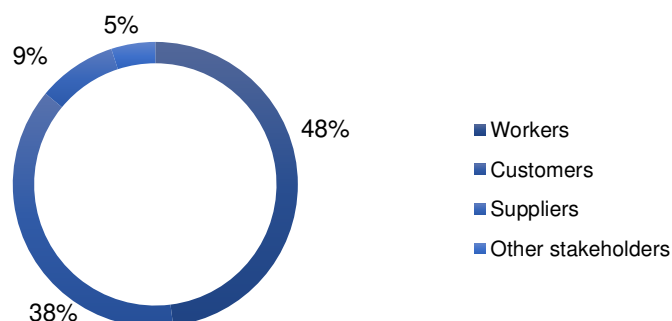
[102-33]

[102-34]

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 experienced in social responsibility and sustainability. The Committee met six times in 2021. On 23 February 2022, the Ethics and Sustainability Committee submitted the annual report on the activities carried out and on reports received during 2021 to the Board of Directors of Hera Spa.

In 2021, the Ethics and Sustainability Committee received **seven reports**. Three reports were received from customers, three from workers and one from suppliers; the Ethics and Sustainability Committee has examined 262 reports since 2008.

REPORTS TO THE ETHICS AND SUSTAINABILITY COMMITTEE FOR STAKEHOLDERS (2008-2021)



Three reports from **workers** concerned the relationship and behaviour between employees and/or between manager/employee, the company climate, worker health and safety, respect for privacy and diversities and equal opportunities. The three reports received from workers were all closed as at 31 December 2021. On the basis of the investigations concluded, the Committee found no violations of the Code of Ethics. The **Committee contributed** in the form of facilitating dialogue between workers and the company, verifying the compliance of the behaviour reported with the Code of Ethics and clarifying

to the reporting person that the Hera Group considers protecting the safety of its workers a top priority. Lastly, the Committee promoted solutions and positive behaviour.

The three reports received from **customers** concerned the times for carrying out services and internal procedures, the clarity and accuracy of information provided and the clarity of billing and continuity of the electricity service. The three reports received from customers were all closed as at 31 December 2021. On the basis of the investigations concluded, the Committee found no violations of the Code of Ethics. The **Committee's contribution** was geared towards enabling dialogue between the reporting person and the company, promoting improvements to processes in the internal structures and ascertaining the correct closure of the case involved in the report by Hera Comm. In relation to one report, the Committee promoted and reiterated to the reporting person that the company applied the correct and proper practices.

The Committee received a report from the worker of a **supplier** which concerned working conditions and worker health and safety. The investigation has been concluded and the Committee did not observe any violations of the Code of Ethics, but did highlight some important areas of improvement to ensure more effective application of the company procedures with reference to articles 57 "Working conditions and worker and supplier health and safety" and 58 "Supplier evaluation" of the Code of Ethics.

The Committee's contribution: after having requested a joint audit from the competent departments with the department involved in the reporting, it firstly verified the correct application of the internal procedures, then initiated dialogue aimed at evaluating the initiatives for further improving the application and effectiveness of the corporate procedures and the consistency with the provisions of chapter 5 of the Code, "Suppliers".

In application of article 86 of the Code of Ethics, the Ethics and Sustainability Committee recommended that the departments concerned evaluate the planning of specific training and awareness-raising initiatives, aimed at strengthening the fostering of a shared culture with all representatives of tender contracts on the principles outlined in the chapter relating to suppliers in the Hera Group's Code of Ethics and on the effective application of the corporate procedures relating to the assessment and control of suppliers and the management of contracts fully consistent with the principles of the Code of Ethics.

In the area of sustainability, the Committee defined in 2020 **three areas for action for the three-year mandate** listed hereafter: redesign of the training programme of the Code of Ethics 5.0, updating of the Creating shared value framework and reporting and monitoring of adoption of the **recommendations of the Task Force on Climate-related Financial Disclosure**, a topic addressed in a meeting in 2021.

In full observance of the shared action plan, over the course of 2021, the Committee discussed the draft **Sustainability Report** and examined its main content before the Board of Directors' meeting, conducted an in-depth analysis of the **supplier assessment and control system, delved into the sustainability thematic reports, examined the summary of the suggestions in the Management Letter** drawn up by the independent auditing firm **Audirevi**. At the meeting in which the 2021 Sustainability Report project was shared, the reporting assumptions regarding the **Science Based Targets initiative** were outlined.

Risk management

[102-18]

[102-30]

Hera adopts an organisational structure that appropriately and conscientiously manages **the exposure** and **the risk appetite** arising from its business, defining an integrated approach aimed at preserving the effectiveness, profitability and sustainability of management throughout the entire value chain.

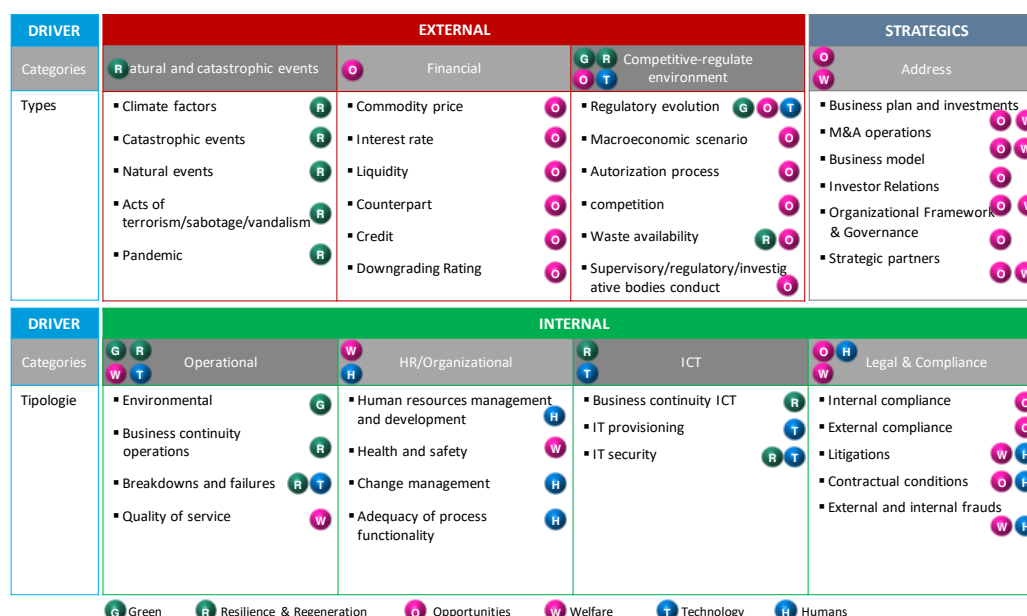
Top management plays a fundamental role in this process and is called upon to express the medium/long-term vision of the desired risk profile for the Group defining the risk areas within which the Group intends to move.

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 with respect 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 that emerged from the Group's **risk management policy** and **risk model**, associated with the strategic aspects of the Business Plan, and which were identified as having a potential impact on the company for 2021 are shown in the table below:

THE HERA GROUP'S RISKS MODEL



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 as at 31 December 2021. For a description of the risks linked to climate change, see section "Hera for climate" (chapter "Pursuing carbon neutrality"). [Hera per il](#)

Compliance system for corruption and fraud prevention

Importance for the Hera Group and monitoring of this aspect
 [102-17]

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**, updated in 2019, 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 Organisation 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 Italian 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;
- "whistleblowing"** system for the handling of reports relating to offences concerning both corruption and those potentially significant for 231-related purposes.

The 231 Organisation model

Italian 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. The 231 Organisation Model is aimed at **preventing all 231 offences**, including corruption and illegal abuse of position; cases of conflicts of interest are governed therein and provision is made for measures to protect the confidentiality of information. The model includes the principles of conduct formalised in the Code of Ethics. In December 2021, the Hera Group approved the revision of the Organisation, Management and Control Model, for the purposes of Italian Legislative Decree 231/2001, which renewed the Hera Group's commitment to tackling corruption and all offences relevant for 231 purposes and preventing situations involving the risk of offences being perpetrated, by disseminating a culture of ethics and legality.

The companies provided with a 231 Model are: Hera Spa, Acantho Spa, AcegasApsAmga Spa, AcegasApsAmga Servizi Energetici Spa, Aliplast Spa, Asa Scpa, EstEnergy Spa, Feronia Srl, Frullo Energia Ambiente Srl, Hera Comm Spa, Hera Luce Srl, Hera Servizi Energia Srl, Hera Trading Srl, Herambiente Spa, Herambiente Servizi Industriali Srl, Hera Tech Srl, Hestambiente Srl, Inrete Distribuzione Energia Spa, Marche Multiservizi Spa, Uniflotte Srl, Amgas Blu Srl, Ascopiave Energie Spa, Ascotrade Spa, Blue Meta Spa, Etra Energia Srl and Hera Comm Marche Srl. All these 26 companies include 95% of Group employees. Marche Multiservizi Spa adopted 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 **27 protocols** to be adhered to when carrying out sensitive company processes given that they are exposed to the potential risk of perpetration of 231-related crimes; some of them have been specifically applied to respond to the company's unique characteristics. In addition, 37 information flows have been periodically made available by companies which inform the Supervisory Board of the processes at risk of 231-related crimes, including fraud and corruption. The protocols are widely distributed to all workers through their publication and periodic updating on the company intranet. Their application is analysed and monitored during the audit phase. Protocol 231 for real estate management (P031) was approved and published in 2021, and eight of them were revised (management of donations, management of sponsorships, management of delegations, relations with partners, statutory auditors and independent auditors, management of complaints, sanctions and notices, information security and prevention of cyber crime, prevention of environmental crimes, prevention of health and safety offences).

For further information on the 231 Model, please refer to the Corporate Governance Report included in the 2021 financial statements.

231 risk assessment activities [205-1]

The risk assessment activities (both standard and for 231 Model purposes) carried out by the **Internal Auditing Department** concern all the business processes implemented by 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 for the purposes of ISO certification 37001 and the offence** referred to in Italian Legislative Decree 231/2001. Specifically, 1,194 risk scenarios were identified, with respect to which the inherent risk was initially evaluated and, following the mitigation actions implemented by the internal control system, the residual risk. 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 offence 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 the Public Administration. These areas, together with spheres such as tenders, donations and sponsorships, entertainment expenses and the management of credit positions, 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. Both the audit plan and the risk assessment, developed for the three-year period 2019-2021, were approved by the Board of Directors of Hera Spa on 16 December 2020. 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. On 15 December, the 2022-2024 risk assessment, the 2022-2024 audit plan and the 2022 audit plan were approved by Hera Spa's Board of Directors.

Based on the matrix identified in the risk assessment, the Hera Group's Internal Auditing Department specifically focused on the risk **of fraud and/or 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 2021, the audits envisaged in the plan that are also significant for anti-corruption purposes were carried out. The analyses did not highlight any episodes of corruption and there were also no reports of corruption pursuant to the 231 model.

[205-3]

On 12 April 2019, the 231 protocol was published, "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). Various channels are provided for reporting to the Supervisory Board both by post and by e-mail; these channels are made public through indications on the Group website and on the company intranet. A tool was created in 2021 which makes it possible to send reports to the Supervisory Board in a timely fashion and completely anonymously, and which guarantees the privacy of the reporting person's details; the platform replaced the possibility of sending reports via e-mail from the middle of January 2022. Over the course of 2021, four reports were received that were assessed as not relevant or irrelevant for 231 Model purposes.

Management and prevention of fraud

The Hera Group drew up specific Guidelines, in application as from 15 February 2018, 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 and further conduct within the organisation consistent and in line with the principles expressed. They also provide indications with regard to the channels to be used, hard-copy post or dedicated e-mail addresses, to report any suspicion of fraud. The guidelines for fraud prevention and management envisage two channels for receiving reports: the Ethics and Sustainability Committee and the Central Legal and Corporate Affairs Department of Hera Spa as well as a specific way of managing the same. The management procedures require that after receiving a report, if deemed necessary, investigation activity will be conducted under the responsibility of the Central Legal and Corporate Affairs Department, which will acquire information from the competent Departments. All the Departments involved must ensure the confidentiality of the information received and handle it in a strictly confidential manner protecting the identity of the whistle-blower, without prejudice to the legal obligations.

[205-3]

The Central Legal and Corporate Affairs Department did not receive any fraud risk reports during 2021.

Within the scope of fraud management and prevention, a work group was set up, under the co-ordination of the Law no. 262/05 Compliance Unit, which developed a method-based technical support, "self-assessment", to be proposed to the company Departments and the Group companies, for the purpose of providing them with elements for self-assessment in the identification of risks and related prevention controls. This instrument becomes an integral part of the internal control system.

The "self-assessment" includes:

- the types of fraud;
- the fraud risks, or which type of action is implemented;
- the fraud schemes, or how the fraud is implemented.

The document includes, by way of example but not limited to, practical examples, red flags and analytical controls.

In the risk control matrices used as part of the activities carried out by the Law no. 262/05 Compliance unit, applied by process (Financial closing, consolidated financial statements, etc.), the mapped controls were integrated with the types of fraud (embezzlement, corruption and false accounting), where a

potential fraud risk has been identified, therefore, the result of the testing activity is considered to cover both compliance and fraud risk.

Main activities and results achieved in 2021 [102-33]

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 October 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 this end by the Internal Auditing Department and monitoring corruption risk and preventive and risk mitigation actions.

The cited procedure for "whistleblowing" envisages new **measures to protect the confidentiality** of those who make 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.

The Law 262/05 Compliance Unit completed the activities set out in the Financial Reporting Manager's Plan prepared for the year 2021, modified accordingly as a result of the changes that occurred during the year. The controls present in the matrices used to verify the processes are integrated with the fraud risks, where this risk is present, so the result of the test for the purpose of proper preparation of the financial disclosure also covers the associated fraud risk. The tests performed were passed; **no anomalies were identified linked to fraud**.

The training/information activities of the "**self-assessment**" continued in 2021, a self-assessment tool providing support in identifying fraud risks and the relevant prevention controls, which involved the Group companies for which the document has still not been compiled.

The Law 262/05 Compliance Unit cooperated with the Internal Audit Department in the provision, again in 2021, of a training course on the Internal Control System and with a focus on "Anti-Corruption and Anti-Fraud", in which 50 workers took part.

The correct separation of roles/activities (SoD, Segregation of Duties) is one of the prerequisites for preventing fraud; the organisation of activities make provision for the definition of roles, avoiding functional overlapping and operational allocations which concentrate critical activities on a single entity, with regard to the correct alignment between the IT profile and its related organisational role. The long-term project launched in 2020 by the Personnel and Organisational Central Department, which involved different players including also the Law 262/05 Compliance Unit, aims to identify, map and monitor, in specific SoD matrices, the risk rules in the Sap environment. The overall planning of the programme identified the processes to which to make changes, by prioritising those considered more risky; the process envisaged is divided into five phases: definition of the risk matrix, risk analysis, remediation, mitigation, continuous compliance. The first two phases were completed in 2020 on the purchasing cycle, and activities continued in 2021 with the analysis on sales and distribution; the activity will continue over the next few years for all the additional processes identified.

Managing sustainability

[102-20][102-22]
[102-26]

In order to ensure that **social responsibility** and **sustainability in planning** and **corporate management** are supplemented, 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 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 on **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 VCS Director is a member of the Group's Ethics and Sustainability Committee.

In **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 is part of the External Relations, Institutional Relations and Regulatory Affairs Function and carries out sustainability accountability activities.

The Code of Ethics [102-16]

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 the 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 sees all the workers and the trade unions involved. The fifth and current version of the Code of Ethics was approved by the Board of Directors in December 2019. The fifth update of the Code of Ethics will be carried out in 2022, again through the involvement of the Group's workers.

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 ethical game **AlfabEtico**. Furthermore, since 2013 the Hera Group has undertaken an intense programme for raising awareness on the Code of Ethics addressing 25-30 managers (management employees, middle managers and managers) by means of the Corporate Social Responsibility and Code of Ethics in current operations seminars. In 2020 and 2021, the seminar was cancelled due to the restrictions imposed as a result of the health emergency, but a process was initiated that will allow it to resume in 2022.

The quality, safety, environmental and social responsibility management system [103-2] [103-3]

In 2021, despite the ongoing health emergency, the activities with the certification body for the renewal and maintenance of the various certification schemes of the Group companies were conducted by striking the right balance between face-to-face and remote audits, therefore managing to guarantee seamless continuity with last year. The successful outcome of the audit activities **enabled all quality, safety, environment and energy certifications** of Hera Spa and the other Group companies to be maintained, including Inrete Distribuzione Energia, Uniflotte, HeraTech and Acantho, as well as the Herambiente, AcegasApsAmga and Hera Comm Groups.

[403-1] [403-8]

The Group is also strongly committed to observing the values of social responsibility, assumed as its own in the **Code of Ethics**, and strengthened by the maintenance of the certification of the corruption prevention management system, **Iso 37001**, by the Parent Company Hera Spa, as well as the **Sa 8000** certifications of AcegasApsAmga, AcegasApsAmga Servizi Energetici, Hera Luce, as part of the AcegasApsAmga Group and of Marche Multiservizi.

In line with the Group's development strategies, aimed at developing the objectives of efficient and rational use of resources, in 2021, Hestambiente and Fea also obtained the certification of their energy management system according to the **Iso 50001:2018** standard, bringing the number of Group companies that hold said certification to 11.

With the goal of supporting the process of transition to a circular economy through the sharing of management tools and methods, in relation to the driver of change "Regenerating resources and closing the loop", Hera Spa launched the integration of its environmental management system with the requirements of regulation **Afnor XP X30-901**, therefore laying the foundations for setting up a Group system for the management of **circular economy** projects, with the objective of certification in 2022.

The implementation of a **business continuity** system in the Hera Group is also continuing, developed starting with AcegasApsAmga, according to the framework defined by standard **Iso 22301**, with the goal of ensuring business continuity and minimising the impacts on the public in the event of a crisis.

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 (2021)

[403-8]

Management system	Group	
	No. of companies	% workforce
Iso 9001 - Quality	31	99%
Iso 14001 - Environment	20	87%
Iso 45001 – Health and safety	20	87%
Iso 50001 - Energy	11	72%
Sa 8000 – Social responsibility	4	22%

The percentage of energy consumed at Group companies that have **Iso 50001 energy certification** is 96% of the total (76% in 2020). The increase over the previous year is the consequence of the certification obtained by Hestambiente and Frullo Energia Ambiente in 2021.

In addition to the management systems reported above, the Group companies hold the following certifications:

- Iso 37001 (system for managing the prevention of corruption): **Hera Spa**.
- Uni 11352 (companies that provide energy services - ESCO): **Hera Spa, AcegasApsAmga Servizi energetici, Hera Luce, Hera Servizi Energia and Marche Multiservizi**.
- Iso 17025 (laboratory accreditation): **Herambiente Servizi Industriali, HeraTech and Marche Multiservizi**.
- Iso 27001, Iso 27017 and Iso 27018 (group of regulations that make up the data security management system), Iso 27701 (privacy certification) and Tia-942 Rated 3 (international standard which evaluates the configuration and maintenance of the key aspects of Data Centres): **Acantho and Aresgas** (the latter solely for Iso 27001).
- EuCertPlast (European certification of companies that recycle plastic materials), Iso 22000 (international standard that governs the rules to be followed regarding food safety), Iso 28000 (Security Management System for the Supply Chain): **Aliplast**.
- Iso 14067 (certification of carbon footprint): **Hera Spa** for the district heating of Ferrara.

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. A total of **29 sites held the Emas certification** at the end of 2021. 100% of the waste treated by the Group was treated at plants with Iso 14001 certification.

5.03 Economic value for the stakeholders

The production and allocation of value added

Value added, in this Sustainability Report, 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, own capital and labour, have added to the inputs acquired from outside**. The concept of value added adopted is distinct from the definition of value added strictly applying to accounting practices. Here, the methodology applied is that proposed in 2001 by the Gruppo di studio per il Bilancio Sociale (GBS). With respect to the GBS methodology, rental payments for 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 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 value added distributed is almost equal to the gross value added produced by normal operations.

There are two important reasons for using the indicator of value added. 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 understanding 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 value added is an instrument by means of which we can reconsider the corporate annual financial statements from the vantage point of stakeholders.

[102-7]

PRODUCTION OF VALUE ADDED

millions of Euro	2019	2020	2021
Revenues	6,910.9	7,053.8	10,377.1
Other operating and non-operating revenues	642.3	467.8	400.1
Grants received from public institutions	-37.3	-35.2	-36.0
Consumption of raw materials and consumables (net of changes to raw materials inventories and stocks)	-3,458.2	-3,410.6	-6,668.5
Costs for reclassified services	-2,234.4	-2,340.4	-2,380.2
Bad debt provisions	-80.5	-83.4	-94.4
Accruals to provisions for contingencies and other provisions	-33.4	-32.8	-54.4
Other reclassified operating costs	-28.1	-26.0	-25.8
Capitalised costs	37.6	43.3	60.8
Core gross value added	1,721.1	1,661.7	1,756.8
Portion of profit (loss) pertaining to associated companies and joint ventures	13.4	8.2	13.2
Gross overall value added	1,734.5	1,669.9	1,764.4

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 value added generated for stakeholders in 2021 came to Euro 1,764.4 million, marking an increase of Euro 94.5 million on the previous year (+5.7%).

DISTRIBUTION OF VALUE ADDED TO STAKEHOLDERS

millions of Euro	2019		2020		2021	
Workforce	560.4	32.3%	572.7	34.3%	592.8	33.6%
Shareholders	165.2	9.5%	183.9	11.0%	217.9	12.4%
Company	665.5	38.4%	594.4	35.6%	618.1	35.0%
Financial institutions/Banks	139.4	8.0%	124.9	7.5%	218.0	12.4%
Public Administration	201.0	11.6%	190.7	11.4%	115.1	6.5%
Local community	3.0	0.2%	3.3	0.2%	2.5	0.1%
Gross overall value added	1,734.5	100%	1,669.9	100%	1,764.4	100%

Proposal of the BoD to the General Shareholders' Meeting

The amount of value added allocated to the **workforce** increases by Euro 20.1 million over 2020 (+3.5%). This increase is linked to the salary increases envisaged in the national collective labour agreement, the lower benefits of the mass holiday-use plan adopted by the Group last year, in conjunction with the national lockdown and the changes in the scope of consolidation with respect to December 2020. These effects are only partially mitigated by the lower average presence of employees.

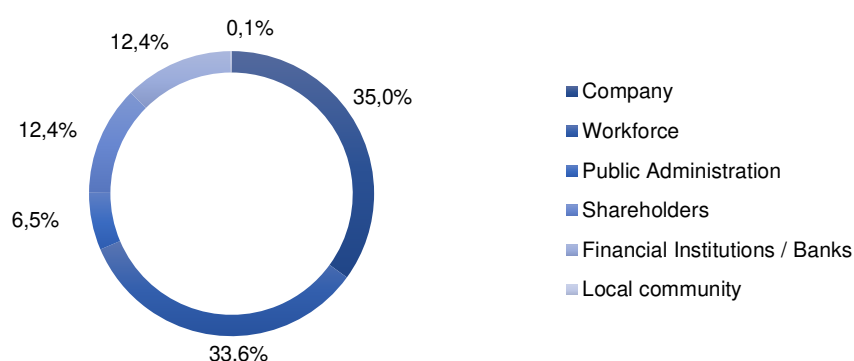
The portion allocated to the **shareholders** of Hera Spa and the minority shareholders of the subsidiaries rose by Euro 34.0 million (+18.5%) and equates to 12.4% of the total, up compared to the previous year.

Of this portion, Euro 178.7 million was allocated as dividends distributed to Hera Spa shareholders (up with respect to 2020) and Euro 39.2 million was allocated as the portion of earnings pertaining to the minority shareholders of the subsidiaries of Hera Spa.

A portion totalling 35% of the value added generated in 2021 was **re-invested in the company**. This portion increased with respect to 2020 (+4.0%) and includes the profit for the year not allocated to shareholders (Euro 154.8 million) and amortisation of investments made (Euro 463.3 million). Higher amortisation was recorded, primarily for the new investments in the operating sectors, owing to an increase in the sales commissions in sales companies and the changes in the perimeter stemming from the entry to the scope of consolidation of companies whose business purpose is the sale of gas, electricity and other energy products, as well as companies specialising in the management of industrial waste and in waste management services.

The portion of value added allocated to **financial institutions** in 2021 came to Euro 218.0 million (12.4% of the total, up by 74.5% compared to 2020). This share comprises Euro 300.3 million in financial charges (Euro 198.3 million in 2020), and Euro 82.3 million in financial income (Euro 73.4 million in 2020). The increase in financial charges is connected with special items deriving mainly from the partial repurchase of five bond loans, for a total book value of Euro 1,780 million, which involved the recognition of charges of Euro 82.6 million due to the repurchase price being higher than the book value.

ALLOCATION OF VALUE ADDED TO STAKEHOLDERS (2021)



The share distributed to the **Public Administration** came to Euro 115.1 million, accounting for 6.5% of the total (down by 39.6% compared to 2020), mostly as a result of the special items deriving from (i) the tax realignment of some goodwill values which had been recognised as at 31 December 2019, pursuant to art. 1, paragraph 83, of Law 178/2020. This transaction determined the tax realignment of said values, with the subsequent recognition of a tax benefit of Euro 87.0 million, in respect of the payment of a substitute tax of 3%, amounting to Euro 9.2 million; (ii) the tax effect for Euro 19.8 million related to the partial repurchase of the bonds already highlighted in the comments on the financial management performance.

Duties and taxes amounted to Euro 55.6 million (3.2% of the total value added distributed), down by 57.6% compared to last year. Of the taxes and duties, Euro 22.7 million was allocated to the Government (Euro 93.5 million in 2020), Euro 19.2 million to the Regional authorities and Euro 13.7 million to the Provincial and Municipal authorities. Corporate income taxes fell from Euro 111.8 million in 2020 to Euro 34.2 million in 2021 as a result of the above reasons.

[201-4]

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 the Public Administration also includes environmental compensations paid to the municipalities regarding the waste treatment plants. In 2021, total payments for use of the assets of shareholder municipalities and environmental compensations came to Euro 90.4 million. There was also Euro 5.1 million relating to the running costs of the national (Arera and Agcm) and local authorities. **Public grants** received in 2020 came to Euro 36.0 million of which roughly Euro 26.9 million **allocated as operating grants** and Euro 9.1 million as **plant grants**. The operating grants mainly include the incentives for renewable sources (RES) recognised by the Energy Services Operator (GSE) for the production from renewable energy sources and grants recognised by public bodies, authorities and institutions for specific projects and activities carried out by the Group. The plant grants refer mainly to investments made in the water sector and in the waste management sector.

Lastly, an amount of Euro 2.5 million was allocated to donations (Euro 0.4 million) and sponsorships (Euro 2.1 million); details on these items can be found in the "Innovation and contribution to development" chapter (under section "Economic development and social inclusion").

[203-1]

The investments

In 2021, Group investments amounted to Euro 570.3 million. Gross of contributions to the capital account, the Group's **operating investments, amounted to Euro 588.7 million**, an increase of Euro 82.3 million compared to the previous year (+16.3%) 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.

5.04 Shareholders and financial institutions

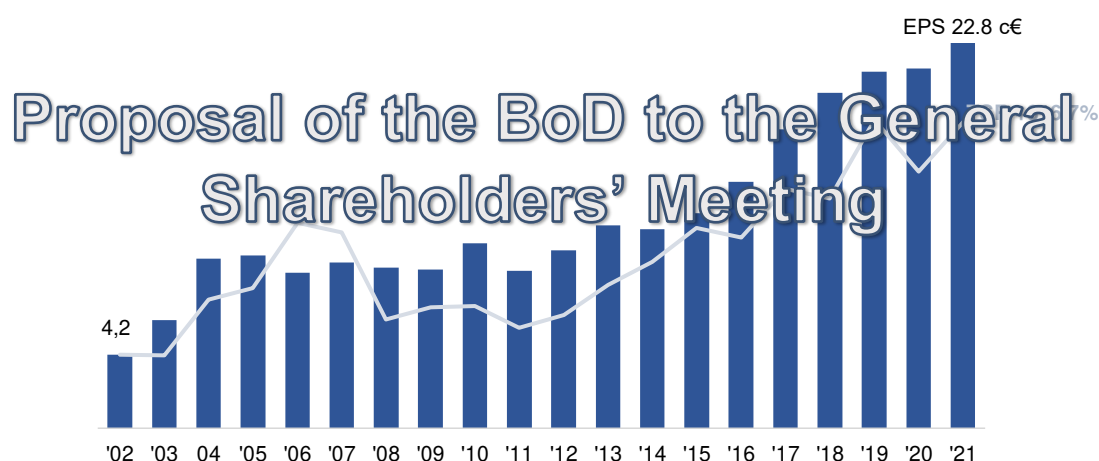
Hera's commitment toward investors

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 19 consecutive years, also under adverse market conditions.

At the end of 2021, the total shareholders' return with respect to the initial public offering (IPO), came to +316.7%: a value which has always remained positive even in periods characterised by considerable volatility on the financial markets.

TOTAL SHAREHOLDER RETURN (TSR) FROM THE IPO COMPARED WITH THE GROWTH IN EARNINGS PER SHARE (EPS)



Full transparency with investors and the financial market on the creation of value

Hera provides the market with the relevant economic-financial information, promptly facilitating the correct assessment and the transfer of the value generated by operations to the listed shares, by respecting the different categories of shareholders, addressing the dedicated communications to them.

Hera continues to make the greatest commitment so as to ensure a plurality of professional and independent appraisals on the company's value and on 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.

In 2019, the Group adopted an **ESG analyst management policy**, in order to select the most authoritative external stakeholders with the best research quality, to whom to provide the necessary

assistance so that they can refine their knowledge of the Group and, consequently, more accurately reflect the practices and strategies implemented since its foundation.

ESG RATING OF HERA STOCK

Company	Rating	Comment
	18/100 (July 2021)	Hera is the first company in Italy to have published its ESG Evaluation, which obtained an overall score of 81/100, placing it in the top fifteen best companies at international level assessed by S&P Global Ratings.

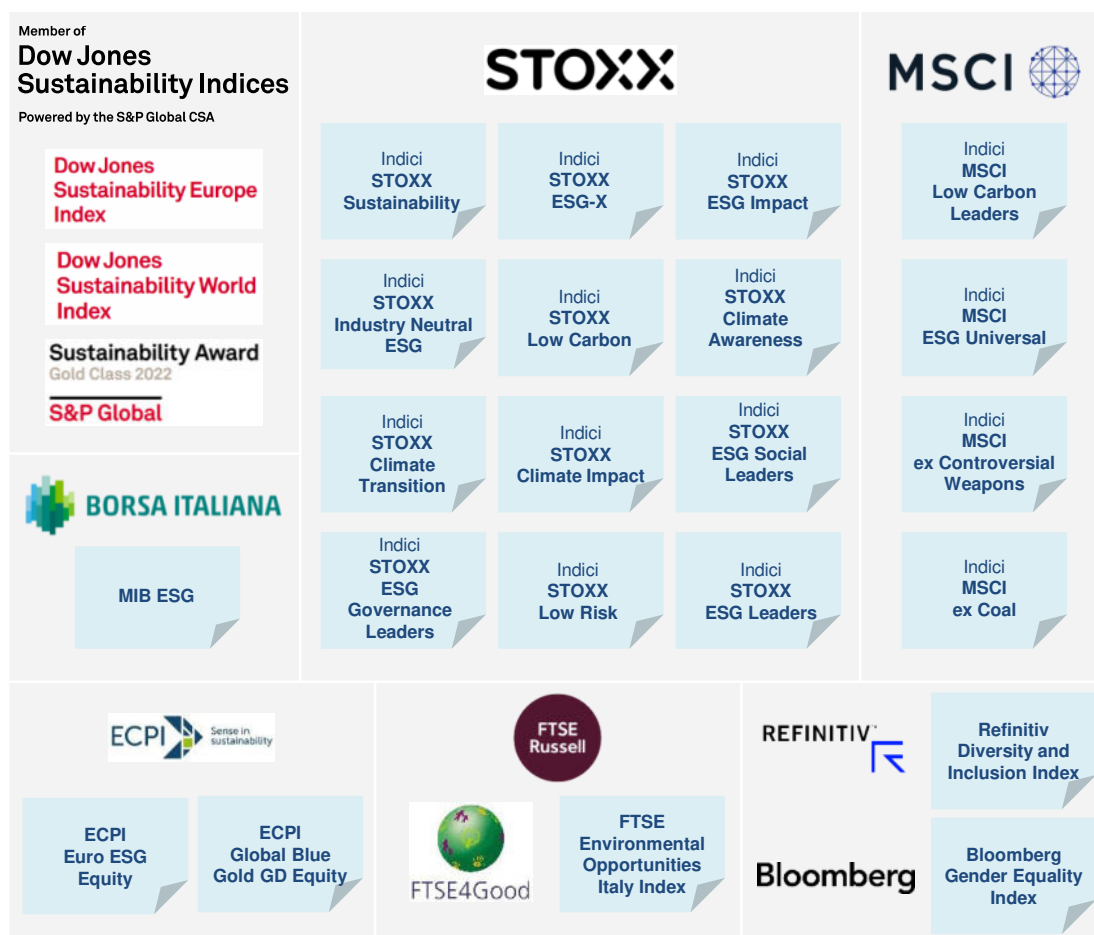
ESG SCORING OF HERA STOCK

Company	Rating	Comment
	90 Industry leader (November 2021)	Hera earned an overall score of 90/100, a result that places it as the best "Multi and water utilities" provider worldwide. (39/100 was the industry average). The score improved by +3 points compared to 2020. This rating is used to select the stock to be included in the Dow Jones Sustainability indexes.
	18.8 low risk (September 2021)	Hera achieved a score of 18.8, which places it in the companies at lower ESG risk (best European multi-utility). The score improved by +7.2 points compared to 2020.
	Advanced (December 2021)	Hera is classified in the Advanced category, in preparation for the entry to the Borsa Italiana 'Mib Esg' index, which is based on the evaluations performed by Vigeo.
	A (January 2022)	Hera confirmed its A rating from MSCI. In particular, the score highlights a notable out-performance in the "Carbon Emissions" category, with a score of 9.8/10
	A- (December 2021)	Rating unchanged from 2020 and improved with respect to 2019 (B). Hera obtains the maximum rating (A) for governance, opportunities tied to climate change, emissions reduction initiatives and targets.
	1st place globally 1st place green finance (June 2021)	Hera came top in the global rankings and in the area of surveying integration of the ESGs in company finances.
	42nd place (September 2021)	Hera is the second multi-utility worldwide in the classification drawn up by Refinitiv on the promotion of diversity, inclusion and personal development.
	80/100 (January 2022)	Hera was confirmed in the Bloomberg index on gender diversity with a score better than the industry average.

The Hera Group is the first company in Italy to have published the **ESG Evaluation** created by the Sustainable Finance analysts of **S&P Global Ratings**. Hera obtained a score of 81/100, placing it in the top fifteen best companies at international level assessed by S&P Global Ratings. The score obtained (81) is higher than the international (68) and European (73) average and places the Hera Group in fifth place among Utility Networks at international level (the industry average is 74).

The ethical indexes 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 indexes 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.

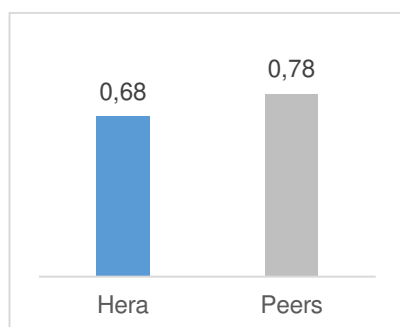
ETHICAL INDEXES IN WHICH HERA STOCK IS PRESENT



The commitment to reduce the investment risk

Hera pays great attention to the **monitoring of the risk** components associated with the trend of stock on the stock market, such as the volatility of the listed prices (beta index), which was lower than other local utilities (A2A, Acea, Iren) in the three-year period.

HERA AND PEER 3-YEAR BETA (2021)



These characteristics of the stock are consistent with the strong resilience of the 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.

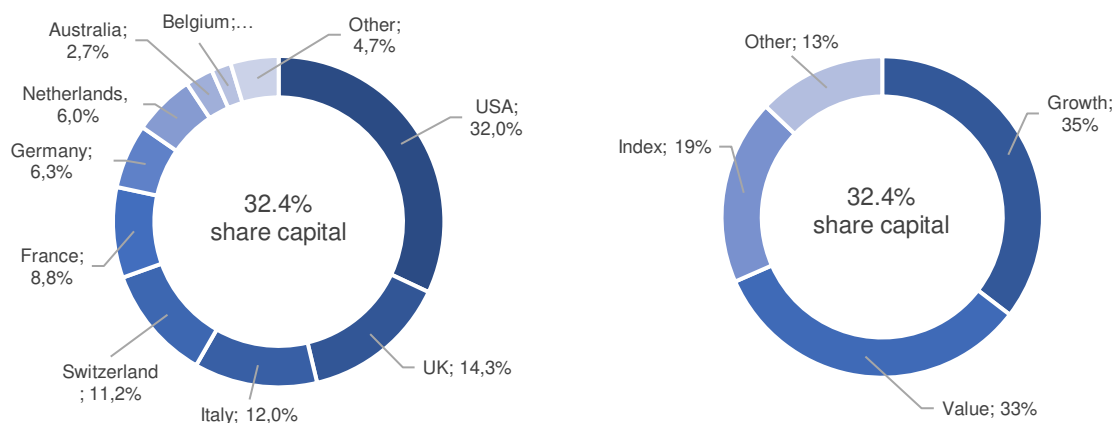
In 2021, contacts totalled 341, including the launch of new relations with professional investors which have an investment style consistent with the Group's stock profile. Management has participated in theme-based and sustainability conferences, meeting with investors who combine ESG aspects with financial assessments and now account for approximately 30% of total assets under management globally.

The institutional shareholding structure

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 from the resilience and low volatility of the stock.

INVESTMENT FUNDS BY GEOGRAPHICAL AREA AND INVESTMENT STYLE AS AT 31/12/2021



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 on the search for businesses able to grow at a faster-than-market rate or competitors or companies that operate in sectors, in turn, with a high level of current or potential growth; Value, to investors that are searching for companies whose market price is discounted with respect to the intrinsic value or companies that trade at low valuation multiples; Index, to investors that use passive investment strategies, structuring portfolios to imitate the reference indexes and tracking their trend. The item Other includes: hedge funds (investors that use investment strategies, with the aim of maximising the investment return in any market situation), long/short (implementing investment strategies to capitalise on the return differential between financial instruments), momentum (use quantitative investment strategies that attempt to take advantage of the trends in financial instruments), sector specific and specialty (invest solely in particular equity sectors (e.g. financial, utility, industrial)), yield (search for companies that guarantee greater returns from the distribution of dividends).

Source: Refinitiv

The Hera stock is included in the FTSE Mib, FTSE All Share and FTSE Italia Servizi Pubblici of Borsa Italiana **share indexes**.

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 the stakeholder 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 closely monitored aspects of good governance and protection of the interests of the shareholders: 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.

The composition of the shareholding structure

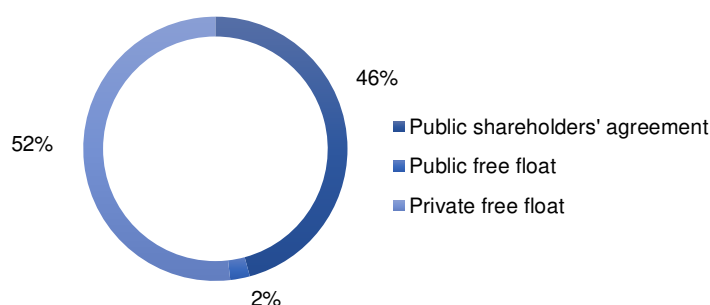
[102-5]

[102-7]

Hera's past features 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 more than 45 utility companies since 2002, ensuring around 40% of the growth of the results in the last 18 years. The merger transactions have been financed mainly by the issue of 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 2021. These transactions have not had diluting effects for the shareholders, as the annual average growth of the earnings per share of around +9% bears witness to. The creation of value took place also thanks to the extraction of synergies and the increased economies of scale. The Group's capitalisation thus reached almost Euro 5.5 billion (compared to Euro 1 billion in 2003) on average in 2021, i.e. an average annual growth of +9% in line with the growth in earnings per share.

The expansion of the shareholding structure maintained a constant balance between the public and private component, and extended the diversification of the shareholders both in terms of number and geographic origin.

SHAREHOLDING STRUCTURE AS AT 31 DECEMBER 2021



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 and in 2020, according to the Climate Bonds Initiative, bonds were issued for a total value of US\$ 269.5 billion, just slightly above the figure of the previous year (US\$ 266.5 billion).

The Hera Group was the first in Italy to launch a green bond in 2014, paving the way for other operators in the utility or non-utility sectors. Through this first green bond, 26 projects belonging to the categories indicated in the table below were financed or refinanced for a total of Euro 500 million.

USE OF FUNDS RECEIVED WITH THE GREEN BOND 2014-2024

Area	Total funds collected (millions of Euro)	Number of projects
Increase in energy production from non-fossil sources	57.1	10
Increase in energy efficiency	219.1	7
Increase in the use of waste-to-energy plants for the treatment of waste	173.2	4
Improvement of the wastewater treatment plants	31.9	4
Increase in separate waste collection and reduction in the use of landfills	18.8	1
Total	500.0	26

In 2019, 5 years from the issuing of the first green bond, **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 amounted to Euro 500 million. The transaction saw a significant participation of 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 structures for recycling, recovery and reuse of materials similar to that for 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 in the **Green financing framework**, published by Hera in June 2019 and verified by ISS Esg, guaranteeing the correct allocation of funds. The environmental benefit generated by the projects was quantified by using 11 performance indicators that are reported annually in the sustainability report, included in the GRI contents index and, therefore, subject to external audit.

GREEN BOND 2019-2027: ALLOCATION OF FUNDING

Area	Total funds collected (millions of Euro)	% 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 infrastructures	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.

The first sustainable revolving credit facility in Italy

In May 2018 (expiring in May 2023), a new credit facility was taken out for Euro 200 million, 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 the multi-utility company may benefit over time by more favourable rates.

The areas of the indicators identified coincide with the two drivers of shared value creation (Energy - Pursuing carbon neutrality and Environment - Regenerating resources and closing the loop) and are: carbon footprint of energy production, percentage of separate waste collection and reduction of energy consumption. The indicators identified are included in the GRI contents index of this Sustainability Report and are, therefore, subject to external audit.

Sustainability-linked financing framework and Sustainability-linked bond

In October 2021, Hera published its Sustainability-linked financing framework, a tool which further reinforces the integration between financial strategies and the attention on sustainability of the Group, with a focus on carbon neutral projects and the circular economy.

In particular, the Group introduced two key indicators to its bond, in line with the strategies outlined in the Business Plan for energy and environmental transition, and representative of the multi-utility's commitment to reaching the objectives of the UN Agenda 2030. The first indicator concerns Group greenhouse gas emissions (Scope 1+2+3 from the sale of electricity and gas downstream) while the second relates to the quantity 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. For insights in this regard please refer to the sections "Hera for the climate" and the "Contribution of the Hera Group to future plastics" as well as to the case study "The commitment of the Hera Group to the new plastics economy".

INDICATORS PROVIDED FOR IN THE SUSTAINABILITY-LINKED FINANCING FRAMEWORK

	Base year	2021	2030 target
Reduction of CO ₂ emissions compared to 2019 with SBTi calculation methodology (Scope 1+2+3 sale of electricity and gas downstream) (%)	13,626.4 kt (2019)	-11.6%	-36.7%
Plastic recycled by Aliplast (thousands of tonnes)	59.6 (2017)	80.9	152

In addition, for both indicators, the intermediate Sustainability performance targets have been defined, which will be reported annually in the sustainability report, included in the GRI contents index and, therefore, subject to external audit. In 2021:

- Group greenhouse gas emissions fell by roughly 12% compared to 2019, with respect to a forecast reduction of 26% in 2025;
- recycled plastic rose by 36% compared to 2017, with respect to a forecast increase of 125% in 2025.

For further information on the trend in these indicators, please see the sections "Hera for the climate" and "Transition to a circular economy", respectively.

Following the publication of the Sustainability-linked financing framework, the Hera Group issued its first Sustainability-linked bond of Euro 500 million, repayable in 12 and a half years. An annual fixed-rate coupon of 1% will be paid, while the return at the time of issue was 1.077%. Starting from the interest payment date in 2032, provision is made for a potential step-up (interest rate increase) in the event in which the company should fail to reach the targets set in terms of the reduction in greenhouse gas emissions (increase of 0.20% in the rate) and the quantity of plastic recycled (increase of 0.15% in the rate).

The indicators, strategies and targets included in the Sustainability-linked financing framework have been validated and considered ambitious by Sustainalytics, one of the leading ESG rating agencies, which issued a second party opinion certifying the consistency of the framework with the main reference international standards, starting with the 2020 Sustainability-linked bond principles of Icm (International Capital Market Association).

5.05 Dialogue with our stakeholders

Dialogue and consultation initiatives

[102-21]
[102-42]
[102-43]
[102-44]

Hera's significant commitment to involving stakeholders is by now part of the operational structure of the departments that deal with the relations with various stakeholders. This strong commitment continued throughout 2021 despite the difficult situation due to the restrictions on containing the Covid-19 pandemic.

The main engagement and dialogue activities carried out with the company's stakeholders and the method used for identifying the material issues that guided this activity are described in the methodological guide of this report in the section "[The stakeholders and the materiality analysis](#)".

Customer
satisfaction
survey

Since 2005, the quality of our services has been assessed through annual Group customer satisfaction surveys aimed at defining improvement measures.

ASSESSMENT OF OVERALL SATISFACTION OF RESIDENTIAL CUSTOMERS

CSI (from 0 to 100)	2019	2020	2021
Overall satisfaction index (CSI)	73	73	73
Service satisfaction index (CSI services)	76	78	78
Global satisfaction	75	76	76

The satisfaction index and average satisfaction for the services provided in 2021 confirmed the 2020 results, reaching 73 and 78 points, respectively, in 2021. All services widely exceeded the threshold of 70 points, confirming high levels of satisfaction.

The contact channels show an excellent and very high level of customer satisfaction: the ratings of branch offices, call centres and online services are above 80 points, which means that customers will always find competent operators and appropriate instruments, regardless of the contact channel.

SATISFIED CUSTOMERS

%	2019	2020	2021
Percentage of satisfied customers	92%	92%	92%

The percentage of satisfied customers (customers who expressed a satisfaction rating of 6 or higher) was **92%** in 2021, confirming the results for 2020 and 2019.

The survey was also carried out for **business customers** in order to monitor customer satisfaction levels both for the free market and protected market. In the case of companies, the contact individual for the services provided by Hera is interviewed.

The results of the 2020 survey are reported since those regarding 2021 were being processed on the date of approval of this report. There is a cross-cutting increase in the number of customers contacted to monitor satisfaction. In particular, CSI increased exceeding **70 points** for the second consecutive year.

ASSESSMENT OF BUSINESS CUSTOMER SATISFACTION

CSI (from 0 to 100)	2018	2019	2020
Overall satisfaction index (CSI)	69	72	73
Service satisfaction index (CSI services)	74	75	77

The
methodology
used for the
customer
satisfaction
survey

The customer satisfaction survey is based on an internationally recognised methodology designed to assess the quality of services offered and customers' overall satisfaction with Hera. The number of

telephone interviews in 2021 settled at over 9,000 replies. 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 individual for Hera within the household. The questionnaire, which lasts around 15 minutes, monitors satisfaction components and measures future behaviour (word-of-mouth, loyalty etc.) towards the company. The assessments of the results are expressed in numerical scales, divided into levels of satisfaction: under 50 points indicates insufficiency; up to 60, minimal satisfaction; between 60 and 70, a good level of satisfaction, and above 70, a high level of satisfaction.

From the second half of 2017, call centres, branch offices, online services and apps are monitored as contact channels through daily interviews conducted the day after the contact has been made, in order to gain insight into the customer's satisfaction while the experience is still fresh. Around ten thousand interviews/month are carried out using IVR (by telephone with pre-recorded questions) and CAWI (by email) methods. Over 120 thousand interviews were carried out in 2021 to monitor the contact channels. The portal used for analysing customer evaluations allowed channel performance to continuously improve.

Other dialogue initiatives with customers

Our **web portal for consumer groups** has been online since 2011: the section of the Group's corporate website is entirely reserved for representatives of the main associations 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 and solve problems. In 2021, the web portal recorded **16,049 visitors** and a total of **43,700 page views**.

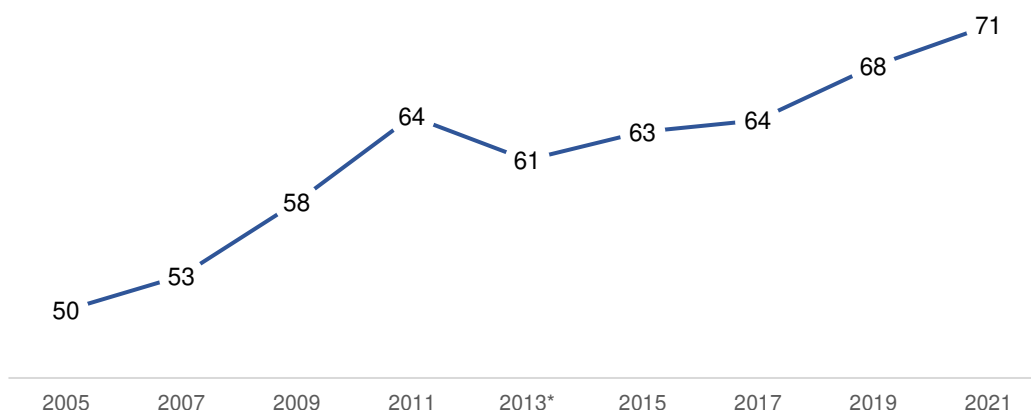
In addition to the portal, the contact individuals and operators of the associations can use dedicated email addresses, and phone and fax numbers that, together with the web section, make up a real communication channel reserved to consumer groups. In 2021, 536 cases were managed through this dedicated channel (425 in 2020), 99.2% of which were solved successfully; average case resolution time was 1.5 business days.

Furthermore, in order to build positive relationships and create an increasingly open dialogue, Hera organised specific meetings with consumer group contact individuals, again in 2021. In particular, **2 meetings** were held, in April and September 2021 respectively, during which the water leakage fund and joint mediation and ADR systems were discussed and assessed. The 2 meetings were organised online and a total of **25 representatives from leading national and regional consumer associations** took part. Furthermore, as every year, periodic meetings were held for the provincial and local representatives of the associations: as in 2020, they were held online due to the Covid-19 health emergency. A total of **2 meetings** were held in November involving overall **33 representatives from the main associations operating throughout the local areas**. During the meetings, topics of special interest and current relevance for the associations were addressed, including bill increases and the Energy Decree, the transition to the free market, the Water Bonus, and focus on two issues: AWS certification and the leading projects carried out by Hera in the field of water management, and the Commissioning Plan for the Inrete 2G smart metering system (PMS2).

Internal climate survey and other dialogue initiatives

Following the completion of nine surveys (the first dating back to 2005), the path undertaken by the Hera Group has proved to be highly effective: satisfaction and participation have **increased by more than twenty points**.

ESI (EMPLOYEE SATISFACTION INDEX) OVER THE YEARS



The 2013 value was constructed using Hera, AcegasAps and Amga data collected in 2013-2014. The decrease in the 2013 and 2015 values is mainly due to the acquisition of AcegasApsAmga in 2014.

Conducted every two years, the climate survey has allowed the company to implement a wide range of ideas and suggestions from workers and to set up detailed improvement plans based on the outcome of the survey.

The survey was held between August and October 2021 and was **attended by 82% of the corporate population** (2 points up on the previous edition), with the satisfaction target being exceeded and settling at **71 (out of 100)**. The various areas examined in the questionnaire (me, team and manager, company and culture) achieved excellent scores.

The results show employees' appreciation of the company's ability to define processes, projects and activities that meet the changing needs of people and the market.

Specifically, the Hera Group's main investments were aimed at ensuring:

- sharing of purpose, mission and values;
- workers' safety;
- renewal of working environments and instrumentation (equipment and devices);
- improved corporate communication;
- development of certain specific areas such as training, the leadership model, the welfare system and performance management.

The process of continually listening to employees has helped the Group not only address and accompany change, but also incorporate the different businesses that have become part of the Hera Group over time, aligning and developing a common culture.

Among the initiatives most appreciated by workers:

- smart working / remote working;
- courses/training/updates;
- corporate welfare plan;
- Covid19 management (safety devices, prevention, vaccination campaign, information...);
- technological innovation/renewal 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.

Internal communication

The **function of internal communication**, especially in this complicated period marked by the pandemic, is to increasingly inform, involve and promote the exchange and sharing of experience. In line with this requirement and consistently with the company's strategic guidelines, 2021 was the year that steered internal communication towards increasingly **digital** projects.

The new **"inHera" corporate portal** went online in December 2021, launching a new season of communication that will be more interactive, participatory, inclusive and engaging. The "inHera" intranet has a system for **profiling and configuring the interests** of employees and provides personalised content and notifications based on their chosen preferences. It is also **integrated with corporate tools** such as Digital Workplace, corporate applications, Office 365, calendar and address book. The new portal was designed to keep operating and information functions together: it is the only gateway to the Group's applications and digital communication tools and is available to everyone, including colleagues who received their digital identity in 2021 and use the Group's digital resources.

A strong impetus to digitalisation was also given by the fact that it was not possible to organise face-to-face meetings: alternative solutions were considered, such as **streaming events** and **video making**. The traditional "Facciamo il punto" (Let's take stock) meetings, as in the previous year, were organised through two videos in which the Chairman and CEO provided information about future strategies and objectives (the videos had a total of 6,000 views). Another video was sent to all colleagues at the end of the year, with focus on the results achieved and a preview of the main indicators of the Business Plan.

With regard to the **topics addressed** by internal communication during 2021, attention was given to the following corporate issues:

- Sustainability: creation of the **monthly Sdgs column** - both paper and digital - for presenting projects linked to the UN's 2030 Agenda goals, also through interviews involving colleagues who took part in the initiatives;
- Diversity: enhancement of the topics promoted by **Diversity management** through articles, videos and the creation of webinars for colleagues.
- Digitalisation: definition of the **communication plan and support** provided to the Digital Workplace Plan and the **corporate digitalisation tools**. The Ambassador project was launched in 2021, involving colleagues in social activities seeking to improve the company's online reputation.

In 2021, great importance was once more given to **communication about the health emergency**: operational instructions and information on prevention, returning from trips abroad and green pass checks were collected and conveyed through the information hub "Ognuno protegge tutti" (Protecting everyone protects us all).

At the same time, all ordinary internal communication activities continued:

- **222 articles** paper HO
- **286 articles** digital HO
- **133** Buongiorno del mattino (**Good morning**)
- **45** communication campaigns
- **29** video interviews

Relationships with the local community

HeraLAB, a tool for listening to the local communities
[413-1]

[102-44]

HeraLABs are local multi-stakeholder boards that Hera provides to the local areas in which it delivers its services to open a structured channel for listening to and discussing with local communities. The HeraLAB process lasts one year, during which the local stakeholder board meets five times. The aim of the meetings is to define a plan of actions that Hera undertakes to implement over the next two years.

Two of the five projects for the Rimini Initiatives Plan were implemented in 2021: **Senza reti** (Without Nets), designed to recover plastic in the sea, through the creation of a virtuous network made up of institutions, environmental associations, harbour-offices, fishing operators, fishermen's cooperatives and Hera; and **Eco-sustainable Events**, during which Guidelines for sustainable events were drawn up and applied on an experimental basis at Santarcangelo dei Teatri. The six additional initiatives of the Rimini and Bologna HeraLABs were rescheduled for 2022.

During the year, the **two Modena and Forlì-Cesena HeraLABs** were also concluded and local initiative plans were approved with four projects for each respective area. The Forlì-Cesena HeraLAB was the first for this area since the start of the HeraLAB project

The Modena Initiatives Plan included the following projects:

- **Ecological transition in the agri-food sector.** The aim of the project is to promote a survey in the agri-food sector in order to identify the main processes on which ecological transition initiatives can be more effectively introduced. The results of the study will encourage the implementation of effective actions throughout the supply chain (industrial production, distribution and sale, catering).

- **Dialogue groups.** To accompany the transformation of the waste collection service, which will involve 32 municipalities in the province of Modena, dialogue with citizens will be strengthened and innovative contact channels will be set up, involving the third sector, young people and trade associations.
- **Le vie dell'acqua** (Water ways). Thanks to this initiative, the historical and nature trails in the Modena area (Via Romea/Nonantolana pilot project) are accompanied by the "story" of the water flowing underneath them. Public fountains will be installed along the route, acting as strategic points to which communication actions will be linked, also with the support of the Aquologo application.
- **Energy tutor.** This project aims to implement structured channels focused on training the staff of Third-Sector support desks, in order to become more familiar with the bonuses available and all the incentives offered (whether or not by Hera) to reduce energy poverty and arrears.

The Forlì-Cesena Local Initiatives Plan included the following projects:

- **"Green" hotels.** The aim of this project is to define highly effective methods (brand, protocol) to group together and distinguish the hotels of Cesenatico with a green/environmentally-friendly approach. For this purpose, a working group comprising the public administration and tourist operators will be set up to define best practice standards for "green" hotels and decide how to promote this type of accommodation facilities.
- **Ecological transition in the footwear district of San Mauro Pascoli.** In collaboration with the public administration, enterprises, trade associations and universities, a study will be promoted in the district of San Mauro Pascoli (FC) to become aware of the different types of manufacturing waste in the shoe industry and to understand how this waste is managed by the companies. This will be done to identify any processes on which circularity actions may be applied.
- **Am I circular?** The project makes people more aware of good circularity practices that can be applied to everyday life, in order to improve environmental impact. Ten good circularity actions on energy, water and waste will be selected. These actions will be promoted by means of a vademecum prepared together with environmental and consumer associations. Thanks to the participation of local companies, a feasibility study will be launched to create an App that measures the circularity of our most common daily habits.
- **Protocol with third sector.** Working tables and structured dialogue will be set up with Volontà Romagna (an association resulting from a merger between Volontarimini and Assiprov, the voluntary service centres of Rimini and Forlì-Cesena, respectively), in order to engage the different targets of the local community and, in general, the stakeholders of various projects having as their priority goals: waste reduction, the quality of separate waste collection and city integrity improvement.

As at 31 December 2021, a total of **120 meetings (equal to over 2,700 hours of listening)** had been organised for the HeraLAB project. The community affected by HeraLAB over the years is made up of **116 members**. A total of 78 projects have been approved during the laboratories, 57 of which have already been implemented.

Eight years after the start of the HeraLAB project, an assessment was carried out before implementing the third edition; as a result, the **Guidelines for the new edition of the LABoratory** were drafted in 2021. The new edition will be implemented in June 2022.

As set forth in the HeraLAB regulations, appointment as LAB member and attendance to the LABs are **free of charge**.

Hera has decided to pay an attendance fee of Euro 150 (Euro 100 during the first edition of the project) for each participant and for each LAB meeting. The overall attendance fees go into an annual fund that the LAB uses every year for supporting sustainability initiatives and projects promoted by local public bodies or non-profit organisations identified by the LAB. From the start of the HeraLAB project to the end of December 2021, Euro 97,750 attendance fees have been donated to 23 public bodies and non-profit organisations in the local areas where HeraLAB is active.

Associations of which Hera is a member

[102-13]

The Hera Group is present at the highest levels of the organisations which represent the system of local public services, first and foremost Utilitalia. Hera participates actively in the association's activities and supports the institutional communication through the identification of its representative in the different round tables opened with regulators by the associations. At local level, Hera takes part actively in Confservizi Emilia-Romagna and Confservizi Veneto (the Regional Association for Companies, Firms

and both public and private Bodies that manage local public Services in their reference area), in Confindustria and Unindustria in many of the local areas of competence.

In the **energy field**, the Group is also a member of Anigas (National Association of Gas Industrialists), Assogas (National Association of Gas Private Industrialists and Energy Services), Airu (the Italian Association for Municipal Heating), Fire (Italian Federation for the Rational Use of Energy), Assorisorse (Natural Resources and Sustainable Energies Association) Apce (Association for the Protection of Electrolytic Corrosions); Uni (Italian Regulatory Body); Cti (Italian Thermotechnical Committee), and it takes part in Cig (Italian Gas Committee) works. At European level, it participates in the CCE (European Cooperation Council), especially with regard to energy transition topics.

In the **environmental sector**, the Group is also a member of the national association Fise Assoambiente and of Eurits, the European association regarding hazardous waste; again at European level, it has joined the Rdf Industry Group, which comprises organisations spanning the waste-derived fuel supply chain. The Group has also joined the supply chain consortia Polieco, Conip and Cic; Emas Ravenna, the first national entity to have obtained Emas district registration; and Unichim (Association for the Unification of the Chemical Industry).

The Group contributes to **research activities** regarding the public utility services sector performed by leading institutions, both as a client for specific research and by participating in the scientific debate proposed by them with contributions published under record: Agici Finanza d'impresa, Ref Ricerche, Florence School of Regulation, Leap Mater, and Innovhub- Stazioni Sperimentali.

Hera is also a member of the **Asphi Foundation** (promotion and integration of the disabled via the use of Information and Communication Technology) and of **Impronta Etica** (a business association to promote social responsibility). Hera is also a member of the **Circular Economy Network** (supporting and promoting circular economy development), the **Sustainability Makers** (sustainability issues), the **Aspen Institute** (an international non-profit organisation which has as its mission the internationalisation of business leadership and dialogue on major contemporary issues), **Aziende Modenesi per la Responsabilità Sociale d'Impresa** (Companies from Modena for Corporate Social Responsibility), the **Rubes Triva Foundation** (training and promotion of occupational safety in environmental hygiene companies), and the **Italy Global Compact Network Foundation** (promotion of a culture of corporate citizenship).

[415-1]

Also in 2020, consistent with the provisions of the Group's Code of Ethics and protocol for Model 231, the Hera Group **did not make any contributions of any kind to any party or politician**.

CONTRIBUTIONS TO POLITICAL PARTIES AND TRADE ASSOCIATIONS

thousands of Euro	2018	2019	2020	2021
Politicians and political parties	0	0	0	0
Trade associations	1,326	1,336	1,304	1,284
Other associations/organisations (promotion and spread of sustainability, research and industry/themed studies)	87	117	153	178
Other contributions	0	0	0	0
Total	1,413	1,453	1,457	1,462

Among the main contributions in 2021: Euro 916,219 to trade associations and Euro 74,202 to associations dealing with CSR. The first category mainly includes Utilitalia (Euro 660,219) and Confservizi Emilia-Romagna (Euro 184,500), while the highest single contribution made to the second category is Circular economy network (Euro 15,000).

Communication

Social and environmental communication

In 2021, the COVID-related safety rules once again affected communication choices which, however, always leaned towards being close to customers and using simple and friendly communication, geared towards resuming everyday activities.

The year began with TV **commercials** starring Giorgio Comaschi and reminding all citizens of the **rules** for separating waste and of the small good actions we can all take with very little effort. These

commercials always referred to the previous year's RigenereAzioni campaign, recalling the rule of the 5 Rs: Recycle, Reduce, Reuse, Recover, Regenerate.

From March to June, and then in the autumn, the **RigenereAzioni campaign** on the topics of water, energy and waste was resumed, with two new endorsers: local influencers and celebrity Luca Mercalli. They were both involved with two different but complementary aims; the influencers were chosen to speak to a **young audience**, through Instagram, and they showed the actions that everyone can take to save resources; instead, Luca Mercalli had the task of addressing a **more adult audience** and gave advice on the protection of resources through local radio and TV stations.

We aired **1,912 radio commercials** and **971 TV commercials** featuring Luca Mercalli, while the influencers reached **16,550 likes** for reels and **714,558 overall views**.

Both were involved bearing in mind some key dates in terms of sustainability and the UN's 2030 Agenda: the world days of water, energy, environment, earth and biodiversity.

In the spring and autumn, the **campaigns to increase the quality of the separate collection of plastic and organic waste** in some local areas with considerable criticalities continued. In addition to standard communication tools (flyers sent with bills, posters, bus shelters, large-scale distribution, social networks, radio), leading **local TV stations** were again used to broadcast ironic commercials specifically built around these issues. For both campaigns, the claim was deliberately short and the visual was highly evocative and at the same time appealing, giving both words and images equal potential.

A **flyer summarising how to carry out quality waste separation** was also sent to customers with their bill, using clear summary tables and cartoons.

Hera in the Internet

The Hera Group is continually committed to ensuring **effective web communication**, which fully meets the transparency expectations of its stakeholders. The portal www.gruppohera.it is an important communication and interaction tool between the company and citizens, and is constantly updated. With this in mind, a **new version of the portal** was published in February 2021. Designed with an inclusive approach, simplified content and easy browsing, the new portal will continue to be enriched with content with a view to continuous improvement.

Compared to the previous website, the 2021 version is **smoother and more streamlined** in terms of distribution and amount of content (approximately 25,000 pages against 100,000 of the previous website), has a **modern** narrative style (for example, the storytelling in the "Together" area) and features **simplified** user interactions and clicks. Furthermore, with regard to the Hera Group's digital ecosystem, there is greater **integration** between the web portal and the Group company websites. This was achieved by redistributing content and directing traffic towards the various business channels, thus making it easier and quicker for stakeholders to find the information they are interested in.

In 2021, the new website recorded around **2.4 million visits** totalling around 5.8 million pages visited. The most frequently viewed areas were the **"Assistance"** and **"Offers and Services"** areas (both included in the "Customers" area of the previous website) with around 3 million page views (around 53% of the total) and **"Group"** with around 1.5 million page views (around 21% of the total).

Within the "Assistance" area, the "Environment" service was confirmed as the most viewed in 2021, with almost 1.1 million page views, while within the "Group" area, the most viewed sections were Media (roughly 295,000 views) and Work With Us (262,000 views).

What is Hera's presence on the web?

Hera uses communication through social channels to broaden dialogue with the different local stakeholders and narrow the gap even further thanks to a simple language and daily life content.

The Group's online visibility increased in 2021 (+13%). Hera's presence on the web focuses on blogs, forums and social networks, i.e. platforms on which the Group monitors topics relevant to its reputation and operations.

Based on the over 7.500 posts referring to Hera, sentiment showed very positive ratings.

The Hera Group's **Instagram** page had 6,300 followers (41% more than 2020) and published four posts per week, generating almost 17k engagements (likes, comments, photos saved). The **YouTube** channel had over 3,000 subscribers in 2021 and reached over 3.6 million views. In 2021, 157 new videos were published reaching 677,000 views (+121% compared to 2020).

The **Facebook** page on Assistance with separate waste collection in the local areas served by Hera exceeded 6,100 fans, with 12,000 engagements including likes, comments and shares (+128% compared to 2020).

Twitter almost reached 7,000 followers in 2021, with a total of 2,445 posts published (with an average of over 200 posts published every month). The tweets had a total of 8.4 million views, +39% compared to 2020 (with an average of 700,000 views per month) and generated more than 12 thousand likes and retweets. The account continues to pursue the aim of conveying institutional content to enhance the multi-utility's reputation. It has evolved over time to guarantee timely information on services, broaden the opportunities for communication with customers and involve all stakeholders, drawing on its strong links with the local area and on the creation of shared value.

LinkedIn reached 93,000 followers, rising by 19% compared to 2020. Around 850 posts were published on the profile during the year, which received about 174 thousand engagements and reached more than 2.1 million people. The account continues to be a place where professionals involved in the company's business areas can meet and exchange ideas. With a view to reputation and employer branding, increasingly more space is given to initiatives that involve the company's top management and managers as well as the personnel policies for the selection and attraction of talent, training and the development of people.

Media relations

The press office manages Hera Group's communication on the local, regional and national news media. This work is accomplished by continuously drawing attention to the company's many initiatives, through the dissemination of press releases and the organisation of press conferences and press tours at the Group's main plants. This effort is complemented, in parallel, by the organisation of in-depth interviews with management on specific issues, as well as the drafting, based on the needs of journalists or on topical issues on the media agenda, of position papers and specific material on the various business areas. The press office also promptly answers any critical positions taken against the company or its services, and provides a direct line, through the media, for local communities and customers. These activities are carried out in collaboration with all the company's structures and with all the Group's companies. Lastly, the office handles relations with the press offices of public and private institutions, associations or third parties to give visibility to the jointly developed activities.

A qualitative and quantitative analysis has been active for some time now to gauge this daily work. It is carried out by a specialised third party, which constantly and thoroughly monitors national, regional and local press (press, web and audio-video). All the articles are assessed and weighted 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. The pieces are then grouped according to their tone: positive, neutral, or critical.

HERA-RELATED NEWS ITEMS (NATIONAL PRESS REVIEW)

%	2019	2020	2021
Favourable or highly favourable articles	97.2%	96.3%	98.7%
Neutral articles	2.6%	3.6%	0.9%
Critical or extremely critical articles	0.2%	0.1%	0.4%
Total articles (no.)	752	641	718

HERA-RELATED NEWS ITEMS (LOCAL PRESS REVIEW)

%	2019	2020	2021
Favourable or highly favourable articles	84.9%	84.6%	78.6%
Neutral articles	9.8%	10.1%	10.9%
Critical or extremely critical articles	5.3%	5.3%	10.6%
Total articles (no.)	6,486	5,625	5,621

Thanks to the work done, in 2021, **Hera's positive visibility** in the press continued to be at very high levels, rising further compared to the previous year. The number of articles published in the national press amounted to over 10% of the total - 718 out of 6.339 articles published globally - rising compared to 2020. This figure reveals the attention by the press and the Group's firm involvement in national and local dynamics, whether specific or general, and demonstrates the role of the company among the

leading players in the sector, which has increased particularly in the national media in recent years following its inclusion in the FTSE MIB index and the Dow Jones Sustainability Index. From a qualitative standpoint, the positivity concerning Hera stands almost at 99% in national publications and is over 78% in regional and local publications. Among the topics that contributed to this positive feedback: the business plan; positive economic and sustainability results; investments and impact on the local area; welfare, gender and HR management corporate policies; the wide range of energy efficiency projects for companies and condominiums and of energy projects for public lighting renovation in various municipalities; initiatives for the circular economy; regeneration of resources (including water); energy transition and decarbonisation; the waste management services set up in the various local areas; the broad offer of educational activities for schools; and sponsorships.

The **trend of critical articles** has settled at very low levels over the years: in 2021, below 1% for the national press and 10% for the local press. In both cases, this is quite a logical result and in any case very low if we consider the multi-business nature and the size of the Group's activities which cover an increasingly wide area. The greater negativity in the local press is due to some critical issues that particularly involved the local areas of Padua (construction of the fourth line of the waste-to-energy plant) and Pesaro-Urbino (construction of a biodigester and debate on the possible merger between Marche Multiservizi and Aset).

Pending legal proceedings

[307-1]

[419-1]

In addition to the disputes involving customers and suppliers which are discussed in the corresponding sections of this report, at the end of 2021, additional **614 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 the distributor Inrete, were subject to administrative termination as governed by Arera legislation (specifically the Consolidated Law on gas delinquency). The remaining disputes refer to very different issues regarding claims for damages associated with the management of the services performed by Hera or Group companies. During 2021, 953 disputes were settled of which: 250 with energy customers, 25 with water service customers, 24 with suppliers, 7 with waste management service customers and the remaining 647 with other company stakeholders.

In 2021, **36 warnings** 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). The warnings mainly concerned 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, citizens and/or other parties/bodies are reported:

Flood in Rimini

With reference to the flood which, on 24 June 2013, following a violent storm, submerged the street 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), an employee of Hera Spa and two other external parties were served a notice for setting a preliminary hearing in which they were accused of disaster and involuntary manslaughter. At the date of approval of this report, the investigation phase is underway.

Odorous and noisy emissions

Worthy of mention is the notification in July 2017 of the decree that ordered the committal to trial of two Herambiente managers, with which the Public Prosecutor of Rimini questioned, in particular, the odorous and noisy emissions from the recovery and storage plant in Rimini which allegedly caused nuisance to the owners of nearby lands. At the first hearing scheduled for 28 November 2017, a local committee was set up as plaintiff for damages. On 30 November 2021, the Court of Rimini passed a non-definitive ruling against one of the two managers involved, determining only the application of a fine. The court ruled that prosecution of the other defendant manager should not be pursued (due to expired period of limitation). At the date of approval of this report, the company is waiting for the grounds of the ruling.

2017 Economic and Financial Plan appeals

With further appeals notified in 2017 before the Regional Administrative Court of Emilia-Romagna against Atersir, and against Hera Spa as the other party to the proceedings, the Municipalities of Sassuolo, Maranello, Fiorano, Formigine, Predappio, Tredozio, Rocca San Casciano, Bertinoro, Forlimpopoli, Galeata, Premilcuore, Meldola, Savignano sul Rubicone, Borghi, Sogliano al Rubicone, San Mauro Pascoli, Longiano, Gambettola, Roncofreddo, Santa Sofia, Castelnuovo Rangone, Castelvetro di Modena, Savignano sul Panaro, Spilamberto, Vignola, Guiglia, Marano sul Panaro and Zocca challenged, within their area of responsibility, resolution no. 27 of 24 March 2017 and resolution

no. 17 of 15 March 2017 adopted by the Area Council of Atersir, through which the Economic and Financial Plans for the 2017 municipal waste management service covering the local areas related to the above municipalities were approved. Hearings on the merit were held before the Regional Administrative Court on 16 January 2020 as regards the appeal filed by the Municipality of Sassuolo and on 28 January 2020 for the appeals filed by the Municipalities of Maranello, Fiorano, Formigine, Castelnuovo Rangone, Castelvetro di Modena, Savignano sul Panaro, Spilamberto, Vignola, Guiglia, Marano sul Panaro and Zocca. With the exception of the appeals filed by the municipalities of Predappio, Tredozio, Rocca San Casciano (for which a hearing has been set for 6 April 2022); Borghi, Sogliano al Rubicone, San Mauro Pascoli, Longiano, Gambettola, Roncofreddo (still pending), the remaining appeals were dismissed by the Regional Administrative Court of Emilia-Romagna.

2018 Economic and Financial Plan appeals

With further appeals notified in 2018 before the Regional Administrative Court of Emilia-Romagna against Atersir, and against Hera Spa as the other party to the proceedings, the Municipalities of Sassuolo, Formigine, Castelvetro di Modena, Savignano sul Panaro, Spilamberto, Vignola, Zocca, Castel Guelfo, Maranello and Fiorano Modenese challenged resolution no. 9 of 19 February 2018 of the Authority Council and resolution no. 1 of 12 February 2018 of the Local Council, respectively, through which the Economic and Financial Plans for the 2018 municipal waste management service covering the local areas related to the above municipalities were approved. With a similar extraordinary appeal to the President of the Republic, then brought before the Regional Administrative Court of Emilia-Romagna, the municipality of Imola challenged Atersir resolution no. 19 of 19 March 2018 of the Area Council containing the Economic and Financial Plan for the 2018 municipal waste management service relating to the municipality of Imola, as well as, to the extent concerned, Atersir resolution no. 3 of 8 March 2018 of the Local Council of Bologna. Hearings on the merit 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, Fiorano, Castelvetro di Modena, Savignano sul Panaro, Spilamberto, Vignola and Zocca, and on 19 February 2020 for the appeal filed by the Municipality of Formigine. With the exception of the appeals filed by the Municipality of Castel Guelfo and the Municipality of Imola (which are still pending), the remaining appeals were dismissed by the Regional Administrative Court of Emilia-Romagna.

2019 Economic and Financial Plan appeals

With further appeals notified in 2019 before the Regional Administrative Court of Emilia-Romagna against Atersir, and against Hera Spa as the other party to the proceedings, the Municipalities of Sassuolo, Formigine, Maranello, Fiorano Modenese, Castelvetro di Modena, Savignano sul Panaro, Imola and Castel Guelfo challenged, respectively, resolutions no. 18 and no. 19 of 13 March 2019 of the Area Council, and resolution no. 14 of 5 February 2019 of the Area Council, 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. On the other hand, the appeals filed by the Municipality of Castel Guelfo and the Municipality of Imola, which filed three further appeals for additional grounds against the Atersir Resolutions for the 2020 and 2021 Economic and Financial Plans, are still pending; the appeals filed by the remaining municipalities were dismissed by the Regional Administrative Court of Emilia-Romagna, with the exception of the appeals filed by the Municipalities of Castelvetro di Modena and Savignano sul Panaro, which were settled out of court.

Finale Emilia landfill (MO)

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 the volumetric expansion of the existing landfill in the Municipality of Finale Emilia. The Municipality also challenged, among other things, the Integrated Environmental Authorisation serving as single Authorisation for the construction and management of the plant as well as being an alternative tool to the municipal urban planning tool. The Regional Administrative Court rejected the request for suspension and at the hearing of 18 December 2019 the Municipality requested a deadline to file additional grounds. The Regional Administrative Court removed the case from the register, therefore the proceedings could have been terminated six months after cancellation and if the parties had failed to act. Subsequently, the Municipality of Finale Emilia filed an application to set a hearing on the merits, after which the Regional Administrative Court of Emilia-Romagna, with ruling issued in July 2021, declared the complaint inadmissible and rejected the claims of the Municipality of Finale Emilia, which subsequently appealed to the Council of State.

On 10 December 2019, the Judge for Preliminary Investigations of Modena preventively seized a section of the Finale Emilia special and municipal waste landfill. Two former officials of Feronia Srl are under investigation for participation in the adoption of the decision to renew the integrated environmental

authorisation (IEA) of the landfill despite the maximum capacity established by the IEA had been exceeded and despite the contamination threshold concentrations (CTC) at the same landfill had also been exceeded; they are also under investigation for environmental pollution. The Company, instead, is charged with administrative offence in relation to the same offences. The interlocutory phase was recently concluded, with the Court of Cassation rejecting the complaint filed by Feronia S.r.l. against the Court of Review's order confirming preventive seizure. On the merits, the preliminary hearing is set for 6 April 2022.

No **new third-party disputes** were reported in 2021.

Relationships with the Public Administration

Relations with Local Authorities [102-44]

The Central Department for Strategy, Regulation and Local Authorities constantly and effectively supervises **relations with partner Municipalities and with Local Authorities** through its Area Managers. It ensures that proper attention is given to the local areas and communities in which the Group performs its business activities, with a view to ongoing industrial and organisational development. All Local Authorities served are given a direct contact that is always ready to respond, in due time, to any questions and problems on the services provided by the Group, being certain they are talking with the right people and will obtain the required feedback within a reasonable time. In 2021, collaborative integration between Strategic Planning and Regulatory Affairs, and HeraLAB initiatives was further developed. As a result, opportunities for two-way dialogue between the Group and the area it serves were enhanced.

In 2021, the customer relationship management system, designed to support local relationship activities in Emilia-Romagna, Veneto and Friuli-Venezia-Giulia, was further strengthened. This tool introduced customer experience logics (CRM) into the relations with Local Authorities to make interactions with them quicker and more effective. It also ensured a far more streamlined management of available historical data and sector-based reports that fostered dialogue with the Group's structures.

Although characterised by continuing restrictions due to the health emergency, in 2021, the service model for monitoring relations with Local Authorities was strengthened. In fact, during the year, **the Area Managers supervised over four thousand relations with local stakeholders**, maintaining ongoing interaction even during the most severe phase of the emergency and despite shifting part of this activity to digital communication channels. Constant dialogue also enabled the Group to intercept the new needs arising in each local area in real time, and to provide them with a quick and suitable response.

In terms of number, in 2021, **relations mainly concerned waste management services** (34%), which, due to the health emergency, required a high amount of extraordinary meetings with single municipal administrations. These were followed by the integrated water service (31%), other network services (10%), the customer area (13%) and business topics of general interest (12%).

The relationship with the Area Authority for water and waste services

The Water and Waste Services Regulator for Emilia-Romagna (Atersir) was founded by Regional Law no. 23/2011 and has regional competence since it has incorporated the previous provincial Water and Waste Regulatory Authorities (ATO). It deals with the governance of the water service and the municipal waste management services, with functions of service and investment planning, governance and management control, and management of activities that are inherent to the award of the water and municipal waste services.

As regards the water service, Atersir operates with second level functions as a result of the transfer to the Italian Regulatory Authority for Energy, Networks and the Environment (Arera) of regulatory and supervisory functions which occurred at the end of 2011, with Italian Law Decree no. 201/2011.

In 2018, Atersir started to operate with second level functions also for the waste service, following assignment to Arera of the regulation and control functions under Italian Law no. 205/17, which also includes the waste disposal and treatment activities.

The relationship with the Italian regulatory and supervisory authorities [307-1] [419-1]

The Italian regulatory authorities that mainly affect the Group's management and activities are the **Regulatory Authority for Energy, Networks and the Environment (Arera)**, and the **Italian Antitrust Authority (Agcm)**.

The Arera proceedings that directly involved the Group in 2021, as part of the Authority enforcement activities, are reported below.

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 completing our commitment to rapidly replace them entirely in the Ferrara distribution system, Inrete Distribuzione Energia is going ahead with its commitment to inspect the entire hemp asbestos cement network that will involve the complete replacement thereof as per the timescales set by the Regulation of the quality of the gas distribution service (Rqdg).

Following the **audit** carried out in October 2018 at the offices of Hera Spa on the integrated water service tariffs with regard to integrated water system operators, that is, local area government bodies and other competent parties (resolution 170/2018/E/IDR), by way of decision DSAI/41/2019/IDR Arera started a sanctioning procedure, establishing a pecuniary administrative sanction of Euro 378 thousand and granting the right to waive the further formalities of the procedure by paying the administrative sanction reduced to one third. Hera Spa, however, decided to continue with the ordinary sanctioning procedure initiated by the decision: we are waiting for Arera's decisions.

[417-2]

[417-3]

Finally, it should be noted that **no preliminary investigations were initiated** against the Hera Group in 2021 by Arera, Agcm or main controlling bodies, concerning non-compliant products, services and marketing activities which led to sanctions, warnings, investigations or the initiation of preliminary investigations by the relevant authorities.

Litigation proceedings brought by the Group

Details are given below on some of the litigation proceedings brought by the Group against the Public Administration:

- By means of an appeal filed in 2014 before the Regional Administrative Court of Emilia-Romagna against the Emilia-Romagna Regional Authority and against 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 and the previous (2015) appeal filed by Herambiente, which challenged the respective rulings before the Council of State. By order issued in July 2021, the Council of State joined the two proceedings due to their objective and subjective connection, partially rejected Herambiente's claims and partially referred the matter to the Constitutional Court, raising a question of constitutional legitimacy.
- By means of an appeal filed in 2015 by Herambiente before the Regional Administrative Court of Emilia-Romagna against the Emilia-Romagna Regional Authority and against Atersir, cancellation was requested of resolution 467 of the Regional Council of the Emilia-Romagna Regional Authority dated 27 April 2015, concerning the criteria to define the fee for the disposal of municipal waste and similar pursuant to art. 16(1) of Regional Law 23 of 2011. The filed appeal particularly objected to two aspects of resolution no. 467, considered illegitimate, i.e.:
 - the erroneous inclusion of revenue from incentives for renewable electricity generation among the amounts to deduct from fees expected;
 - the lack of specific mention of tax charges among the costs incurred by Herambiente that the contested resolution does not recognise.
 The Regional Administrative Court of Emilia-Romagna rejected this appeal and the previous appeal (2014) filed by Herambiente, which challenged the respective rulings before the Council of State. By order issued in July 2021, the Council of State joined the two proceedings due to their objective and subjective connection, partially rejected Herambiente's claims and partially referred the matter to the Constitutional Court, raising a question of constitutional legitimacy.
- 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. Italian Legislative Decree no. 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. Herambiente challenged the ruling before the Council of State. At the date of approval of this report, the hearing is yet to be scheduled.

- 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 (Italian 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 or exceeding Euro 150 thousand, 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 first declared the application initiating the proceedings and related additional grounds admissible, deeming the Guidelines to be immediately detrimental and, on the merits, considered the issues of constitutional legitimacy of art. 1, paragraph 1, letter iii), of Italian Law no. 11 of 28 January 2016 and of art. 177, paragraph 1, of the Public Contracting Code with reference to articles 41, 3 and 97 of the Constitution.

The Council of State, therefore, suspended the ruling, and consequently the measures contested therein, and referred the matter to the Constitutional Court, which, by Ruling no. 218 of 2021, declared the constitutional illegitimacy of article 177, paragraphs 2 and 3, of Italian Legislative Decree no. 50 of 2016. As of the date of approval of this report, the Council of State has not yet scheduled a hearing on the merits of the case.

- Herambiente Spa filed an appeal before the Regional Administrative Court of Emilia-Romagna in which it challenged and requested 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 decision of 10 August 2018 regarding extension of the Environmental Impact Assessment in relation to the expansion of the landfill located in Baricella. By ruling of 6 July 2021, the Regional Administrative Court rejected the claims of Herambiente S.p.A., which appealed to the Council of State.
- 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". At the hearing of 1 December 2021, a decision on the case was not taken by the Court.

In **2021**, no new disputes were initiated by the Group.

Sanctions imposed on the Group [419-1]

With regard to the most significant sanctions imposed in recent years, it should be noted that:

- In November 2015, the **Italian Antitrust Authority (AGCM)** imposed a **sanction** of Euro 366 thousand 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, concluded 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 on the offers and on the nature of the contracts. Specifically, certain methods used for concluding the contracts through phone and sales agent channels were criticised and accused of increasing the 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 check the customer's consent. Moreover, Hera Comm challenged the sanctioning measure before the Regional Administrative Court of Lazio. The Authority Board decided "to refer to the EU Court of Justice the matter relating 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 Council of State, 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 Regional Administrative Court of Lazio. Following an application by Hera Comm for continuation of the proceedings, the Regional Administrative Court of Lazio rejected the appeal with ruling no. 9764 of 24 September 2020. Hera Comm appealed against this ruling to the Council of State, which is still pending at the time of approval 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 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 Euro 800 thousand. An appeal against this decision was lodged with the Regional Administrative Court of Lazio. At the date of drafting of this report, the hearing is yet to be scheduled.

With regard to **minor sanctions** reported in 2021, 161 administrative sanctions were imposed (amounting to approximately Euro 200 thousand) mainly relating to waste management issues. These sanctions, imposed by the controlling bodies, mainly relate to the infringement of the requirements under Italian 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 provided for by sector regulations.

6. CUSTOMERS

6.01 Objectives and performance

What we said we would do	What we have done	SDGs	Progress*
Service quality			
88% new generation electricity meters installed by end 2024.	Start of installation in 2021: by the end of the year, new generation electronic electricity meters installed account for 3.6% of the total (see page 223).	9	
Ensure compliance with commercial quality standards for gas, electricity, water and district heating services, in line with 2020.	99.7% of cases were compliant with commercial quality standards in 2021, in line with 2020. (See page 221)	-	
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.	97.8% arrival rate at the call location within 60 minutes (against a service requirement of 90%) (see page 224)	-	
More than 300 thousand NexMeter meters installed by the end of 2024.	80,000 NexMeter meters installed in Ferrara, Modena and Udine at the end of 2021 (20,000 at the end of 2020) (see page 223).	9	
Customer relations			
10 minutes average waiting time at the branch offices and 30 seconds average waiting time for the call center.	5.7 minutes the average waiting time at counters in 2021, and 32 seconds the average waiting time at the call centre (see pages 229 and 230).		

*  Result achieved or in line with plans.  Result with moderate deviation from planning.

What we will do	SDGs
Service quality	
98% second-generation smart electricity meters (420,000 meters), 50% of which are made of recycled plastic, and 98% electronic gas meters installed by the end of 2025.	9, 12
Ensure compliance with commercial/contractual quality standards for gas, electricity, water and district heating services, in line with 2021.	-
Safety 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.	-
More than 300,000 NexMeter advanced gas meters installed by the end of 2025 (18.2% of the total), of which 200,000 will be made of recycled plastic.	9
Customer relations	
10 minutes average waiting time at the branch offices and 30 seconds average waiting time for the call center.	-

6.02 Customers

ENERGY SERVICES CUSTOMERS

thousands	2019	2020	2021
Gas customers	2,049.5	2,076.2	2,072.7
Electricity customers	1,288.8	1,333.6	1,400.9
District heating customers	12.4	12.6	12.8

INTEGRATED WATER SERVICE CUSTOMERS

thousands	2019	2020	2021
Water customers	1,467.8	1,470.8	1,478.6

MUNICIPAL SANITATION SERVICES

	2019	2020	2021
Municipalities served (no.)	187	188	189
Residents served (thousands)	3,204.5	3,209.1	3,220.2

Also in 2021, the Hera Group recorded **significant growth in the acquisition of new customers**, despite a strong increase in competitive pressure. This result confirms the effectiveness of our growth strategy, even in the face of the extraordinary events of recent times.

Commercial policies

In 2021, Hera Comm's commercial policies will further **strengthen its focus on environmental sustainability**: already in 2020, the range of products linked to **sustainable mobility** was expanded with the launch of the sale of electric bicycles, to which a new range of electric scooters dedicated also to younger people who are more sensitive to environmental issues has been added. The sale of electricity and gas offers continues, guaranteeing the supply of **electricity from renewable sources** as well as **full carbon offsetting**.

Customer growth is the result of our sales activity conducted across **all our channels** with a sharp focus on **digital** channels, offering customers maximum flexibility in choosing among Hera Comm's solutions. For example, **live chat** has proved particularly popular during 2021. This was activated in 2020 on the Hera Comm website, where users can interact with our energy consultants. In fact, at a time when regulatory changes linked to the health emergency period led to a decrease in face-to-face contacts by our customers, digital channels were able to absorb our customers' requests for assistance while ensuring an increase in customer satisfaction.

In spite of unfavourable market conditions due to the sharp increase in raw material prices, the **portfolio of offers** for mass markets maintained its dual orientation between fixed-price and variable-price offers in 2021. Customers continue to be offered the opportunity to choose the solution that best suits their needs:

- reduce its carbon footprint thanks to a "**100% green**" proposition whereby electricity is supplied from renewable sources, CO₂ emissions from gas consumption are offset, paper usage is reduced to zero with the electronic bill and travel is reduced with the current account debit;
- a wide range of **sustainable energy efficiency solutions**, such as Hera Led, Hera ContaWatt, Hera Thermo, Hera Caldaia, Hera Scaldacqua and Hera Clima; furthermore, the entry of Wolmann into the Hera Group has seen Hera Comm engaged in the **sale of photovoltaic systems with storage systems** for families and small businesses through the Hera

Fotovoltaico offer. The model implemented is based on the one already tested for the sale of high-efficiency boilers and water heaters and air conditioners;

- the **insurance content** of Hera No Problem, Hera No Problem H₂O and Hera Caldaia Sicura for protection against breakdowns of domestic electrical, gas and water systems and related maintenance.

Lastly, the company consolidated its presence in the **sustainable mobility sector**: the Hera E-bike offer for the sale of electric bicycles continued, the Hera Monopattino offer for the sale of electric scooters was launched, the installation of recharging infrastructures in public areas and the sale of wall boxes and private recharging stations progressed, and lastly there is still the possibility of renting electric cars.

Hera Comm's Sales Network and Commercial Conduct

Hera Comm's commercial strategy for the sales of energy services to small and medium customers (households and companies) relies on **commercial partners that operate across various sales channels**.

In 2021, Hera Comm introduced a new form of contract that allows a larger pool of agents to be contracted. Also in 2021, Hera Comm introduced a new sales channel called "**product consultants**": this channel is in addition to the energy consultants and is made up of agents specialised in the sale of products such as boilers, air conditioners and photovoltaic systems.

Particular attention during 2021 was paid to what were considered to be the four fundamental pillars:

- training**: the training plan for agencies provides for initial training on all topics, in particular on industry regulations (Codes of Conduct, Group Code of Ethics, etc.). This training is carried out either by the area managers themselves or by the Hera Comm trainer. Training sessions are also planned both at the request of the agency and for any new offers/procedures.
- mentoring**: mentoring in the field or in "headphones" is carried out constantly by area managers in order to verify the correct way of approaching customers
- monitoring of commercial kpi**: commercial kpi 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 of quality kpi**: as part of its quality and comfort call activities, Hera Comm periodically monitors the quality kpi of the agencies and provides area managers with reports enabling them to align the structures with excellent quality results.

In 2021, **quality controls were again strengthened** by introducing additional checks on the agency channel to **ensure that the sales network is operating as fairly as possible**. Controls continue in 2021 on sales of all sales channels, including customer relationship management (counters and call centres) as well as Vas (value-added services) and commodity sales.

The **additional protections** implemented by the Hera Group are also confirmed, in addition to those already provided for by Arera, such as easy application of the cool-off period by e-mail, simple letter or fax (not only by registered letter).

For Hera, it is fundamental to **acquire 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 effort carried out by our telesales channel. In addition, customers can retrieve the telephone recording of their conversation via the web portal or automated phone system;
- for contracts proposed 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.

With regards to complaints about unsolicited contracts, there were 58 in 2021 compared to more than 590 thousand contracts concluded off-premises (it was 6 out of 376 thousand in 2020). All complaints for unsolicited contracts were accepted and remedial measures were applied in 100% of the cases.

6.03 Cost of services

The Hera Group manages **concession services** (integrated water services, urban hygiene, electricity and gas distribution) and **free-market services** (waste disposal, gas and electricity sales). For the former, the **tariffs** Hera applies are **set by the regulatory authorities** (Arera and the local municipal sanitation authorities), while the tariffs for free-market services are freely determined. Every quarter, Arera defines and updates the prices for the sales tariffs for customers that have not subscribed to a free market electricity service option and for residential gas customers that are under economic protection conditions.

The following table shows the average household expenditure in 2020 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: 875 m³ for gas in 2021 (-12.5% compared to 2020), 1,948 kWh of electricity (+2.1%) and 104 m³ of water (-1.5%). 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)

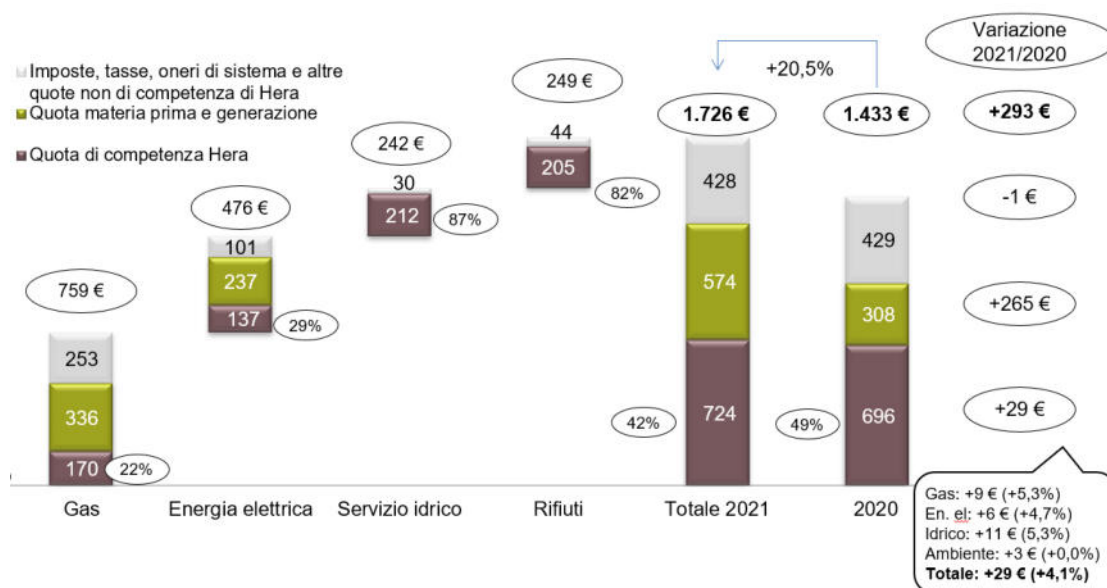
Euro	2020	2021	Var. 2021/2020 (€)	Var. 2021/2020 (%)
Gas	596.67	758.88	+162.21	+27.2%
Electricity	363.61	475.67	+112.06	+30.8%
Water service	228.60	242.13	+13.53	+5.9%
Waste	243.85	249.39	+5.53	+2.3%
Total	1,432.73	1,726.06	+293.33	+20.5%
<i>of which attributed to Hera</i>	<i>695.53 (49%)</i>	<i>724.17 (42%)</i>	<i>+28.64</i>	<i>+4.1%</i>
<i>of which attributed to raw materials and generation</i>	<i>308.22</i>	<i>573.61</i>	<i>+265.39</i>	<i>+86.1%</i>
<i>of which duties, taxes, system charges, and other charges</i>	<i>428.98</i>	<i>428.28</i>	<i>-0.70</i>	<i>-0.2%</i>

Bill of a residential customer with an average annual consumption of gas, electricity, and water, and for a household of three people in a house of 80 m², for waste disposal.

In 2021, the average family spent a total of Euro 1,726 on the services supplied by Hera, 20.5% more than in 2020, amounting to about Euro 293. Compared to 2020, the main impact is the increase in the raw material component of gas and electricity bills (an additional Euro 265, Euro 144 for gas and Euro 121 for electricity), partly mitigated by the Government's actions to reduce system charges and taxes (for more details see the following paragraphs on gas and electricity bills). For the water service, there is an increase of Euro 13.5 compared to 2020. Lastly, the increase in the waste services bill was about Euro 5.5.

42.0% of overall spending, amounting to Euro 724 (48.5% in the previous year), was attributable to the components of bills attributable to Hera. In 2021, this share increased by around Euro 28.6, broken down as follows: Euro +8.5 for gas, Euro +6.2 for electricity, Euro -10.7 for water, and Euro -3.2 for waste.

THE COSTS OF HERA'S SERVICES FOR AN AVERAGE CUSTOMER (REAL CONSUMPTION)

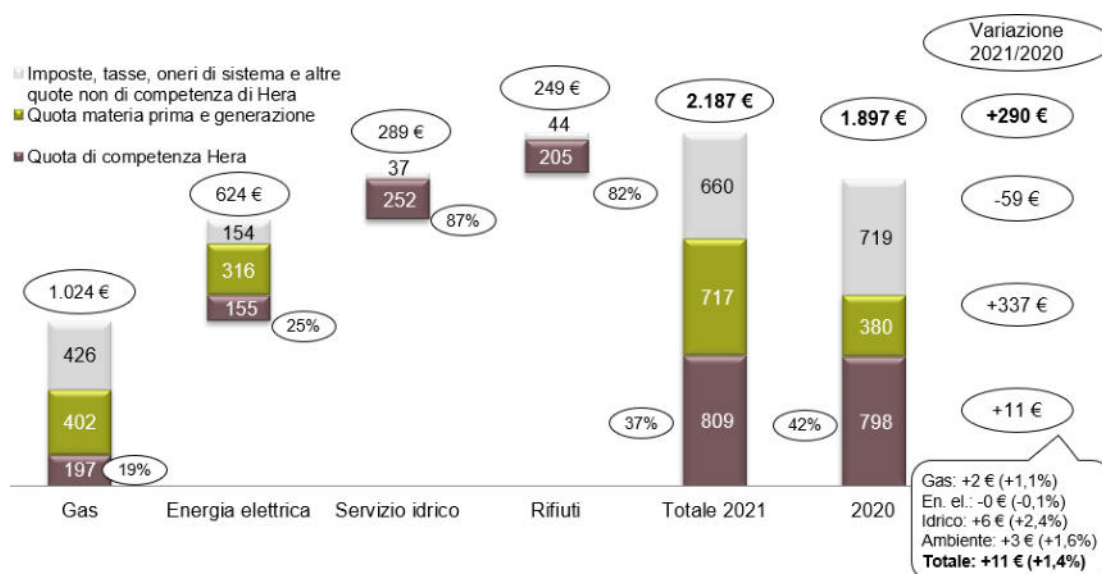


The costs of Hera's services for an average customer (constant consumption)

Euro	2020	2021	Var. 2021/2020 (€)	Var. 2021/2020 (%)
Gas	895.88	1,024.32	+128.45	+14.3%
Electricity	476.01	624.13	+148.12	+31.1%
Water service	280.87	288.71	+7.84	+2.8%
Waste	243.85	249.39	+5.53	+2.3%
Total	1,896.61	2,186.55	+289.94	+15.3%
<i>of which attributed to Hera</i>	<i>797.81 (42%)</i>	<i>808.93 (37%)</i>	<i>+11.12</i>	<i>+1.4%</i>
<i>of which attributed to raw materials and generation</i>	<i>379.89</i>	<i>717.34</i>	<i>+337.45</i>	<i>+88.8%</i>
<i>of which duties, taxes, system charges, and other charges</i>	<i>718.91</i>	<i>660.29</i>	<i>-58.62</i>	<i>-8.2%</i>

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 a household of three people in a house of 80 m², for waste disposal. For the other conditions considered, see the following pages.

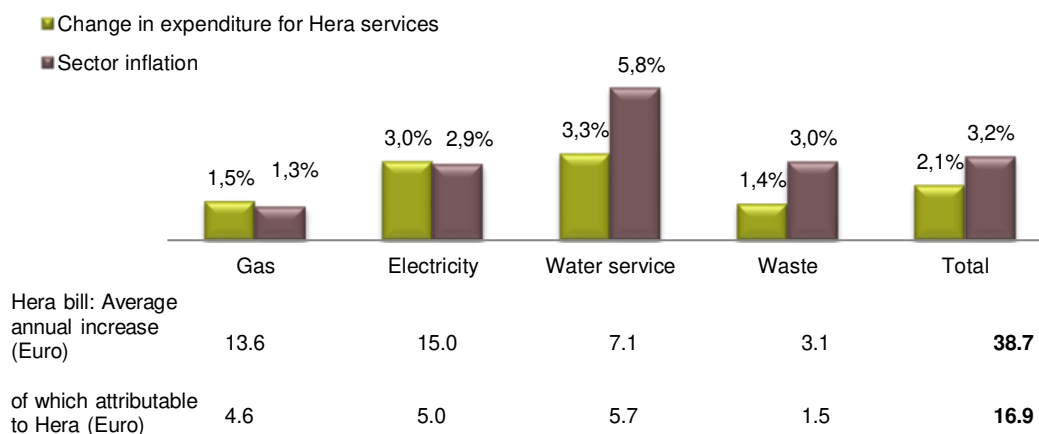
THE COSTS OF HERA'S SERVICES FOR AN AVERAGE CUSTOMER (CONSTANT CONSUMPTION)



Based on an analysis considering equal volumes used by an average Hera customer, for 2021 the overall cost of services increased by 15.3%, amounting to about Euro 290 more compared to 2020. This increase stems from:

- an increase in the cost of gas and electricity raw materials (Euro 337.5) (for more details see the following sections on gas and electricity bills);
- an increase of the bill components attributable to Hera (Euro 11.1). This increase corresponds to 1.4% of the total amount of the bills considered: Euro 2.1 for the gas bill, Euro 5.9 for the water bill and Euro 3.2 for the waste bill; Hera's share of the electricity bill is reduced by Euro 0.1;
- a decrease of Euro 58.6 in taxes, duties, system charges and other charges not attributable to Hera, mainly related to the Government's actions to counter increases in energy bills.

COMPARISON BETWEEN THE CHANGES OF BILLS FROM 2006 TO 2021 AND INFLATION (ANNUAL AVERAGE INCREASE, CAGR)



The long-term analysis shows that, between 2006 and 2021, Hera bills in Emilia-Romagna had an average compound annual increase below the Italian average: +2.1% compared to +3.2% for the whole of Italy (Source: Eurostat). This gap is markedly beneficial for water service and waste service customers.

The gas bill

The Regulatory Authority for Energy, Networks and the Environment (Arera) determines the information that must be on the bill. There are four cost items, which are described below.

Expenditure on natural gas includes amounts related to the different commercial activities carried out by the seller to supply natural gas to the final customer. Raw material acquisition costs were indexed according to the gas price of the Dutch hub TTF, which reflects the costs of the European market. The **marketing charge** (for which Hera is responsible) for the economic conditions of the supply for the protected service is governed by the Uniform Code Governing Retail Sales of Natural Gas attached to ARG/gas resolution 64/2009. For protected service customers who receive their bills in electronic format and who have activated an automatic debit payment method, a discount for the electronic bill introduced by Resolution 610/2015/R/com is applied to this item.

The **expense for transport and meter management** includes amounts related to the different activities that allow sellers to deliver natural gas to final customers. It includes **distribution and metering tariffs** (Hera's responsibility), transport and any municipal fees to cover the concession fees for the distribution service. It is updated by the Authority every year and is differentiated for the seven macro-regional areas into which the national territory is divided. In particular, the regulation of distribution and metering tariffs for the period 2020-2025 is established by Resolution 570/2019/R/gas, while the mandatory levels for the year 2021 were approved by Resolution 596/2020/R/gas. In continuity with the previous regulatory period, the fixed portions of the distribution and metering tariffs are broken down according to the class of the metering unit (meter class) installed at the supply point; for a household with a consumption of 1,200 Smc/year, a G4 meter class was used as a reference.

Another part of the bill consists of components covering **system charges**, i.e. amounts intended to cover costs related to activities of general interest for the gas system (e.g. costs for the promotion of energy saving) and are paid by all final customers of the service. Distributors pay the proceeds to the Cassa per i Servizi Energetici e Ambientali [Energy and Waste Management Services Fund].

Lastly, the **taxes** include consumption tax (excise duty), regional surtax and VAT (rate). Taxes are set by specific provisions by the Ministry of the Economy and Finance and the regional government authorities, and vary according to the type of use (whether for heating or only for cooking, or industrial uses). Consumption tax (excise duty) applies to the quantity of gas consumed, while VAT applies to the total amount of the bill, including excise duty. Currently, for civil use, the rate is 10% for the first 480 m³/year consumed, and 22% on all other consumption and fixed quotas; from the fourth quarter of 2021, in order to cope with the increase in the cost of raw materials, the Government has temporarily reduced the value of VAT applied to consumption to 5%. The regional surcharge applies to the quantity of gas consumed and is established autonomously by each region within the limits set by law.

[417-1]

THE GAS BILL

Euro	2019	2020	2021
Expense for natural gas	406.10	311.78	474.60
<i>of which: marketing share</i>	<i>70.15</i>	<i>73.53</i>	<i>72.80</i>
Expense for transport and meter management	187.25	183.29	184.82
<i>of which: distribution and metering tariff</i>	<i>125.98</i>	<i>121.23</i>	<i>124.07</i>
System charges	35.82	36.78	30.32
VAT	151.22	135.31	105.92
Other taxes	228.62	228.71	228.67
Total	1,009.01	895.88	1,024.32
<i>of which attributable to Hera</i>	<i>196.12</i> <i>(19%)</i>	<i>194.76</i> <i>(22%)</i>	<i>196.87</i> <i>(19%)</i>

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 protection market conditions was considered; based on the economic conditions set by the Regulatory Authorities: 33% of Hera's residential customers are in this category. Cities considered: Bologna, Ferrara, Forlì, Imola, Modena, Padua, Pesaro, Ravenna and Trieste (weighted average of residents). The grey areas show tariff components that are attributable to Hera. The complete data on gas supply tariffs are available on the Group's website.

For the same consumption, on average the 2021 gas bill of a Hera residential customer under market tariff protection conditions costs about Euro 128.4 more (+14.3%) than the previous year. Expenditure on natural gas increased by Euro 162.8 (+52.2%), while expenditure on transport and meter management increased by Euro 1.53 (+0.8%). System charges and taxes decreased by Euro 6.5 (-17.6%) and Euro 29.4 (-8.1%), respectively, as a result of the Government's actions which reduced the amount of system charges and raised VAT to 5% from the fourth quarter of 2021. Hera's share includes the marketing fee and the distribution and metering tariff, and has increased by Euro 2.1 compared to 2020 (+1.1%); it accounts for 19% of the total gas bill.

The significant increase in the price of natural gas is the result of several causes.

On the one hand, the recovery of the economy and industrial production after the most difficult periods of the health emergency has led to a progressive **increase in consumption and therefore in the demand** for raw materials and fuels, including natural gas (both in Europe and in China). To meet demand, operators had to draw on reserves with the intention of restoring them between spring and summer, in time for the planning of supplies for the winter months. In addition, the longer-than-usual cold season meant that more gas was also consumed for heating purposes; here, too, the operators had to draw on reserves, without actually obtaining more supplies. Lastly, in Brazil, where hydroelectricity is generally used for electricity generation, the drought meant that the demand for energy could not be met from this source, so here too the acquisition of methane in the form of liquefied natural gas had to be increased.

At the same time, problems on the supply side of fuels have also generated **pressure on prices**:

- European natural gas reserves are at an all-time low, well below previous years. This is because mining activities have been reduced in both the Netherlands and the UK, and production in Norway has slowed down due to necessary plant maintenance activities;
- Russia (the main European gas supplier) has not granted flexibility regarding the increased flows requested by Europe by supplying only the volumes already contracted;
- an unusually windless summer in northern European countries, where the main wind farms are concentrated, reduced production from these plants; to compensate for the lower renewable production, greater use of other conventional energy sources, including gas, was necessary;
- the shutdown of some French nuclear reactors has led to less available capacity and electricity production and therefore fewer imports, again leading to greater demand for natural gas for thermoelectric use.

Italy is more exposed than other countries to changes in the price of natural gas because it is used to generate about half of its electricity, and almost all of the country's needs come from foreign imports.

The bill increases occurred from the third quarter of 2021 (+15.3% compared to the previous quarter) and continued in the fourth quarter of 2021 (+14.4% compared to the previous quarter) as well as in the first quarter of 2022, when the price per cubic metre calculated on an annual consumption of 1,400 cubic metres increased by 41.8% compared to the last quarter of 2021. These variations would have been higher without the Government's interventions, which reduced system charges and taxes from Q4 2021 onwards (Source: Arera).

The electricity bill

The Regulatory Authority for Energy, Networks and the Environment (Arera) determines the information that must be on the bill. There are four cost items, which are described below.

Expenditure on energy includes amounts related to the different commercial activities carried out by the seller to supply electricity to the final customer. In addition to the energy generation quota, this item includes 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 last resort electricity sales services" attached to Resolution 491/2020/R/eel). For customers with the highest protection who receive their bills in electronic format and who have activated an automatic debit payment method, a discount for the electronic bill (Resolution 610/2015/R/com) is applied.

The **expense for transport and meter management** includes amounts related to the different activities that allow the seller to deliver electricity to final customers. This item includes **transport, distribution and metering tariffs** (Hera's responsibility).

System charges cover the costs of activities of general interest to the electricity system (including, for example, support for energy from renewable sources) and are paid by all final customers of the electricity service. In January 2020 the process begun in 2016 to reform grid tariffs and tariff components covering this type of charge for residential customers, in implementation of Directive 2012/27/EU on energy

efficiency, was completed: the tariff components were updated according to gradual criteria with the aim of stimulating virtuous behaviour on the part of the public and encouraging the achievement of energy efficiency objectives.

Finally, **taxes** include excise duty and VAT. Excise duty is applied to the quantity of energy consumed; residential customers with a power output of up to 3 kW enjoy preferential rates for supply to their registered residence. VAT is applied to the total amount of the bill, including excise duty. It is currently 10% for households and 22% for non-households, with some businesses benefiting from the reduced rate of 10%.

[417-1]

THE ELECTRICITY BILL

Euro	2019	2020	2021
Expense for energy	247.84	192.78	364.49
<i>of which: marketing share</i>	<i>48.01</i>	<i>51.14</i>	<i>48.95</i>
Expense for transport and meter management	105.71	105.53	108.24
<i>of which: transport, distribution and metering tariff</i>	<i>103.55</i>	<i>103.59</i>	<i>105.68</i>
System charges	127.04	112.91	72.86
VAT	50.24	43.27	56.74
Other taxes	21.79	21.52	21.79
Total	552.62	476.01	624.13
<i>of which attributable to Hera</i>	<i>151.56</i> <i>(27%)</i>	<i>154.73</i> <i>(33%)</i>	<i>154.63</i> <i>(25%)</i>

Bill for a residential customer with 3 kW contract, whose yearly consumption totals 2,700 kWh, with direct debit and electronic billing. A customer of the market with the highest protection was considered, based on the economic conditions set by the Regulatory Authorities: 9% of Hera's residential customers are in this category. Cities considered: Modena, Imola and Trieste (weighted average of inhabitants). The grey areas show tariff components that are attributable to Hera.

For the same consumption, on average, the 2021 electricity bill of a Hera residential customer under market tariff protection conditions cost about Euro 148.1 more (+31.1%) than the previous year. Expenditure on electricity increased by Euro 171.7 (+89.1%), while expenditure on transport and meter management increased by Euro 2.7 (+2.6%). System charges decreased by Euro 40.0 (-35.5%), as a result of government intervention that reduced the amount from Q3 2021, while taxes increased by Euro 13.7 (+21.2%). Hera's share, which includes the marketing and distribution share, has remained stable compared to 2020 and accounts for 25% of the total electricity bill.

The significant increase in the price of electricity is a consequence of the various causes already highlighted in the commentary on the natural gas bill, to which is added, to a lesser extent, the **increase in the price of carbon dioxide emission permits** under the EU Emission Trading System. In fact, in order to encourage a shift to more sustainable energy production, the amount of available permits is periodically reduced and consequently the demand and price of these permits increases (see the dedicated section "Greenhouse gas emissions under the EU-ETS" for more details on this system). At the end of 2021, emitting one metric ton of CO₂ cost Euro 62, double the price of the previous year and twelve times the price of four years earlier; these trends have repercussions on companies producing energy from fossil fuels, but also effects on end consumers' bills.

The bill increases occurred from the third quarter of 2021 (+9.9% compared to the previous quarter) and continued in the fourth quarter of 2021 (+29.8% compared to the previous quarter) as well as in the first quarter of 2022, when the price per kilowatt hour calculated on an annual consumption of 2,700 kWh increased by 55.0% compared to the last quarter of 2021. These variations would have been higher without the Government's interventions, which halved system charges in the third quarter of 2021, and reduced them to zero from the fourth quarter of 2021 onwards (Source: Arera).

The water service bill

Average expenditure for the integrated water service differs among the various territories in which the Hera Group operates: it depends on the procurement sources of the various territories, the availability of water resources and the proximity of the withdrawal source.

THE WATER SERVICE BILL

Euro	2019	2020	2021
Water network	109.83	111.23	113.11
Sewer network	33.73	34.55	34.96
Purification	83.36	84.64	86.11
Fixed share	15.58	15.79	17.95
Equalisation components	5.51	9.13	10.33
VAT (10%)	24.80	25.53	26.25
Total	272.80	280.87	288.71
<i>of which attributable to Hera</i>	<i>242.50 (89%)</i>	<i>246.21 (88%)</i>	<i>252.13 (87%)</i>

Bill of a residential customer (household of three) with a yearly consumption of 130 m³. Cities considered: Bologna, Ferrara, Forlì, Imola, Modena, Padua, Pesaro, Ravenna, Rimini, and Trieste (weighted average of residents). The grey areas show tariff components that are attributable to Hera.

The average bill of a residential customer with a consumption of 130 cubic metres per year in 2021 cost about Euro 289, with an increase of about Euro 8 compared to 2020 (+2.8%) also as a result of the introduction of the equalisation component in the tariff method provided by Arera, an increase in the regulatory scheme of the ATO Rimini (Rimini Water and Waste Regulatory Authority) due to the large investments planned in the tariff period, and as provided for in the regulation in Trieste, Padua and Pesaro-Urbino.

The equalisation components are tariffs defined by the Authority that operators must apply to end users for the three services aqueduct, sewage and depuration. They are intended to cover tariff concessions granted to populations affected by seismic events, to promote the quality of aqueduct, sewage and depuration services, to cover the costs of the water bonus, and to cover the operating costs of the Guarantee Fund for water works.

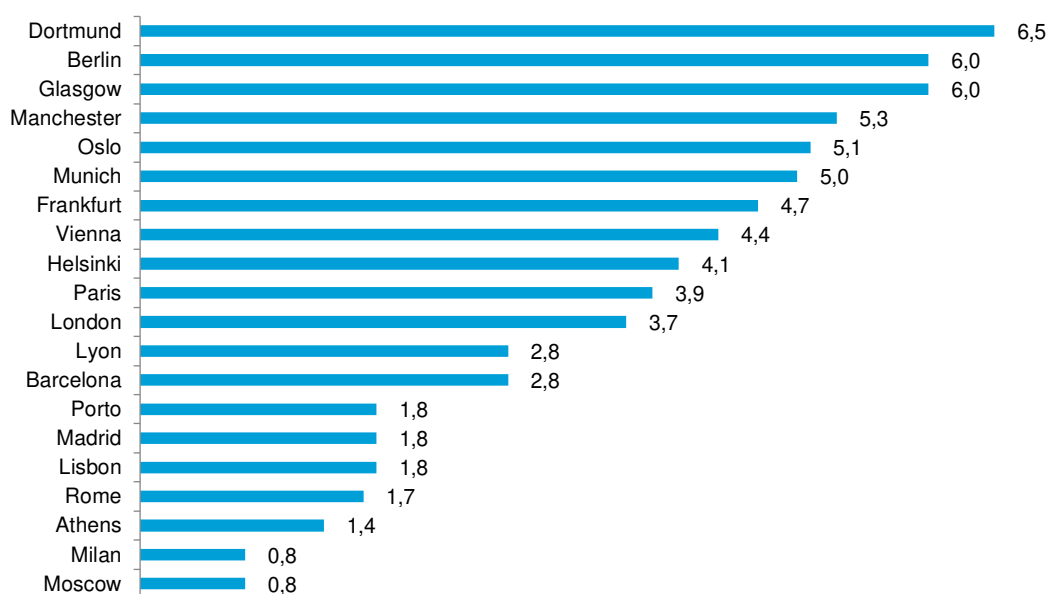
How much water costs

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 Euro 28 cents per litre for certain retailed mineral waters, yearly spending on bottled water comes to around Euro 460 a year. The cost for the same quantity of water from the water network, meanwhile, would be Euro 3.6 a year (calculated as the 2021 average of the bills in the ten main cities served by Hera). A family can therefore save around Euro 456 per year compared to bottled water. Italy ranks first in the world for consumption of bottled mineral water with 200 litres of water per capita consumed in a year (Source: The European House Ambrosetti: White Paper Value of Water for Italy 2021).

The cost of water in Europe

The European House – Ambrosetti conducted research on water pricing in 2018 in some European countries. In Italy, the cost of water is Euro 1.87 per m³ compared to Euro 3.67 in France, twice as much, and Euro 4.98 in Germany, just under three times as much. There are even higher imbalances for data of individual cities: for example in Rome the cost is Euro 1.7 per m³ while in Berlin it is Euro 6 per m³.

LEVEL OF DRINKING WATER TARIFFS IN SOME EUROPEAN CITIES (EURO PER M³)



Source: The European House – Ambrosetti: White Paper Value of Water for Italy – 2020 Report

Regulation of the water service

Arera has been the Italian regulatory agency for water services since 2012. Its initial objective was to define a tariff method capable of supporting (efficient) coverage of costs, of increasing investments and also promoting mechanisms oriented to the quality of service. Arera initially set up a transitional tariff method for the 2012-2013 period and later a permanent tariff method for 2014-2015, subsequently updated for 2016-2019 and 2020-2023. The 2021 tariffs (ATO Resolution No. 21 of 30/12/2020) also include the balances from previous years, determined in compliance with the rules of the tariff method.

The tariff mechanisms developed by Arera since 2012 helped us continue to make major investments, particularly in the sectors with a higher environmental impact, such as reclamation from sewer restoration and purification. In particular:

- from a tariffs point of view, 2021 is part of the third, current, regulatory period (2020-2023) which, in addition to confirming the criteria outlined above, initially with the 2012-2013 transitional tariff method and then with the first regulatory period (2014-2015), introduced important new factors concerning regulatory and incentive aspects of contractual quality, requiring minimum service levels but also forms of recognition of levels higher than the minimum required;
- In 2019, Arera adopted the following measures, that applied from 2020: an integrated text that governs payment delinquencies, an update of the contractual quality discipline that requires a mechanism of incentives and penalties also at Italian national level, and lastly the tariff method for the third regulatory period 2020-2023.

The bill for waste collection and disposal

The Stability Law of January 2014 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 a tax, and the quantity-based tariff (Tcp), which is a fee. Both charging methods must ensure full coverage of costs for the waste management service, which includes street sweeping and washing, waste collection and transportation, separate waste collection, waste treatment and disposal, and administrative costs.

In the area served by Hera Spa, 119 municipalities apply the Tari (of which 24 have chosen to entrust collection to Hera), while 18 municipalities (including a provincial capital: Ferrara) apply the quantity-based tariff.

THE BILL FOR WASTE COLLECTION AND DISPOSAL

Euro	2019	2020	2021
Fixed share	105.90	106.26	102.92
Variable share	93.27	95.85	102.37
Fixed and variable share not attributable to Hera	32.57	32.13	31.10
Additional provincial charges	10.99	9.62	13.00
Total	242.73	243.85	249.39
<i>of which attributable to Hera</i>	<i>199.17 (82%)</i>	<i>202.11 (83%)</i>	<i>205.29 (82%)</i>

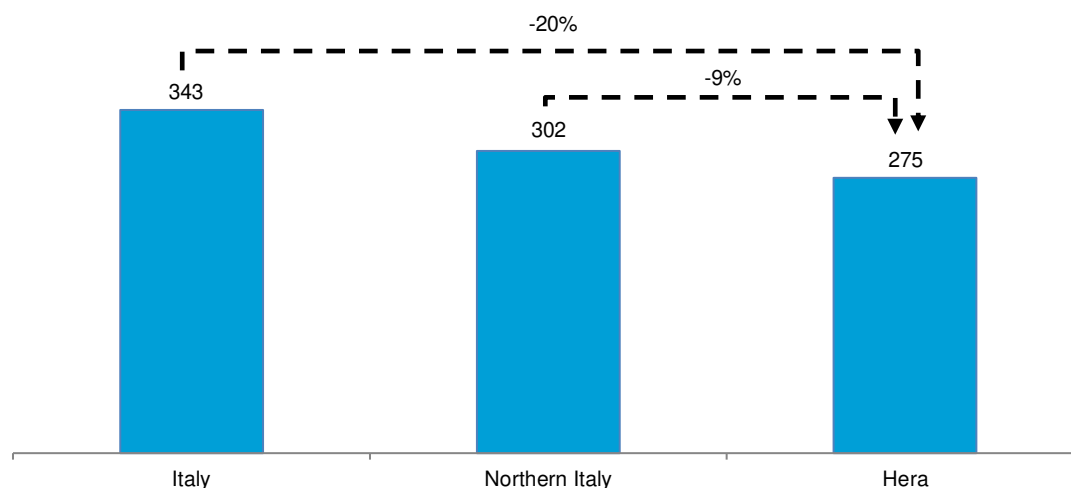
Bill of a residential customer (family of three people in a house of 80 m²). Cities considered: Bologna, Ferrara, Forlì-Cesena, Imola, Modena, Padua, Pesaro, Ravenna, Rimini, and Trieste (weighted average of residents). For Ferrara, where we introduced quantity-based charging on 1 January 2018, the respect of the limit of 52 disposals per year of 30 litres each of non recyclable waste was also taken into account. The grey areas show tariff components that are attributable to Hera.

A family of three people, living in an apartment of 80 m², paid approximately Euro 249 for waste collection and disposal in 2021, an increase of about 2.3% (about Euro 5.5) compared to 2020. This increase in the bill is mainly attributable to the local areas of Trieste, where the provincial surcharge increases, and Ferrara, where the fixed and variable quotas have been reshaped: in fact, with the tariff structure approved for 2021, users can undergo increases or benefit from reductions based on the parameters that enter into the calculation (square metres, household members, litres, etc.).

The cost of waste management services for residential and non-residential customers

In 2021, Hera charged its residential customers waste management service costs that were 20% below the Italian average and 9% lower than the Northern Italy average: these were the findings of the Cittadinanzattiva Price and Tariff Study (Osservatorio prezzi e tariffe), which covered 102 province capitals (municipalities where the quantity-based 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.

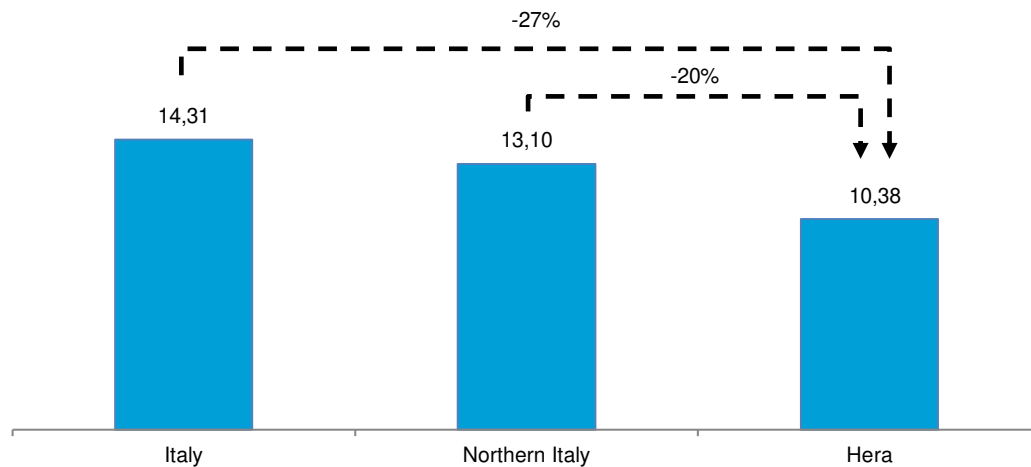
AVERAGE ANNUAL EXPENDITURE PER HOUSEHOLD (EURO)



2021 data, 3 persons in 100 m², Source: Cittadinanzattiva

Considering four types of non-residential users in 101 provincial capitals, in Hera's service area, hotels spend 22% less than the Italian average, and the saving was 29% for restaurants, 38% for the food industry and 24% for supermarkets. For non-residential users of restaurants, supermarkets and food industry in Hera's service area, they are cheaper respectively by 26%, 16% and 24% compared to the average for northern Italy: for hotels Hera charges more than the average for northern Italy by 4%. The average of the four types of users considered by the research shows therefore that Hera's area is more competitive, with costs 27% below the Italian average and 20% below the average of northern Italy.

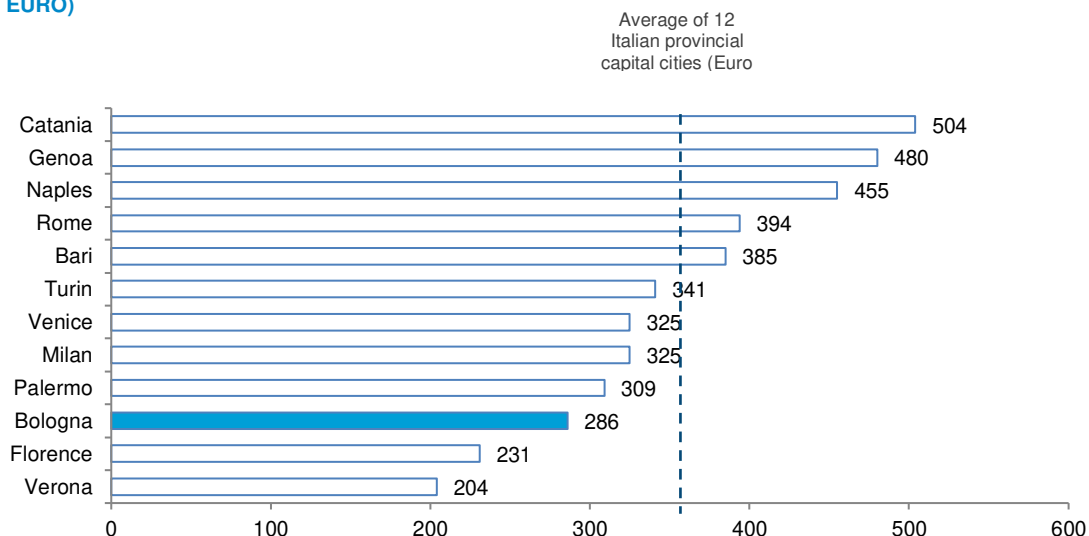
AVERAGE YEARLY EXPENSE FOR FOUR TYPES OF NON-RESIDENTIAL USERS (EURO/M2)



2021 data, Hera processing of data from websites of municipalities

Cittadinanzattiva's 2021 report also compares the 2021 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 Euro 286 ranks among the cities with the lowest cost, together with Florence and Verona, and at a level 19% below the average of the 12 provincial capital cities.

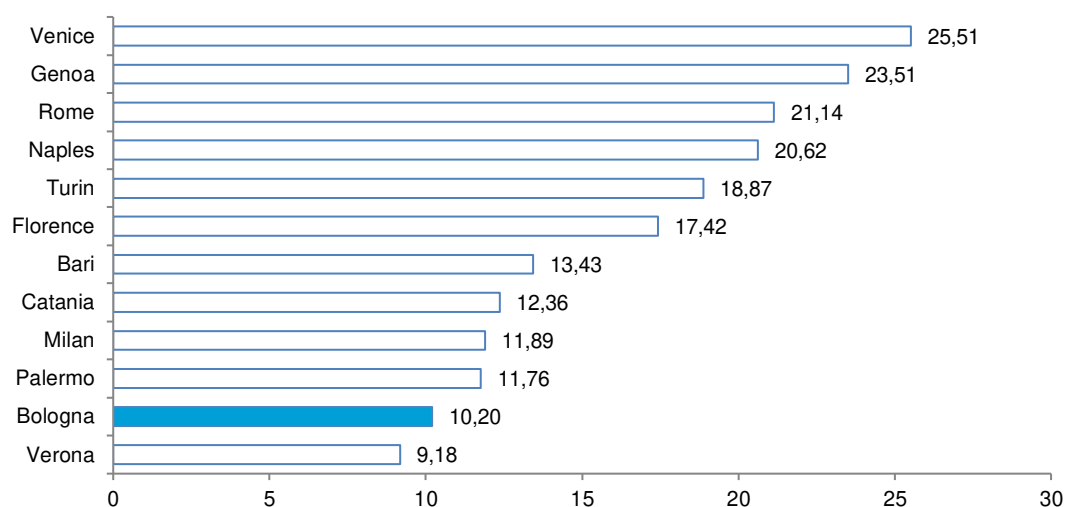
TOTAL COST PER USER IN CITIES WITH MORE THAN 250,000 INHABITANTS (3 OCCUPANTS, 100 M², EURO)



2021 data, 3 persons 100 m², Source: Cittadinanzattiva

Among them, comparing the cost of the municipal sanitation service for non-residential customers in Italian provincial capital cities with over 250 thousand inhabitants, Bologna 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, food industry, and supermarkets), with Euro 10.2 per m².

WASTE MANAGEMENT EXPENDITURE FOR NON-RESIDENTIAL USERS IN CITIES WITH OVER 250 THOUSAND INHABITANTS (EURO/M²)



2021 data (types of non-residential users covered by the research: hotels, restaurants, food industry and supermarkets.) Source: Hera Group

The quantity-based tariff in Emilia-Romagna

During 2021, Hera managed the fifth year of application of large-scale quantity-based charging, ending the trial phase and becoming fully operational, thanks to an integrated management of systems and processes that have enabled its effective and uniform application in all its aspects and phases, from user management to the measurement of non recyclable waste disposed of, and up to final invoicing. The new system is a **fairer and more transparent way to finance waste management services** and can promote virtuous behaviour and participation in separate waste collection.

In particular, there are 18 municipalities with a quantity-based tariff in Emilia-Romagna:

Municipality	Province	Residents as of 01/01/2021	Start year of quantity-based charging	SWC band (%)
Budrio	Bologna	18,415	2016	More than 85%
San Giovanni in Marignano	Rimini	9,495	2017	More than 85%
Bastiglia	Modena	4,215	2018	More than 90%
Bomporto	Modena	10,179	2018	More than 90%
Castelfranco Emilia	Modena	32,975	2018	More than 85%
Ferrara	Ferrara	131,935	2018	More than 85%
Monte San Pietro	Bologna	10,756	2018	More than 85%
San Cesario sul Panaro	Modena	6,539	2018	More than 90%
Cattolica	Rimini	16,933	2019	More than 75%
Coriano	Rimini	10,563	2019	More than 85%
Dozza	Bologna	6,643	2019	More than 90%
Marano sul Panaro	Modena	5,290	2019	More than 90%
Misano Adriatico	Rimini	13,852	2019	More than 85%
Mordano	Bologna	4,672	2019	More than 90%
Spilamberto	Modena	12,869	2019	More than 90%
Vignola	Modena	25,771	2019	More than 85%
Guiglia	Modena	4,026	2020	More than 80%

Municipality	Province	Residents as of 01/01/2021	Start year of quantity-based charging	SWC band (%)
Morciano di Romagna	Rimini	7,195	2020	More than 80%

The new tariff system has thus reached about **332 thousand inhabitants in 2021**, 13.5% of the residents of Emilia-Romagna served by the Hera Group through the integrated management of urban waste.

For these municipalities, the new quantity-based collection services have been activated and personal equipment for disposal has been 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 taken to **inform and involve users** on how the new system will be introduced. It should be noted that any change in the service that entails changes to the collection service that may affect the calculation of the tariff is communicated to the citizens by means of wide dissemination, for example through bills, ad-hoc communications and on the website.

6.04 Service quality

Electricity and gas

The **electricity and gas distribution services** quality regulation divides the standards to be met into general and specific: failure to meet the latter due to causes attributable to the distributor requires the payment of indemnities directly to customers or through the sales company requiring the service from the distributor, which may vary depending on the type of customer (low or medium voltage for electricity, meter category for gas), the delay in executing the service, and the time required to pay compensation. Automatic compensation ranges from Euro 35 to Euro 140 based on the type of customer and supply, and can increase based on the delay in the provision of the service or the fulfilment times.

The specific quality standards for the distribution service include, in particular, the time for executing works, activating supply, and the failure to comply with the punctuality bracket for appointments scheduled with customers.

The reference resolutions of the regulatory authority are resolution 569/2019/R/Gas and resolution 646/2015/R/Eel.

Water services

In the management of the **integrated water service**, the operator commits to comply with certain minimum quality standards set out in the Service Charter, i.e. the characteristics of the main services provided by the operator and the timeframes within which they must be performed. This document is drawn up on the basis of a template prepared by the Regulatory Authorities and annexed to the signed agreements.

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 Euro 30 in cases of non-compliance with specific quality standards; this amount, with the exception of the service relating to the punctuality range for agreed appointments, is increasing in relation to the delay in execution, up to a maximum of Euro 90 in cases where the execution time is more than three times the standard.

It also allowed operators to access incentives for their commitment to pursue quality levels that improve on the minimum levels required by said resolution 655/2015. Hera Spa achieved the incentive for the Bologna and Modena areas, applying the improved levels set by ATERSIR 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.

In addition, a new resolution, 547/2019/IDR, was issued on 17 December 2019 to supplement the current regulations governing the contractual quality regulation of the integrated water service, which entered into force in 2020. This resolution includes an incentive and penalty system at the Italian national level, through an equalisation fund that will be distributed among the best-performing operators, identifying a mechanism that evaluates the performance of contractual quality, by grouping them into two macro indicators, weighted by the number of services; the performances provided in the reference year will be verified within the respective minimum standard specified by Arera (compliant services) with respect to all the services provided (compliant and non-compliant services).

District heating service

In July 2019, the Arera commercial quality discipline came into force, also for the district heating market, under resolution 661 of 2018. This resolution 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 resolution 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.

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 provides the sanitation service. 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.

In the management of the urban waste management service, the operator also commits to comply with certain minimum quality standards laid down in the Service Charter, drawn up on the basis of the scheme prepared by the Regulatory Authorities and attached to the agreements signed.

COMPLIANCE WITH QUALITY STANDARDS

	%	2020	2021	No. of services provided (2021)
Gas		99.7%	99.7%	3,918,781
Electricity		98.4%	98.2%	53,059
Integrated water service		98.9%	99.3%	217,533
District heating		91.7%	96.1%	770
Total		99.6%	99.7%	4,190,143

Includes the services for which customers must be automatically compensated if the company does not comply with the standard. Data on sales quality standards do not include the companies Estenergy, Amgas Blu, Ascotrade, Ascopiave Energia, Blue Meta, Etra Energia, Eco Gas.

The overall data have improved over 2020: in 2021, **in 99.7% 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 services of Marche Multiservizi (99.8%) and those of AcegasApsAmga (99.9%).

COMPLIANCE WITH SPECIFIC GAS AND ELECTRICITY QUALITY STANDARDS

	%	2020	2021	No. of services provided (2021)
Gas sales		99.9%	99.6%	9,586
Gas distribution (end customers and sales companies)		99.7%	99.7%	3,909,195
Total gas		99.7%	99.7%	3,918,781
Electricity sales		99.8%	99.4%	9,822

	%	2020	2021	No. of services provided (2021)
Electricity distribution (end customers and sales companies)		98.0%	97.9%	43,237
Total electricity		98.4%	98.2%	53,059
Total		99.6%	99.7%	3,971,840
<i>Of which gas and electricity distribution</i>		<i>99.6%</i>	<i>99.7%</i>	<i>3,952,432</i>

Includes the services for which customers must be automatically compensated if the company does not comply with the standard. Data on sales quality standards exclude the companies Estenergy, Amgas Blu, Ascotrade, Ascopiave Energia, Blue Meta, Etra Energia, Eco Gas.

Excellent results are confirmed in the individual gas services provided. 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% as in 2020), punctuality range for agreed appointments (99.6% compared to 99.4% in 2020) and activation of gas supply (100% compared to 99.9% in 2020).

For the supply of electricity, one of most provided services, activation of the electricity supply, rose from 99.2% to 99.6%.

For the water service, the high standard of the most provided services was confirmed: compliance with the punctuality range for appointments (99.6%), transferring (99.7%), activation of the supply (98.3%) and deactivation of the supply (99.6%).

Electronic meters and initiatives to reduce estimated bills

The **installation of electronic meters** continued in 2021 despite the continuation of the sanitary emergency period and the placement of most devices inside homes. In this sense, the activities were carried out in accordance with national health protocols. The installation of NexMeter meters with specific safety functions also continued: during the year, 80,000 installations were carried out in the areas of Ferrara, Modena and Udine, with a total target of 300,000 installations by 2024.

On the technical side, during 2021 the technical integration of **NB-IoT (Narrowband Internet of Things)** technology took place in the gas sector, while in the electricity sector the preliminary activities for the installation of second generation (2G) electricity meters were set up.

In 2021 the Hera Group will have **more than 1.3 million electronic gas meters in its fleet, equal to 78.2% of the total** (+13.5 percentage points compared to 2020). If electronic electricity meters are also taken into account (over 471 thousand, equal to 97.6% of the total), **the percentage of electronic meters rises to 82.6%** (+10.5 percentage points).

With regard to the **water sector**, in recent years the Hera Group has tested different communication technologies for water meters, identifying good performance in the NB-IoT in terms of stability and signal reachability. This led to the launching of a **remote meter reading project** targeting primarily water-demanding users, for whom remote reading is important for several reasons:

- it allows actual consumption to be made available more frequently compared to billing,
- it allows comparative analyses and consumption trends, including hourly,
- it makes some notifications available on anomalies in consumption or in the functioning of the meter that can lead to timely field actions.

This is all part of the **water efficiency** concept that the Authority is also introducing into the regulatory framework, and which leads to **increasing transparency towards the end user**, using advanced technologies to promptly intercept internal leaks or meter anomalies.

Precisely in order to build value-added services from the data acquired with the smart meters, a dashboard has been developed that is also accessible by end users and makes the analysis of daily or hourly consumption available, allowing comparisons over comparable periods, and providing notifications of any consumption anomalies or leaks in the internal system.

In 2022, the installation of the first electronic meters at water-hungry users is expected to start.

6.05 Safety and continuity of the service

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.

The network, classified as having a high probability of leakage, is defined as the sum of:

- the high-pressure network;
- the network made of materials that are not compliant, according to Arera's Resolution;
- the network laid in areas subject to hydro-geological instability.

Arera provides for an annual inspection of 100% of the network for networks made of non-compliant materials. Hera provides for an annual inspection of 100% of the network also for the other two network types.

Resolution 569 of 2019 further raised the safety standards for the current regulatory period (2020-2025) compared to the previous period. This increase was substantially **in line with the previous standards observed 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 on the inspection of networks, on odourising and on incentives to upgrade the odourising 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, **no breaches** in this area related to Arera's controls or inspections;
- the number of **measurements of the gas odourising 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 **odourising plants** (flow-proportional, remote-controlled injection-type odourising 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 with non-technological use of gas (e.g., domestic use, boilers for heating, etc.).

For 2021, **Inrete Distribuzione Energia** is estimated to have a **positive balance between premiums and penalties of approximately Euro 400 thousand**, relating to the recovery of continuity of the gas distribution service for the districts managed. Specifically, Inrete Distribuzione Energia obtained bonuses for the odourisation component (Euro 600 thousand) and penalties for the dispersion component (Euro 200 thousand), resulting from an unexpected reversal in the trend of dispersions reported by third parties, the causes of which are currently being investigated.

For AcegasApsAmga, pursuant to the TUDG for the 2020-2025 regulatory period, **premiums are estimated at Euro 741 thousand** deriving from the dispersion (Euro 547 thousand) and odourisation (Euro 194 thousand) components. For the second year in a row, AcegasApsAmga has managed to obtain bonuses on all the distribution plants it manages.

For Marche Multiservizi, Arera recognised **bonuses of Euro 98 thousand** relating to safety recoveries in the gas distribution service for the year 2018.

Arera's 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" (TUDG), establishes that the distribution company must comply with the minimum annual percentage service requirement of 90% of calls with arrival time at the call location for emergency services within no more than 60 minutes.

GAS EMERGENCY SERVICES

	2019	2020	2021
Average arrival time at the call location (min)	32.6	35.3	35.7

	2019	2020	2021
Calls with arrival time at the call location within 60 minutes (%) (service requirement: 90%)	97.0%	97.8%	97.8%

Our gas emergency services reports confirm full compliance with the regulatory requirements, as 97.8% of all calls arrived on site within 60 minutes (compared to Arera's service requirement of 90%). In particular, Inrete recorded a result of 97.5% for this indicator while AcegasApsAmga recorded 99.6%, and Marche Multiservizi recorded 98.1%.

In 2021, Inrete continued to plan and execute a series of inspection **campaigns for underground and overhead connections**, including the planned search for gas leaks extended to above-ground parts of the plant. 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 **check using instruments is carried out on the above-ground connection** and on the **meter being worked on** to ensure that there are no leaks.

Arera resolution 569/19 of 27/12/19 requires all gas distribution service operators to replace gas networks defined non-compliant by 2025. As of 2019, Inrete Distribuzione Energia manages just under **160 km** of non-compliant network, consisting of asbestos cement pipelines, located in the municipalities of Forlì (120 km), Ravenna, and Codigoro. The replacement works must be completely carried out by 2025 (net of the Municipality of Forlì, for which a formal waiver has been requested from Arera, in accordance with Resolution 569/19, to extend the deadline until the end of 2029), with intermediate production results of at least **30% by 2022 and 75% by 2024**. To this end, agreements have been completed with the above-mentioned municipalities to streamline authorisation procedures in order to comply with the obligations imposed by this Resolution. The **multi-year plan of interventions continues**: the execution of the works has been entrusted to specialised companies through the use of new specific scheduled maintenance contracts activated in 2020 for the replacement of gas networks and connections in non-compliant material. The basic rules of the intervention plan remain unchanged and are constantly updated with reference to the probability of breakage calculated for each individual pipeline, as well as the many context conditions that must necessarily be considered when working in densely inhabited environments, such as: road networks, the presence of schools, hospitals and sensitive users, areas subject to constraints, and the feasibility of construction. In the course of 2021, Inrete replaced a further 11.3 km of asbestos cement pipelines and renewed the connections connected to them, bringing the renewed network to 20.2 km. By 2022, a further 25 km of new gas network is expected to be laid, with the simultaneous renewal of the connected connections, in order to meet the deadlines set by Arera: 27% compliance will thus be achieved for the Forlì network (following the exemption granted by the Authority) and 30% for the Ravenna and Codigoro networks.

INSPECTIONS AND LEAKS IN THE GAS NETWORK

	2019	2020	2021
Percentage of the total high and medium-pressure network inspected (service requirement: 100% in three years)	62.4%	54.9%	61.7%
Percentage of the total low pressure network inspected (service requirement: 100% in four years)	85.0%	81.9%	78.1%
Number of leaks on distribution network located upon inspection, per kilometre of network	0.105	0.098	0.092
Number of leaks on distribution network located upon notification by third parties, per km of network	0.031	0.033	0.036

In 2021, **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, we inspected more than 62% of the high and medium pressure network and 78% of the low pressure network.

As of 2019, Inrete Distribuzione Energia's new system for the programming and management of the **gas network's scheduled leak detection** is active. The system consists of planning activities using an artificial intelligence **platform with machine learning algorithms**, aimed at optimising the effectiveness of daily inspections in terms of maximising the number of dispersions found and minimising inspection routes. This is not only in pursuit of industrial efficiency objectives, but also to guarantee 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 as optimised road routes to minimise mileage and inspection times so as to increase effectiveness and reduce the environmental impact of the operations.

The data resulting from the start-up of the new system for managing the planned search for leaks on the gas network highlight the coherence between them and the aims of the planning tool: in fact, the number of leaks detected in relation to the network inspected was **higher than in the years prior** to the start-up of the new system for planning the search for leaks. While the quantity of network inspected in 2021 in Emilia-Romagna was 6.1% higher than in 2020, the number of detected leaks decreased by about 4.5% compared to 2020 (the number of leaks per km of network inspected decreased from 115 to 103). The incidence rate of leakages reported by third parties in Emilia-Romagna is in 2021, equal to 36% of the total leakages (both reported by third parties and detected during inspections). This incidence rate, while higher compared to 2020 and 2019, remains below the 2018 figure (equal to 38%).

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 being carried out to pursue a new step in improving process performance.

Analysing the Group's entire gas distribution network, in 2021, **36 leaks were reported by third parties**, per thousand kilometres of network, compared to 33 in 2020. On the other hand, **92 leaks** were identified by means of inspections on the Group's distribution network per thousand kilometres of network, compared to 98 in 2020.

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 distribution network and on an estimate of the time between the time of breakage and the time the leak is fixed. In 2021, the percentage of leaks in the gas distribution network calculated using this method was 0.024% of the total volume of gas injected into the network.

How does the initiative contribute to responsible digital transformation? The benefits achieved in the Corporate digital responsibility dimensions (please refer to the dedicated section "Corporate digital responsibility")

Social		Increased health and safety for residents and workers, achieved by using artificial intelligence systems to support inspection and detection of fugitive leaks. The activity is aimed at pursuing increasingly advanced levels of safety and quality of service.
Environmental		Improved air protection due to more efficient leak detection and the resulting less travel required by operators. The decrease in fugitive emissions from the grid translates into less greenhouse gas emissions into the atmosphere.
Economical		The efficiency of leak detection operations, supported by artificial intelligence algorithms, reduces operating costs and accordingly increases the effectiveness of the work done.

Electricity distribution service safety and continuity

[416-1]

In 2021, the distribution networks operated by Inrete Distribuzione Energia distributed approximately 2,074 GWh of electricity to around 263 thousand users in 24 municipalities of the provinces of Bologna, Modena, and Ravenna in Emilia-Romagna. Also, we distributed about 788 GWh of electricity to 163 thousand users served by AcegasApsAmga, in the municipalities of Gorizia and Trieste.

The electricity grids operated by **Inrete** at 31 December 2021 are 10,479 kilometres long; 73.2% of them carry low voltage, 26.5% medium voltage, and 0.3% high voltage. 42.2% of the lines are underground. In the **Triveneto** region, AcegasApsAmga operated 2,314 kilometres of network, 65.8% of them carry low voltage, 34.0% medium voltage, and 0.2% high voltage. 69.9% of the lines are underground.

In total, the approximately 12.8 thousand km of electricity distribution network managed by the Group distributed over 2,860 GWh to 426 thousand users.

The **continuity of the electricity distribution service** is regulated according to the provisions of the Authority on the quality of electricity distribution and metering services for the regulatory period 2016 - 2023 (Resolution ARG/elt 566/19). 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 both geographical areas, Inrete Distribuzione and AcegasApsAmga have approved 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, target levels and trend levels have been set for the districts managed.

For 2020, bonuses relating to the recovery of continuity of the electricity distribution service of approximately Euro 530 thousand were recognised to **Inrete** following the preliminary investigation in the proceedings decided by Arera for the formation of the measure on service continuity. **AcegasApsAmga** also participates in the system of bonuses and penalties relating to the recovery of continuity in the electricity distribution service provided for by Resolution ARG/elt no. 566/19: in 2021, based on the duration and number of interruptions without prior notice relating to the reference year 2020, the two areas were entitled to incentives of approximately Euro 135 thousand.

CONTINUITY OF THE ELECTRICITY SERVICE

	2020	2021	2020-2021 average	2021 trend level
Average number of power cuts per customer in high concentration areas	1.06	0.64	0.85	1.22
Duration of power cuts (minutes) per customer in high concentration areas	15.19	8.44	11.82	28.00
Average number of power cuts per customer in medium concentration areas	1.10	1.97%	1.53	2.78
Duration of power cuts (minutes) per customer in medium concentration areas	18.13	20.93	19.53	45.00
Average number of power cuts per customer in low concentration areas	4.76	3.58	4.17	5.01
Duration of power cuts (minutes) per customer in low concentration areas	35.97	48.65	42.31	68.00

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.

For 2021, the good level of continuity of the electricity distribution service is confirmed and, for all the reference indicators, is 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 0.35 hours in 2021 (it was 0.30 in 2020 and 0.40 in 2019).

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** has toll-free numbers for each service (gas, integrated water service, and district heating), and district (Emilia-Romagna and Triveneto) 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.). In 2021, Hera Luce became part of the centralised technical call centre in Forlì for the management of customers for emergency services for public lighting and traffic lights.

To deal with the health emergency, in keeping with 2020, the technical call centre has been **completely reorganised** with various measures (logistical decentralisation, new customer relationship management infrastructure, etc.) with the priority aim of ensuring continuity of service while ensuring the safety of operators and complying with regulatory provisions. A fundamental element to safely perform the above was the upgrading of the system to create a more open and flexible architecture allowing for remote work by adapting the operations of the technical call centre to a remote location (mobile or fixed).

PERCENTAGE OF CALLS RECEIVED BY THE TECHNICAL CALL CENTRE AND ANSWERED (WITHIN 120 SECONDS) OR ABANDONED WITHIN 120 SECONDS

%	2019	2020	2021
Gas	98.6%	98.5%	99.4%
<i>of which for the gas emergency services (minimum percentage required by Arera: 90%)</i>	97.4%	96.2%	96.2%
Water service	98.0%	97.4%	96.1%
<i>of which for water emergency services (general level: 90%)</i>	95.0%	92.5%	92.5%

The figures do not include Marche Multiservizi. The percentage of calls for emergency services for gas and water was calculated according to criteria defined by Arera, considering the calls received, answered, or abandoned within 120 seconds.

AVERAGE TECHNICAL CALL CENTRE WAITING TIMES

Seconds	2019	2020	2021
Gas	54.6	49.0	54.0
Water service	69.9	61.4	64.3
Number of calls	317,956	340,364	316,832
<i>of which for the gas emergency services</i>	100,006	105,895	75,388
<i>of which for the integrated water emergency services</i>	217,950	234,469	241,444

The figures do not include Marche Multiservizi.

In 2021, the technical call centre in Forlì received over 316 thousand calls, slightly down compared to 2020. The percentage of calls answered by the technical call centre within 120 seconds improved for the gas service (from 98.5% to 99.4%) and slightly decreased for the water service (from 97.4% to 96.1%). Average waiting times worsened slightly.

In 2021, the customer satisfaction survey, carried out at the end of the conversations with operators by means of an automatic post-call system, showed 8% participation and an **overall satisfaction level of "very satisfied" or higher in 90% of the surveys**.

Development of the technical call centre continued in 2021, aimed at improving the performance and quality of the services it provides. Work continued on organisational integration of the emergency response service within Hera Luce, implementing the Speech API and Text Mining voice analysis tools, aimed at monitoring operator behaviour and call quality, developing a dynamic workflow tool for listing safety requirements to gas service customers, creating an online digital medium called CCT_News for detailed call procedures, and lastly fine-tuning the testing of the Man-Down app and Black Box Mezzi.

The continuity of the water service

The water network control activity index is expressed as a percentage of the network inspected for leaks.

In 2021 a total of 14,792 kilometres (+23.8% compared to 2020) of network were inspected by the Group, corresponding to **42.1% of the total**. In Emilia-Romagna the organisation of the leak detection activity was based on a criticality analysis in terms of network losses, breakage indexes of the pipes, and possible issues concerning the availability of water resources (in particular during the summer).

THE CONTINUITY OF THE WATER SERVICE

%	2019	2020	2021
Network subject to active leak detection	31.1%	34.1%	42.1%

6.06 Customer relations

The call centre

The increase of informative and commercial contacts confirms our customers' appreciation for this channel to resolve their needs practically and effectively. The growing number of customers that call the call centre from a mobile phone testifies to the success of the company's decision in 2016 to make this method free of charge.

In 2021, customers' preference for using telephone and digital channels over physical counters was confirmed. Despite the still significant impact of the health emergency, in 2021 all business processes were brought back to flow, and the use of remote work was consolidated for more than 80% of call centre operators, guaranteeing them health protection and a better work-life balance.

For Estenergy's call centre, a unified toll-free number was implemented in 2021 following the merger of Hera Comm Nordest in April, allowing uniform management of its customers.

Attention to the quality of customer service has led, even in such a complex context, to an increase in the Hera Comm call centre satisfaction indicator to 89.5 points (+0.8) in 2021, with a decrease in dissatisfied customers (from 6.4% to 6.0%).

QUALITY OF THE CALL CENTRE FOR RESIDENTIAL CUSTOMERS

	2019	2020	2021
Average waiting time at the call centre for residential customers (s)	27	33	32
Calls with satisfactory outcomes for residential customers (%)	95.9%	94.7%	95.1%
Residential customer contacts at the call centre (thousands)	4,859	6,026	7,013

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. The figure does not include data on the company Eco Gas and Aresgas.

For the **residential call centre** for the **household market**, 2021 shows an improvement in technical indicators despite the 16.4% increase in calls handled by call centre operators: the service level rises to 95.1% (94.7% in 2020) and the average waiting time improves by 1 second (from 33 to 32). An improvement in the effectiveness of the system for acquiring self-meter readings, stimulated by email and text message campaigns, and the introduction of a customer identification system, made it possible to automatically manage the increased flow of calls.

In 2022 Hera Comm will aim to expand its range of automated services to allow its customers to carry out the simplest operations (copying bills, paying instalments, taking bulky waste appointments) independently, avoiding unnecessary waiting and without time restrictions.

QUALITY OF THE BUSINESS CALL CENTRE

	2019	2020	2021
Average waiting time at the call centre for business customers (s)	24	25	34

	2019	2020	2021
Calls with satisfactory outcomes for business customers (%)	96.0%	95.6%	95.6%
Customer contacts at the call centre (thousands)	348	370	432

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. The figure applies to the business call centre of Hera Comm.

For the **corporate segment**, 2021 saw an increase in calls to business call centres (+16.9%) due to the gradual recovery of commercial and industrial activities compared to 2020. The service level is confirmed at 95.6% and the average waiting time increases by 9 seconds (from 25 to 34).

The satisfaction indicator for the business call centre also improved, from 85.6 to 86.1, with a drop in dissatisfied customers (from 8.8% to 8.6%).

With regard to Hera Group call centres, it should be noted that calls are handled both by Hera Group employees and by employees of specialised companies with operational and legal headquarters in Italy. Trade promotion is also carried out by third-party companies, being Italian-owned sales agencies that rely on operating units both in Italy (predominantly) and abroad. Their staff is employed directly by these sales organisations, who have signed a standard agency mandate with the Hera Comm Group.

The branch offices

In full compliance with the prevention and protection measures provided for by the regulations, **Hera Comm** has continued to guarantee territorial coverage in 2021 through its network of branches and to further invest in this extremely important channel of contact. It was thus possible to **securely** guarantee an important communication channel to over 770,000 customers who chose to go to the physical channels.

Particular attention was paid during the year to new systems for monitoring the quality of practices on important issues such as the timing of supply activation, credit and invoicing.

As part of this strategy, Hera Comm has continued to invest heavily in personnel, with new recruits and innovative training courses: a total of around 100 people involved and over 4,500 hours of training provided to improve the digital, technical and communication skills of our counter staff. Investment in quality and personnel has helped to achieve further growth in customer satisfaction and average waiting times:

- The average satisfaction of customers visiting Hera Comm counters is 90.1%;
- The average waiting time at the desks was 5 minutes and 31 seconds.

These results also confirm the validity of the hard work and constant commitment dedicated to improving processes, procedures and daily analysis of customer requirements.

In line with the Group's sustainability strategies aimed at reducing environmental impacts, including those relating to branches, new **innovative services are proposed aimed at saving consumption**, such as technologies for signing contracts and for paperless payments (e.g. electronic sending of bills), also to guarantee a more effective system for delivering bills.

Hera Comm has also intensified its investment strategy on a new, more functional and welcoming layout for its branches: thanks to the work carried out in 2021, the branches in San Lazzaro, Spilamberto, Copparo, Budrio, San Giorgio di Piano and Medicina now have renovated locations, with larger spaces, new soundproofing technologies to protect privacy, a new reception desk to receive and provide faster and more targeted responses to customer needs, exhibition spaces to share with customers our commitment to efficiency and energy saving, as well as spaces dedicated to the storage of environmental equipment useful to citizens as part of the new separate waste collection services that are spreading in many municipalities in the area. A new branch was also opened in the municipality of Riccione, in line with the offer with which the Group was awarded the contract for the integrated water service in the province of Rimini.

AVERAGE WAITING TIMES AT BRANCH OFFICES

Minutes	2019	2020	2021
Hera	8.0	4.8	5.6
AcegasApsAmga	11.4	4.6	2.3
Marche Multiservizi	13.2	14.0	11.0
Weighted average on contacts	9.4	5.4	5.7
Number of contacts (thousands)	998	632	773

The figure refers to branch offices with a queue detection system. The figure does not include the companies Eco Gas and Aresgas

Over the course of the year, branch office inflows increased by 9.4%, partly as a result of the greater use of physical branch offices compared to 2020, which was characterised by the most acute phases of the health emergency.

Average waiting times at branch offices improved, especially for those of the Estenergy Group (accounted for in the Hera perimeter in the table "Waiting time at counter"), AcegasApsAmga and Marche Multiservizi; at the Group level, the percentage of citizens who waited more than 40 minutes at the branch office was 1.1% (0.8% on a like-for-like basis with 2020, when it was 1.4%).

There are a total of **148 branch offices throughout the country**, 70 of which have queue detection systems.

Complaint management

In 2021, the volume of complaints managed by Hera Comm decreased compared to the previous year, reporting just over 31 thousand cases, down (-5.1% compared to 2020), thanks to the **continuous monitoring of customer relationship management** processes with a gradual reduction (volume and seniority) of cases in progress.

The decreases vary by type of service: waste management (-12.7%), water (-5.9%), electricity (-6.8%), and gas (-7.3%). In addition, the ratio of complaints to contracts managed improved significantly from 1.0% in 2020 to 0.9% in 2021. The outcome from the point of view of quality was very positive: the average handling time decreased by approximately 1.4 calendar days, from 11.2 days in 2020 to 9.8 days in 2021 (-12.7%) while maintaining a 99.7% compliance with standards (in line with the previous year).

COMPLAINTS RECEIVED

	2019	2020	2021
Average complaint response time (days)	13.0	11.2	9.8
Complaints that were dealt with within the standard timeframe (%)	99.8%	99.9%	99.7%
<i>of which electricity and gas complaints relating to sales</i>	<i>99.7%</i>	<i>99.8%</i>	<i>99.8%</i>
Complaints received (No.)	57,449	33,166	31,478

The data do not include the companies Estenergy (and subsidiaries), Amgas Blu, Eco Gas, AcegasApsAmga, Aresgas and Marche Multiservizi. The complaint response time is specified in calendar days, with a reference standard of 40 days.

As for prior years, also in 2021 Arera repeated a survey on energy-related complaints to assess the quality and validity of the replies provided to customers.

For **AcegasApsAmga**, the average time required to respond to complaints was 11.1 days, down compared to the 11.5 days of last year and 100% of complaints were answered within the standard time, as in 2020.

In **Marche Multiservizi's** area, the average time required to respond to complaints was 8.5 calendar days (down compared to 2020, when the time was 13.3 calendar days) and 99.7% 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 manager has become mandatory as of 1 July 2019; however, it is not currently considered a procedural condition as it is for energy services.

In 2021 ADR arbitration was used as a tool for out-of-court dispute resolution, which more and more customers are turning to in order to resolve problems that are not solved at the complaint stage.

For the Hera Group, the success rate (i.e. cases of conclusion with an agreement report) in the free market was around 80%, several points higher than the national Italian data published by Arera. However, in 2021, there was a trend towards longer completion times, from 59 days in 2020 to 62 in 2021. The continuation of the health situation in the spring of 2020 certainly affected the progress of the arbitration, not so much in the conduct of the meetings, which were already taking place remotely, and which continued without any difficulty, but in the interruptions of the on-site verification of circumstances, where inspections were necessary.

In 2021, **requests for ADR arbitration** increased sharply: from 474 in 2020 to 715; the reason for this is the growing popularity of this dispute resolution system, thanks to the increased maturity of Italian consumers, the publicising of the service by Arera, and the indication of this option in the text of each response to complaints. Of these 715, 357 are related to gas service, 175 to electricity, 43 to both sectors and 134 to water service. Of the 653 arbitration requests closed during the year, 438 were concluded with a settlement, 191 without an agreement, 12 were closed due to inadmissibility, 8 due to abandonment of the request and 4 due to non-participation.

In addition to ADR arbitration, there is also **joint mediation**, an instrument based on an agreement between Hera and the main consumer associations, which also aims to resolve disputes out of court. The number of requests for joint mediation by consumer associations is decreasing year on year, largely replaced by alternative dispute resolution ADR, which is now consolidated as the tool of preference for resolving disputes over gas, electricity and water services. The need for face-to-face meetings, and the required assistance of a consumers' association (chosen by the customer or established ex officio on a rotating basis among the signatories to the memorandum of understanding) certainly discouraged recourse to this method; the small number of requests, as well as the even smaller number of procedures concluded, 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, for which some updates were envisaged and for which contacts are continuing, also in the light of the numerous urgent measures put in place by the Government to deal with the economic situation created on the market.

Litigation with customers

[307-1]
[419-1]

At the close of 2021, there were 680 disputes pending with customers, 406 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, 595 concern the energy services (gas, electricity, and district heating), 62 the water service, and 21 the waste management service.

In particular, litigation with customers in the energy sector concerns 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. In addition, following the ruling of the Court of Cassation, electricity service customers have initiated litigation for the refund of provincial surcharges on excise duties 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

The management of **information security** right from the design phase, to achieve *security by design* is a consolidated asset within the Hera Group. It makes it possible to protect all the data relevant to the business and, in particular, the personal data of the persons involved, in an increasingly effective manner, pursuing *privacy by design* in a synergistic manner.

The governance of information security has been consolidated by means of a complex **document management system** consisting of the "Information Security Policy Guideline", the "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 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 initiatives, the implementation of which is constantly monitored, in the face of an increasing level of external threats.

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.

VIOLATIONS OF CUSTOMER PRIVACY: COMPLAINTS

Number	2020	2021
Externally received and substantiated complaints	10	44
Privacy Guarantor complaints	0	5

The secondary use of customers' personal information is also monitored within the Group companies. By 2021, the percentage of **customers whose data are used for secondary purposes** is 57%. The data refer only to domestic customers with at least one active contract on the free market energy services of Hera Comm, Hera Comm Marche and Estenergy (customers on the regulated market and of last resort are excluded).

7. PEOPLE

7.01 Objectives and performance

What we said we would do	What we have done	SDGs	Progress*
Management of skills and training			
Implement MyAcademy, the new online training platform that will allow all workers to customise their learning experience and continuously update their skills. 22.5 hours per capita of training in 2021.	New MyAcademy Group training platform launched: a single digital environment with continually updated content and customisation options. An average of 30.3 training hours per capita were delivered in 2021 (see page 240).	4, 8, 9	
Welfare			
Promote the new welfare portal which has been further adapted to the interests and uses of each worker in order to further improve the opportunities provided. This will be achieved also through the creation of a dedicated Hextra app. Include a new psychological, physical and financial well-being plan in Hextra.	Hextra welfare system promoted also through the launch of a new technological platform and mobile app. New initiatives, free services and agreements for psychological, physical and financial well-being included (see page247).	4	
Continue to promote the fourth edition of HeraSolidale in 2021 to achieve the goals of the 7 Partner organisations through donations from employees, customers and the company.	By the end of 2021, around Euro 250 thousand were donated to the 7 partner organisations of the fourth edition of HeraSolidale 2020-22. At least one goal reached for each organisation (see page330).	17	
Health and safety			
Further reduction in the accident frequency index (10.6 by 2024). Continue with "Culture of Safety" training and awareness-raising initiatives. Gradually extend the use of the "man down" app in BUs with lone working risk.	The accident frequency index in 2021 was 10.3 (12.6 in 2020). The initiative "Culture of Safety" continued and the "man down" app was tested at HeraTech's laboratories (see page248).	8	
* Result achieved or in line with plans. Result with moderate deviation from planning.			
What we will do		SDGs	
Management of skills and training			
Strengthen MyAcademy, the new online training platform and single digital environment featuring continuous content update and options for customising the learning experience according to role and training needs. Continue with the initiative, launched in 2020, which allows workers to devote a working day (full day or two half days) to their professional development by attending distance learning courses. 25 training hours per capita in 2022.		4, 8, 9	

What we will do

SDGs

Welfare

Continue to develop a corporate culture aimed at further strengthening the idea of individual well-being (physical, psychological and financial) as an element to invest in and an opportunity for everyone to express their full potential and contribute to their professional growth and to the growth of the company.

4

Broaden the range of well-being services offered.

Continue to promote the fourth edition of HeraSolidale to achieve the goals of the 7 Partner Organisations through donations from employees, customers and the company. Plan the fifth edition (2023-2025).

17

Health and safety

Further reduction in the accident frequency index (10.2 by 2025). Continue with "Culture of Safety" training and awareness-raising initiatives. Gradually extend the use of the "man down" app in the business units with lone working risk.

8

7.02 Strategic planning of sought-after and future skills and roles

The five strategic levers of the Business Plan steer the action of the Central Personnel and Organisation Department towards building a corporate environment supporting business strategy.

The rapid changes in the competitive context, in technology and in the regulatory framework require that organisations 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 relations with the ecosystem.

The current and constantly evolving market scenario, therefore, also leads the Hera Group to adopt systemic intervention models that are able to support the implementation of the strategies of individual businesses and to identify supply and demand for both current and future roles and abilities.

In this context, as part of the 2021 business planning cycle, **the approach to the workforce planning process** was continued. Drawing on greater integration between the business strategy and the strategy for roles and skills, the 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.

Within the context of this approach, reflection and analysis involve five main aspects:

- **Dimension:** is workload rising or falling? Will there be roles that will no longer be necessary or will be able to be replaced by automation? Will there be emerging roles that will be included in the organisation?
- **Cost:** will 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 demands? Will the demographic structure be appropriate? Is the balance between operational/management positions consistent with future challenges?

Hera Group's workforce

2021 confirmed the consolidation of the Group's organisational and corporate structure, both through expansion of the scope of reference and through ongoing attention towards simplifying the operating mechanisms.

[102-7]

As at **31 December 2021**, the total workers with **open-ended contracts** in Group companies amounted to 9,122, while workers with **fixed-term contracts** amounted to 213.

STAFF FIGURES AT YEAR END

Number	2019	2020	2021
Managers	156	155	153
Middle managers	565	570	583
White-collar workers	4,929	5,005	5,074
Blue-collar workers	3,332	3,281	3,312
Open-ended contract employees	8,982	9,011	9,122
Fixed-term contract employees	97	141	162
Staff leasing contracts	92	39	51
Total workforce at year-end	9,171	9,191	9,335

Data as at 31 December.

The decrease in two managers is due to six moves from the role of middle manager to manager, to the exit of nine managers and to an external recruitment during 2021. The number of middle managers increased by 13, which is the result of 15 new entries, 29 moves from the role of white-collar worker to middle manager, and 31 exits (6 of which as moves from the role of middle manager to manager). The increase in white-collar workers is due to the entry of 369 new workers (50 of which as moves from the role of blue-collar to white-collar worker) and 300 exits (29 of which as moves from the role of white-collar worker to middle manager). The number of blue-collar workers increased by 31 units compared to 2020 due to the entry of 323 blue-collar workers and to the exit of 292 blue-collar workers (50 of which as moves from the role of blue-collar to white-collar worker). Entries include the workers of Vallortigara, Recycla, Primagas and Eco Gas, which entered the scope of consolidation, for a total of 186 employees.

[102-8]

WORKFORCE BY TYPE OF CONTRACT AND GENDER (2021)

Number	Men	Women	Total
Open-ended contract	6,652	2,470	9,122
Fixed-term contract and other	137	76	213
Total	6,789	2,546	9,335

Data as at 31 December.

[102-8]

WORKFORCE BY TYPE OF CONTRACT AND GEOGRAPHICAL BREAKDOWN (2021)

Number	Italy	Abroad	Total
Open-ended contract	8,942	180	9,122
Fixed-term contract and other	212	1	213
Total	9,154	181	9,335

Data as at 31 December.

The 181 workers posted abroad refer to Aresgas, which distributes 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	2019	2020	2021	2021 (%)
Emilia-Romagna	5,864	5,818	5,774	61.9%
Triveneto	2,171	2,195	2,110	22.6%
Marche	612	625	604	6.5%
Other	524	553	847	9.0%
Total	9,171	9,191	9,335	100%

Data as at 31 December.

[102-8]

WORKFORCE BY GENDER AND TYPE OF CONTRACT (2021)

Number	Men	Women	Total
Full-time	6,737	2,197	8,934
Part-time	52	349	401
Total	6,789	2,546	9,335

Data as at 31 December.

The average age of employees is 47.0 years (lower than 2020 when the average age was 47.3). Average seniority is 16.3 years.

HOURS OF ABSENCE AND HOURS WORKED PER CAPITA FOR EMPLOYEES WITH OPEN-ENDED CONTRACTS (BY TYPE)

Hours	2019	2020	2021
Illness	61.2	61.9	60.8
Maternity/paternity and parental leave	12.2	16.5	16.1
Lost time injury	4.5	4.9	3.7
Strikes	0.1	0.0	2.0
Union meetings	0.3	0.1	0.2
Union leave	5.4	4.3	4.6
Other	33.5	40.1	31.2
Total absences (h)	117.2	127.8	118.7
Regular hours worked	1,555.8	1,545.2	1,581.3
Overtime hours worked	34.5	27.3	29.9
Total hours worked	1,590.3	1,572.5	1,611.2

The figures do not include the following companies: Aliplast, Hestambiente, EstEnergy, Ascopiave Energie, Ascotrade, Blue Meta, Etra Energia, Wolmann, Amgas Blu, Vallortigara, Recycla and Eco Gas. 10% of Group employees work in these companies. The hours worked are calculated net of overtime hours for recovery.

Per capita hours of absence fell by 7.1% compared to 2020. The use of holidays was lower than in the previous year which had featured an extraordinary plan so that employees could use their holiday leave backlogs. Nonetheless, the downward trend in the number of holidays left at year end continued. **Parental leave** decreased compared to the previous year, but was nevertheless significantly above the average of the past years due to the health situation and the introduction of specific emergency regulations. There was a slight decrease in the **absence rate due to lost time injuries** as well as in the number of **hours of sick leave**. The number of **hours for strikes and meetings** increased compared to last year, partly due to the fact that negotiations were resumed for the renewal of the main collective agreements.

Overtime hours rose slightly compared to 2020, but were lower than the average in previous years, partly as a result of more widespread agile working.

The “other” item in the table mainly refers to leave requested to assist family members with disabilities or illness, leave for medical check-ups and therapy, and leave for academic purposes.

The selection and onboarding process

Recruiting, selecting and effectively **onboarding** the best talents on the market is a challenge that is tackled by Hera with a **data-driven strategy** that is fully **integrated with its business**.

The analysis of market trends and main process indicators is a practice that has been well-established for years in the **strategic workforce planning** process and that steers targeted employer branding and process actions, including the choice of specific recruiting tools.

This is the framework of reference we used to tackle a difficult years, as 2020 and 2021 were, which certainly put our selection and onboarding activities to the test; and it is thus that the levers we have long used for these processes, i.e., namely **digitalisation, simplification, agility** and **people analytics**, enabled us to deal with these rapid changes in a highly effective manner.

The **digitalisation of interviews** and assessments continued in 2021. This process has been underway for years and includes online tests for soft and digital skills, as well as live and pre-recorded video interviews, thus improving both candidates' experience and process effectiveness.

Regarding the onboarding process, a number of new features were introduced in 2021 that focused mainly on the sense of belonging, engagement and effectiveness of new recruits:

- **a new onboarding module** was implemented that, by making full use of the potential of the new selection system, makes it easier to manage communication between the different players involved in the process even before they join the company;
- **the documents supporting the onboarding process** (vademecum for new recruits and managers) were reviewed to make their use and access easier, also by using simple language; the feedback form on the onboarding process was also digitalised;
- specific events were introduced to **involve and engage new recruits** which will accompany them during their first year in the company: "A coffee with..." for the new recruits of the month to get to know them and help them create a network within the company, as well as two further events, one specifically focused on the Budget Unit and a transversal Group event to celebrate and close the onboarding process.

In order to strengthen its Employer image, the Group once more invested in processes regarding **talent acquisition** (engagement, search and selection of talent) and **arrival in the Group** (review of onboarding process) with a view to improving effectiveness and efficiency.

With the **"Ambassador" project**, a number of colleagues were involved in setting up a pilot group to tell people about the company and to share brand-related content, in order to encourage positive word-of-mouth and show the more human side of the company.

From a **reputational perspective**, the improvement of Hera's popularity as an employer was confirmed on the Indeed and Glassdoor platforms, which benefited from a restyling of the company page and served as recruitment catchment areas.

The result of these initiatives was that the **use of internal tools accounted for around 97% of selections**, achieving significant savings on the costs incurred for entrusting this task to external companies (only 3% of selections). Net of the staff requirements filled through internal mobility (see paragraph "[Internal mobility](#)"), the **careers page** of the website was confirmed as the main channel, accounting for 24% of requirements, followed by **job portals** (5%) and **social media channels** (4%).

Selections contributed to a significant **generational change** (average age of 34 years for new hires) of the company workforce, and to the increase in the number of **women** (see paragraph "[Hera's contribution to creating jobs](#)") and the percentage of **graduates** (76% excluding operating profiles).

With regard to the **areas of recruitment**, the majority of the selections were recorded in the Operations area (61%), particularly in the waste sector, followed by the water sector. Needs in the AcegasApsAmga area were also significant (16%). Staff areas account for about 10% of total needs, and the Market area for 11%.

Smart working

After the launching of the first pilot project in 2017, smart working was **gradually extended to the corporate population** until reaching over 1,500 people in 2019.

The experience we have gained since 2017 has allowed us over the past two years, to handle the emergency situation with **resilience**, further strengthening the tools we are provided with to make sure that people could feel close to one another. Since 2021, almost **4.2 thousand employees** have been permanently involved in the project: the percentage is stable and equal to 77% of total permanent employees, excluding blue collar workers.

The number of smart working days was increased from June 2020: from one day/week of **remote working to two days**. At the same time, associates 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 overall view and better manage the team's activities. Since the health emergency is continuing, these two days may be further **extended in cases provided for by law** (e.g. fragility, quarantine for children under 16 or closing of schools, need for distancing within the company).

Smart working, according to the Hera model, means working on four different aspects: **culture, time and performance, space and technologies**, representing from the outset a process for completely reshaping new ways of working.

During the period of the health emergency, in addition to the traditional training platform, a specific section was created in the **dedicated sharepoint**, with training pills and useful information to better support even new hires who were working remotely.

Key focus was also given to **listening** to remote workers: during lockdown, specific surveys were carried out to find out how workers perceived their forced experience with remote working and to better target initiatives to help them. The various listening sessions carried out over the past years confirmed **complete satisfaction** both in terms of improved productivity for the workers involved and their

managers, and in terms of greater satisfaction by the workers who were already in the project as well as those who joined during the emergency period.

Investment will continue to be made in the **training of skills** that are crucial to making smart working even more effective and to optimising increasingly hybrid working methods. The aim will be to continue measuring both collective and individual benefits, enhancing 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, **achievement of goals** are becoming more important than the time and physical place of work. Hera Group's leadership model plays a leading and decisive role in ensuring effective application.

In 2021, remote working allowed **CO₂ savings of around 2,450 tons**.

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 context of reference and interest 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]
[404-1]
[404-2]

During 2021, continuity was given to replanning the training initiatives **in digital mode**. We experienced a further spread of lifelong learning practices and a steady growth in remote learning, with **digital training accounting for 60%** of total training hours (compared to 55% in 2020).

Regarding the different types of training delivered in 2021, **institutional and managerial training** included: initiatives linked to the **leadership model**; creation of an **institutional path for middle managers** with the aim to enhance the transition to the new role and the entry of new middle managers in the Hera Group; and the **Elective programme**, designed to develop an integrated view of corporate actions and the awareness of one's contribution to business goals, and to strengthen managerial skills for increasingly effective management of activities and resources.

With regard to **information systems**, the **Digital workplace** change management plan continued aimed at the effective use of Office 365 tools.

Technical and professional training included: the continuation of the initiatives planned and implemented within the **Professional Academy** training activities; the design and launch of the **Community Controller** for all Group resources involved in planning and control processes, aimed at introducing knowledge sharing and cross-fertilisation also through new Office 365 digital tools; and the creation of the **Fit for 55 Workshop** in order to provide an overview of the Fit for 55 Package presented in 2021 by the European Commission and on which the political activity of the forthcoming months will focus.

Furthermore, within the **Circular Economy Manager course**, a Monitoring and Measuring Circularity workshop was planned and held to encourage the dissemination of circular economy principles and measurement tools. In the Hera Comm area, widespread training was delivered on the change management plans for the Branch Offices project and the Salesforce project (new CRM application). In the Network area, training was connected to the Geocall C&M project for the listening and monitoring activities in the Operation and Maintenance post start-up phase (Water, TLR, Inrete, AcegasApsAmga) and EHS extension for Personal Protective Equipment management.

Lastly, technical training on procedures and documentation for **waste homologation** was delivered within the Time to Market project, which seeks to reduce the length of time between the business opportunity and the first assignment; instead, as regards the development and **coordination of the BIM methodology** within the Hera Group, an introduction to BIM was launched for the business units involved.

In the **quality, safety and environmental** area, the **Culture of Safety** project - which aims to increase the culture of health and safety at all company levels - was continued. The training model was consolidated with more innovative and engaging communication tools, and the content of the main training projects under the State-Regions Agreement was monitored internally.

Furthermore, the **Safety Leadership** project was launched in April. The project addresses safety managers and employers and its goal is to raise further awareness on the culture of safety, with particular

focus on the importance of the human factor in spreading awareness and preventing occupational health and safety risks.

In the **ethical values and corporate culture** area, the **Alfabetico training project** was delivered in digital mode to all new permanent Group employees provided with IT equipment, to help them become familiar with the Group's Code of Ethics and promote behaviour in line with the Code. Thanks to the contribution of internal facilitators, 29 training sessions were held and 548 people were trained at Group level. The satisfaction rating for the initiative was very high (4.61 out of 5).

The **Group's new online training platform MyAcademy and its mobile app** were launched in 2021: a single, modern digital environment featuring continuous content update and options for customising the learning experience according to role and training needs. The platform has different sections: compulsory, featured, my courses, my favourite subjects, courses saved for later and popular.

How does the project contribute to responsible digital transformation? The benefits achieved in the Corporate digital responsibility dimensions (please refer to the dedicated section "Corporate digital responsibility")

Social



The MyAcademy online training platform promotes digital inclusion and increases the skills of Group employees.

In line with the initiative launched in 2020, workers also had the opportunity in 2021 to devote a working day (full day or two half days) to their professional development by attending distance learning courses.

[205-2]

In 2021, **2,925** resources were involved in **anti-corruption** training, amounting to a total of **2,293 hours** of training delivered through the following initiatives: "AlfabEtico" which included issues on corruption, e-learning on anti-corruption (37001), training activities on the 231 model, self-assessment on fraud prevention, and training courses on fraud prevention issues.

TOTAL TRAINING HOURS PER AREA OF INTERVENTION

Hours	2019	2020	2021
Sales and market	9,638	4,463	9,924
Managerial	27,138	25,271	31,101
Quality, safety and environment	74,459	82,959	96,206
Information systems	30,813	41,420	26,582
Technical-operational	81,407	76,746	103,709
Ethical values and corporate culture	20,820	4,995	5,753
Total	244,275	235,854	273,274

With the exception of Information Systems, all intervention areas show an increase in the number of training hours delivered in 2021 compared to 2020. The increase in total training hours in Quality, Safety and Environment is particularly due to extraordinary training activities of a mandatory nature.

In 2021, 60% of training was delivered in **digital learning mode**, 22% with **face-to-face** activities and 18% with **on-the-job training** activities. This result is due to the need to redesign the learning processes further and also to the particular circumstances in 2021, during which there were still restrictions in terms of face-to-face training due to the health emergency.

TRAINING HOURS (AVERAGE, PER CAPITA)

Hours	2019	2020	2021
Managers	40.0	40.9	29.2
Middle managers	50.4	35.2	42.8
White-collar workers	28.0	22.4	26.7
Blue-collar workers	25.4	30.3	33.8

Average	28.6	26.0	30.3

Despite the continuing restrictions due to the health emergency, the final number of training hours per capita in 2021 is the highest in recent years and well above the target of 22.5 hours. This result is also thanks to the delivery of training activities in digital mode. Training hours per capita were 30.5 (32.3 for men and 25.2 for women).

The 2021 Sustainability Report drawn up by the Utilitatis Foundation on behalf of **Utilitalia**, the Federation of water, environment and energy companies, presents the sustainability performance of 90 utility companies. Considering the training hours per capita in 2020, Hera's figure was 53% higher for managers, 45% higher for middle managers, 33% higher for white-collar workers and more than three times higher for blue-collar workers than the average of the companies analysed.

ASSESSMENT OF TRAINING

	2019	2020	2021
Degree of satisfaction of trainees (quality perceived on a scale from 1 to 5)	4.39	4.30	4.32
Outcomes (correspondence with needs) (% of replies with assessment score of 4 or 5)	75%	73%	76%

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 downstream the training delivered.

Hera uses a training assessment system that considers the degree of satisfaction expressed by the workforce attending the courses, alongside the assessments of the department managers with respect to the impact of training actions on the skill profile development of co-workers and their application in the performance of the working 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 2020. 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 consolidated 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. The purpose is to raise the level of awareness of professional conduct and of 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 typical of the company (for example workers dealing with network services and workers dealing with remote control and management) in **trade notebooks**. Seventeen notebooks 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.

Furthermore, the following new professional Academies were created in 2021: **ICT – Information and Communication Technology** and **"Environment"**, giving priority to knowledge management process innovation. Instead, the "Engineering", "Water", "Purchasing and Procurement", "Energy Distribution", "Administration, Finance and Control" and "Compliance & Auditing" Academies were consolidated.

HerAcademy: Hera Group's Corporate University

[404-2]

In 2021, the process continued for consolidating **HerAcademy** as a **University Stakeholder**, capable of interacting with all partners of the national education system in order to set up Public Private Partnership projects and to define projects seeking to support innovation processes within the ecosystem of reference.

In 2021, in particular, the **workshop** "The evolution of social and relational dynamics for the "regeneration" of work" was held using a **hybrid** model (face-to-face and live streaming). The aim of the workshop was to reflect on the importance of relational assets within organisations and in the broader context of reference. The topic was analysed from a perspective of scientific research, long-term trends and practical cases of application. Furthermore, the tenth edition of the **university orientation** initiative for the children of employees approaching university enrolment was carried out remotely and in collaboration with the University of Bologna with the participation of academic guests, company representatives and H-Farm. Finally, the eighth edition of the **job orientation** initiative was organised to support the children of employees approaching the employment market.

Also as part of HerAcademy, the cooperation and initiatives set up with **H-Farm** continued. H-Farm is one of the largest European innovation centres, designed to develop partnerships for implementing innovation, digital and circular economy projects especially for students, employees and employees' children.

Agreements with universities, business schools and research centres

The Hera Group - through its **Corporate University HerAcademy** - has entered into several framework agreements over the past years with leading universities of the areas in which it operates, such as Bologna University, the University of Modena and Reggio Emilia, Ferrara University, Padua University (with stipulation of a new framework agreement), Florence University, Pisa University and the Polytechnica University of Marche, which include the assignment of six-monthly scholarships for final year students and for recent graduates. The Group also works actively with various business schools and innovation centres such as: the Bologna Business School (BBS), LUISS Business School, the Consorzio MIB School of Management in Trieste, the MIP-Polytechnic in Milan, the SAFE Study and Research Centre, SDA Bocconi, The European House Ambrosetti, and ELIS. It is also a member of the Assoknowledge-Confindustria scientific committee - Innovative and Technological Services.

With specific regard to the University of Bologna, in 2021 activities connected to the framework agreement (renewed in 2019) continued. The Agreement places further focus on 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.

7.04 Development of the individuals

The development process

[404-3]

People are the true asset to achieve differentiation and 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.

The development process is based on the evaluation of performance and managerial skills. It is applied consistently throughout the company: it involves over **5 thousand people** including employees, management employees, middle managers and managers. A distinguishing aspect is the **dialogue on 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 led to a growing 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 2021, over **5,200 Group workers** were assessed. A pilot project was also launched in some company divisions to expand the development process with a specific focus on individual performance. The aim is to raise greater awareness of the goals and promote moments of dialogue with one's manager.

Career progress

CAREER PROGRESS DURING THE YEAR (BREAKDOWN BY POSITION FOR WORKERS WITH OPEN-ENDED CONTRACT)

Number	2019	2020	2021
Managers	7	7	6
Middle managers	35	39	28
White-collar workers	309	449	335
Blue-collar workers	193	243	206
Total	544	738	575

In 2021 there were 575 promotions. **Career progress** involved 148 female personnel, totalling 26% of all cases. Excluding blue-collar workers, where women are around 2.5%, career progress involving female personnel represented 40.1% of the total.

Internal mobility

The speed of changes combined with digital transformation is deeply changing the way people work. Many roles will change and it will become increasingly important, for organisations, to promote the **updating of 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.

During 2021, despite the pandemic circumstances, the Hera Group continued to invest in a range of initiatives involving citizens and cultural involvement events which began at the end of 2019 through a **listening project**. Initially, employees' opinions were collected about the current system through **surveys** and then, during a second phase that was launched in early 2020, a structural listening channel was created in which each employee had the opportunity to indicate areas of interest for possible job rotation: **more than 500 employees** took part in the project in 2021, undoubtedly contributing to the **increase in internal mobility** recorded during the year.

273 mobility opportunities were taken in 2021 (in line with 2020), covering **50% of needs**. In 2021, there was an overall **improvement in the process**, both in terms of ads published (double compared to 2020), applications received (+27%) and positions filled (+23%).

The leadership model

Since 2011, the Group has been provided with a **leadership model**: a compass that steers our behaviour and describes the skills we need to develop the culture and values and to achieve strategic results.

In 2016, a shared and participatory process was launched involving over 700 employees, to review and update the model as a result of the new challenges. The current model follows two lines, a temporal today-tomorrow line and another line involving I-us, thus defining four areas of objectives each containing two skills.

For the second year running, the usual **process for spreading and further examining** the new contents of the model, which involves around **650 people including managers and middle managers**, was conceived and designed remotely in 2021, alternating plenary moments with small discussion groups in virtual classrooms. The programme has as its central focus the objective area "Building the future" which includes the two skills "Enhancing people" and "Innovation". Change, relationships and emotions were the key words of the training course. Topics were proposed for individual and collective reflection, enhancing behaviour that will allow people to be an active part of change in the future.

Multimedia and interactive content through specific e-learning platforms were made available to the entire workforce, over **5 thousand employees, including white-collar workers, middle managers and managers**.

Remuneration and incentives

[102-37] The Hera Group defines and applies a remuneration policy aimed at attracting, motivating and retaining resources having the professional qualities requested to achieve the Group's objectives.

The policy is defined so as to balance the interest of various stakeholders and to achieve the priority objective of creating value in the long term period for its shareholders through the creation of shared value and, with respect to the remuneration policy, through consolidation of the connection between remuneration and performance, both individual and Group-related.

[102-41] All Group employees are hired through national collective labour agreements.

In 2021, the ratio in the Hera Group between the remuneration of the person with the highest salary and the median value of workers was equal to 10.

For 2021, the performance bonus of middle managers, white-collar workers and blue-collar workers was defined within a supplementary collective labour bridge-agreement and is based on profitability (gross operating margin and gross operating margin/worker) and productivity (understood as a decrease in sick leave of up to five days).

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 welfare services up to a maximum value of 50% of the yearly bonus, with significant tax advantages for workers.

Bonus system related to short-term variable remuneration

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** defined in the budget for the year;
- the third involves an assessment on the **behaviours** set forth in the Group **leadership model**.

The structure of the balanced individual scorecard, or the weights assigned to the three areas, vary 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 which is based on the decision of top management for the individual balanced scorecards of directors and managers and of the decision-making role of 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 2021, 51% of the variable remuneration of Hera Group **managers** was linked to the completion of the target projects planned in the balanced scorecard system: 32% 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 98,4% of Group middle managers and managers.

For **middle managers**, 70% of variable remuneration 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% to compliance with the behaviours set forth in the leadership model.

In 2021, 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 a competitive commercial incentive offer and to steer sales staff towards working more by goals.

Incentives also depend on sustainability

The bonus system is connected to the balanced scorecard and ever since 2006 has provided for a part of the incentive to be connected also to the achievement of sustainability targets.

In 2021, 38% of the variable remuneration of Group managers and middle managers was linked to sustainability target-projects (improvement of quality, environmental impact and image; personnel

involvement; professional development and dialogue with stakeholders), with target projects aimed at creating shared value accounting for 24%.

BALANCED SCORECARD 2021: BREAKDOWN OF VARIABLE REMUNERATION IN SUSTAINABILITY AND CREATION OF SHARED VALUE (CSV) AREAS

Area	% variable remuneration	Number of target-projects	No. of managers/middle managers involved
Pursuing carbon neutrality	4%	14	113
Regenerating resources and closing the loop	13%	41	255
Enabling resilience and innovating	7%	27	187
Total CSV areas	24%	82	426
Other sustainability areas	14%	49	281
Total CSV and sustainability	38%	131	519

As may be seen in the table, the managers and middle managers involved in CSV and sustainability target projects in 2021 amounted to 519, that is, 69% of the total. Restricting the analysis to CSV areas only, there were 426 managers and middle managers involved in target projects aimed at creating shared value. This confirms the Group's widespread CSV approach in its strategy and short-term bonus system (balanced scorecard) which in 2021 involved 697 workers, including managers and middle managers.

The final payment of the bonus for all managers and middle managers depends on the achievement of the targets set out in the individual balanced scorecards, but it is also weighted, on the basis of the results achieved on certain Group parameters: the company's economic-financial results (EBITDA and net profit), the customer satisfaction index for residential customers and, starting from 2021, the **shared-value EBITDA** as resolved by the management's Remuneration Committee at its meeting of 27 January 2021, confirming the increasing importance of the UN's 2030 Agenda goals in the Group's strategy.

Sustainability was also included in the deferred incentive plan for management retention redefined by the Board of Directors in the meeting of 19 December 2018, on the proposal of the Remuneration Committee. The Plan is reserved to a small number of managers selected by taking into account the weight of the organisational position, the evaluation of the performances achieved in the development process and the "market risk". The development introduced for the three-year period 2019-2021 includes CSV EBITDA among 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. This approach was also confirmed for the three-year period 2022-2024, as resolved by the Board of Directors at the meeting held on 27 January 2022, again on the basis of the Remuneration Committee's proposal.

Pension funds

The number of employees participating in the pension funds as at December 2021 was 5,473, or 62% of total 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)

%	2019	2020	2021
Pegaso	8.1%	2.5%	11.1%
Previambiente	8.2%	1.6%	16.0%
Previndai	12.3%	6.4%	12.9%

7.05 Welfare

Hera Group's welfare system, **Hextra**, continued in 2021. Hextra confirmed its significant economic and social value, especially during the health emergency of the past two years. Thanks to the launching of a new technological platform and mobile app, Hextra gave a further boost towards a more direct welfare system, with all services just a click away. A flexible welfare share of Euro 385 was assigned to all employees with open-ended and fixed-term contracts, to be used for the Hextra offer. Furthermore, all employees were offered the option to convert part of their 2020 performance bonus, paid in 2021, into a further welfare share. This option is convenient also from a tax viewpoint and in terms of increased purchasing power for each worker.

Hextra counted on **over 9,000** members in 2021, equal to **99%** of the potential population, with over Euro 5.3 million used by employees. This result was achieved thanks to clear information and presentation of the services, to their usefulness and their positive impact on work-life balance, not to mention the opportunity in 2021 to exceptionally use any residual amounts for education-related purposes, due to the closure of schools in 2020.

Increased purchasing power, customisation, easy to use and quick service: a combination allowing a fully comprehensive welfare experience. This can all be achieved digitally, with low environmental impact, both from the office, smartphone or comfortably from home.

Moreover, in another year marked by the health emergency, Hextra showed great resilience and ability to adapt to the immediate situation and to the emerging needs with the **Hextra for Wellbeing** project. A range of initiatives, free services and on demand agreements which could be used directly from home to help increase the feeling of being close to one another and have a positive impact on all well-being spheres: psychological, physical and financial. Thematic webinars, free sessions with psychologists and nutritionists, weekly online yoga and pilates classes, a 24/7 platform for working out at home with a fitness expert, and a 12-week ad hoc course for vulnerable workers to help them return to work.

Strengthening of non work-related training was also ensured: courses such as foreign languages, photography, lifestyle, personal development and access to free individual training platforms for employees. This was all achieved without forgetting the services and the distinctive and traditional initiatives of Hextra, including: the fifth edition of university **scholarships** offering 52 scholarships worth Euro 750 each; the fifth edition of the language study courses **in the world with Intercultura**, with eight scholarships worth Euro 2 thousand each for summer programmes; three scholarships worth Euro 4.5 thousand each for a term; and two scholarships worth Euro 7.5 thousand each for an entire school year abroad. A **summer programme** was also introduced: a further contribution that can be used for the reimbursement of summer camps or, alternatively, the reimbursement of babysitting or homework help services as well as listening and care services to support parenting.

Furthermore, in line with the previous year, the allocation of an **instruction quota** for employees who have school-age children for a total investment of over Euro **700 thousand**. In detail, among all the projects set up to support the education of employees' children, 3,262 applications were received. Of these, 248 shares were used by employees for **crèche services**. Fourteen applications for attending crèches with which the Group has agreements (in Bologna, Cesena and Imola) must be added, for a total of 262 children.

[403-6]

In the area of health and prevention, confirming its constant focus on protecting the health and wellbeing of its employees, the Hera Group renewed, for 2021, the **Covid-19 insurance coverage policy** for all employees. The policy provides a package of guarantees and services as an additional benefit to help workers cover any medical complications following hospitalisation due to Covid-19. Furthermore, a web portal was introduced that allows all Group employees to benefit from discounted rates at **leading healthcare facilities** and receive the services of medical and healthcare professionals.

As part of the activities managed by **mobility management**, it was once again possible this year to include in HEXTRA the reimbursement of the expenses incurred by all employees or their family members who travel using the regional or interregional public transport service. With the aim to further promote and support sustainable mobility when travelling to and from work, a further additional contribution was also available for all Group employees who use public passenger transport to get to work.

Once again in 2021, with 'In Hera Energy is Worth More' users could have access to a promotion for the supply of **free market** electricity and gas, and **photovoltaic energy** to benefit directly from the value that all employees help create with a view to reaching increasingly shared and participated welfare.

The promotion **An extra-ordinary connection** for internet connection and calls continued, in collaboration with Acantho.

A call to action was once again set up for all employees in 2021, allowing them to use the Welfare Voucher Service to identify available partners (for sports, wellness, culture and leisure activities and for medical check-ups). If the service they are interested in is not available, employees can make a spontaneous recommendation and so play an active part in identifying Hextra partners. Hextra also offers travel agencies, water and theme parks, museums, exhibitions and galleries.

This all-embracing and continuous path of combined, shared and highly felt development of the welfare plan makes Hera a national leader in the field of corporate welfare and well-being. As also confirmed by the **Top Employers Italia 2022** certification, achieved by the Group for the thirteenth consecutive year and which places the company second overall in Italy. The Group confirms its place as a leading company 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 measures, the Hera Group offers several forms of supplementary healthcare for workers in compliance with the collective bargaining agreement applied. 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 set out in Hera's Code of Ethics. **Preventing and minimising health and safety risks** is one of the commitments of the Hera Group's Quality and Sustainability Policy that is inspired by the values for sustainable development expressed in the UN's 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 equal to average 2.2 times the value invested (source: International Social Security Association- ISSA, 2011).

Throughout these years, various occupational health and safety projects have been implemented, especially with regard to the development of the culture of safety and to risk awareness at all levels of the organisation. These initiatives - together with ongoing training and coaching of staff, specific actions for the improvement of vehicles 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 by the people who work for the Hera Group.

[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 perform 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 reduce risks and improve 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:

- **identify all sources of hazard and assess the possible impact on workers** in order to remove the hazards at source 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;
- **plan and implement** the necessary information and training courses on risks.

In order to effectively conduct 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 strongly committed to reinforcing workers' **awareness of the risks** associated with their job. For this reason, it increasingly identifies **training courses** that encourage people to develop greater self-awareness by modifying their behaviour as regards the perception of risk and by setting an excellent example for other co-workers. The project "Safety in the field", aimed at achieving this goal, also had an educational purpose with regard to the correct application of the procedure management of lost time injuries, near misses and occupational diseases. The procedure literally states that: "employees who become aware of a near miss in the event of serious and immediate danger and should it not be possible for them to contact their direct superior, must take measures to avoid the consequences of such danger". All company figures are responsible for spreading and enforcing this instruction.

Lost time injuries and near misses are recorded via user ID and personal password on the IT system. The aim of the **IT system** used by Hera Group's main companies is to manage relations with Inail in a timely, fair and complete manner. Following an injury, 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 system. 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. The system ensures that information is fully shared, tracks the entire process and keeps its history. To gradually promote the active reporting of hazards, Hera is seeking to develop **the 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 and it 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 corporate intranet, is also available for all those involved. System updates are followed by revisions of the manual and training meetings.

LOST TIME INJURY INDICES (INCLUDING LOST TIME INJURY WITH LESS THAN THREE DAYS OF ABSENCE FROM WORK)

	2019	2020	2021
Frequency index	17.6	14.2	12.3
Severity index	0.4	1.5	0.3
Rate index	2.9	2.3	2.0
Number of lost time injuries	257	206	185

The frequency index is the number of lost time injuries per million hours worked. The severity index is the number of days of absence per lost time injury divided by thousands of hours worked. The rate index is obtained by dividing the number of lost time injuries by the number of workers, multiplied by 100.

The lost time injury frequency index (calculated considering also injuries with less than three days of absence from work) has been steadily improving over the last three years. This is due to a 10% decrease in the absolute number of injuries compared to the previous year and a 28% decrease compared to 2019. Furthermore, the absolute number of injuries is 23% lower than the average for the three-year period 2018-2020.

The 2021 Sustainability Report drawn up by the Utilitatis Foundation on behalf of **Utilitalia**, the Federation of water, environment and energy companies, presents the sustainability performance of 90 utility companies. Considering the frequency index for injuries lasting more than one day, the Hera value (14.2) is 39% lower than the average of the companies analysed (23.2).

LOST TIME INJURY INDICES (EXCLUDING LOST TIME INJURY WITH LESS THAN THREE DAYS OF ABSENCE FROM WORK)

	2019	2020	2021
Frequency index	14.1	12.6	10.3
<i>of which for ongoing lost time injuries</i>	<i>2.9</i>	<i>1.6</i>	<i>2.2</i>
Severity index	0.4	1.5	0.3
Rate index	2.3	2.0	1.7
Average lost time injury duration (days)	30.7	119.2	24.2
Number of lost time injuries	206	183	155
<i>of which for ongoing lost time injuries</i>	<i>42</i>	<i>23</i>	<i>33</i>

The frequency index is the number of lost time injuries per million hours worked. The severity index is the number of days of absence per lost time injury divided by thousands of hours worked. The rate index is obtained by dividing the number of lost time injuries by the number of workers, multiplied by 100.

Even if analysing only highly significant injuries (those resulting in more than three days' absence), the accident trend in 2021 showed an improvement compared to last year's figures. This is mainly due to the reduction in the overall number of events, which fell by 15% compared to 2020.

The behavioural factor was once again the leading reason for lost time injuries and accounts for around 60% of days of absence.

The health emergency and resulting lockdown led to introducing significant organisational changes (extension of smart working and departure from home for operational staff), which had a positive impact on ongoing lost time injuries. **Ongoing road accidents** at Group level fell from 42 in 2019 to 23 in 2020 (year featuring significant lockdown periods) to 33 in 2021. There were 10 road accidents during working hours in 2021, dropping sharply compared to the average of the previous two-year period (-73%).

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 are analysed using the in-depth Systematic Cause Analysis Technique. In the Hera perimeter alone, 138 corrective actions were identified in 2021 against 316 investigated events including accidents and near misses.

The results obtained in 2021 - with a significant reduction in both the number of injuries and total number of days of absence - and the long-term trend of Hera Group's accident rates show that the many initiatives implemented over the past years are leading to concrete achievements at occupational health and safety level. The actions were conceived and implemented with a medium-long term approach in order to further reduce injuries.

Regarding the **severity index**, the 2020 figure had been influenced by two fatal accidents. The 2021 index returned, therefore, to 2019 levels since there were no fatal accidents and no accidents with serious consequences (absence of more than six months).

With regard to the accident that occurred in Padua on 14 October 2020 to 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 on three senior managers and three employees of the company (as well as on external parties). Non-repeatable technical investigations are underway.

Regarding the accident that occurred in Bologna on 24 July 2020 involving two Hera S.p.A. employees (one of whom died) aboard a vehicle for the collection of bulky waste which crashed against a subway, the Bologna Public Prosecutor's Office served a notice of investigation on four company employees. Preliminary investigations are underway.

With regard to the fatal accident in 2009 that occurred at the waste-to-energy plant of Forlì, following the committal to trial of three Hera Spa employees and one Herambiente employee, the preliminary hearing was held on 3 April 2014. At the hearings of 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. At the date of approval of this report, the date of the hearing is yet to be scheduled.

[403-3]

The **occupational health service** is provided within the Hera Group in accordance with the requirements of Section V (Health Surveillance) of Italian Legislative Decree no. 81/2008. In particular, several **company physicians** operating in the various local areas have been identified 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 are carried out periodically on all the workforce during working hours. The employer is responsible for the planning and for the costs of the check-ups and of any clinical and biological examinations considered necessary by the company physician. In the cases provided for by current 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** is assigned following a public tendering procedure with awarding of the most economically advantageous bid, i.e. technical and economic evaluation of the offers received from the market with the technical part accounting for at least 70%.

The Hera Group periodically assesses the quality of the service provided by the supplier via specific checklists and organises special technical coordination meetings with the company physicians as well as with the coordinating physician specifically identified for this purpose. During 2021, all employees for whom a medical check-up had been scheduled were subject to health monitoring in accordance with the relevant health protocol.

The development of electronic **health files** for employees was completed in 2021. This will make it easier to manage the health monitoring process and to abandon paper-based document management, facilitating the compliance requirements by both employees and physicians.

During the past two years of **health emergency**, the Group's prevention and protection services, together with the company physicians, coordinated the identification and implementation of the **measures for preventing infection** and for **assisting and supporting vulnerable workers**. A Group protocol to prevent infection was 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 health emergency evolved.

During the first phase of the **health emergency**, the Hera Group set up a **committee for the prevention and control of the spreading of the virus**, in accordance with the shared Government-Social Partners protocol of 24 April 2020. The composition of this committee included the participation of workers' representatives and normally met every fortnight. The company protocol for prevention and protection against the spread of Covid-19 was ratified by the corporate committee in May 2020 and updated several times in 2020 and 2021.

In spring 2021, the Group developed a campaign to prevent the spread of the Sars-Cov-2 virus by giving the **opportunity to employees to get vaccinated** at their workplaces or facilities agreed and authorised by the competent regional health authorities.

[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. Workers' Safety Representatives involve staff, so that employees can therefore constructively contribute to the application of effective safety management and to its continuous improvement, by providing suggestions and observations. Consultation is regarded as an opportunity for employers, managers and safety officers to obtain and receive opinions from workers and Workers' Representatives about their occupational health and safety decisions.

Hera perimeter workers are involved in the hazard identification and risk assessment process through **prior consultation** with their representatives (Workers' Safety Representatives). The representatives are convened periodically when occupational health and safety information is shared (e.g. issues such as lost time injury trend, safety improvement projects, health surveillance).

LOST TIME INJURY FREQUENCY INDICES (BY BLUE-COLLAR WORKERS)

	2019	2020	2021
Total	28.6	30.5	22.9
<i>of which grid services</i>	<i>18.0</i>	<i>23.4</i>	<i>18.9</i>
<i>of which waste management services</i>	<i>47.5</i>	<i>35.9</i>	<i>25.9</i>

Data refer to Hera Spa, AcegasApsAmga and Marche Multiservizi. Lost time injuries leading to more than three days of absence from work were considered.

Lost time injury indices are higher for workers, since they are more at risk of lost time injuries occurring given the nature of the activities they perform. The frequency index of both network and waste management services decreased compared to the previous year. The reduction is more marked for waste management services, which show a downward trend over the three-year period. With regard to blue-collar workers, waste management services show a higher frequency index compared to other services (25.9), since featuring a higher operation rate.

LOST TIME INJURY INDICES OF SOME SUBSIDIARIES (2021)

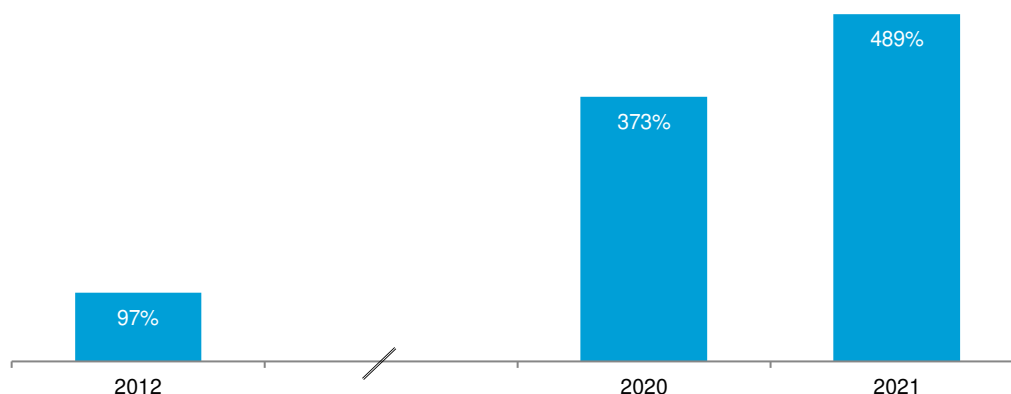
	AcegasApsAmga Group	Herambiente Group	Marche Multiservizi	Hera Comm	Uniflotte
Frequency index	10.9	10.8	20.8	8.6	7.3
Severity index	0.2	0.3	0.5	0.2	0.4
Rate index	1.8	1.8	3.5	1.3	1.2
Workforce by index calculation	1,732	1,414	605	972	169

Regarding lost time injuries in some companies within Hera Group's perimeter, considerable improvements may be seen in the frequency index for Uniflotte (from 24.0 to 7.3) and for Marche Multiservizi (from 25.3 to 20.8). A slight rise in the indices of the other companies was recorded, but they remained below the Group average.

A key topic for 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 prevents 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.

CHANGE IN THE RATIO BETWEEN NEAR MISSES AND LOST TIME INJURIES (NEAR MISS)



In 2021, the ratio between near misses reported and lost time injuries that occurred for Hera Group's scope of reporting was 489%. The index shows a steadily increasing trend, a sign that prevention is an increasingly strong topic in everyday working life. Of note in the Group's overall result are the results achieved by Hera Spa (337%), AcegasApsAmga (700%) and by the companies of the Herambiente Group (1,292%). The level of lost time injuries reported in Marche Multiservizi reached 124%.

The main types of near misses analysed by the prevention and protection service regarded road accidents, falling or slipping to the ground, collisions and crushing.

[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, 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.

The training activity is specifically provided to new hires, after job changes or following technical and organisational changes. It is also periodically repeated in relation to the evolution of risks or to organisational changes that have an impact on 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 workers who receive periodic and repeated training are:

- workers in charge of fire prevention and fighting, first aid and emergency management;
- workers' safety representatives;
- workers, supervisors and managers.

The analysis of the lost time injuries clearly shows that 60% are caused by behavioural factors. After having worked extensively on technique and organisation, today the human factor is a key aspect in the prevention of lost time injuries, and it is exactly on this belief that the **"Culture of Safety in the Hera Group" project** is founded.

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 the individual and not exclusively on the content - participants were provided with elements to deal with behaviour, based on real working experience. This allowed participants to acquire greater knowledge of how to deal with different situations and to understand the importance of being an example to others.

In order to increasingly spread the message of the culture of safety, the Group designed the new training course, **The Culture of Safety**, which involved over 2,500 workers in the three-year period 2019-2021. This innovative and multimedia training method is conceived 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 a real leadership in health and safety at all levels of the organisation. Over the next years, the project will further evolve with the introduction of new tools to support health and safety training and make it more engaging and participatory.

Thanks to these new tools, our goal is to promote cultural change in the company and to question deep-rooted beliefs and habits in order to attain a new way of experiencing health and safety.

Another important step in building a true culture of safety within the Group is the **safety leadership development project specifically set up for managers** and launched in 2021. The aim of the project is to develop awareness about the role of safety managers, especially as regards supervising the behaviour of individuals whom the manager is responsible for.

The activities will consist of three main lines of action:

- **quick individual survey** on the enabling factors of safety behaviour in order to arouse interest and be initially engaged and open to dialogue;
- **20 interactive webinars** with all management staff. The webinars were held in April-May 2021 and focused on the safety culture's state of art in the company, allowing managers to become more aware of their role as safety leaders and their new routines;
- **safety mentoring** for a selected group of 30 managers consisting of three individual meetings with the prevention and protection service.

Even the **Hera cardioprotetta** project was consolidated during 2021. 31 defibrillators have currently been installed in Hera Group's offices.

Development of the Man Down APP, a project launched in 2020 with the aim of developing an IT tool (an 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 feel ill and fall to the ground.

After a first testing phase in AcegaApsAmga to test the app's functions and calibrate the gyroscope phone parameters, the app was tested with Heratech laboratory staff. Testing will be gradually extended to Hera Spa in 2022.

In order to increase the safety of workers on the road, especially when initial intervention by a single worker with a vehicle is necessary, the implementation of an **optical signalling system** on the operating vehicles of the Central Network Department is being studied. The system allows workers to work safely when in the presence of vehicle traffic. As a pilot project and in order to assess the feasibility of extending this prevention measure, two vehicles have already been equipped with the system.

Technological solutions were also implemented by the Central Department for Waste Management Services and Fleets to **improve safety** when unloading waste at plants, for example overload signalling for side-loading vehicles and electronic assistance systems for the unloading phase of detachable vehicles.

Another important IT project developed by the Group to help improve workers' health and safety conditions was the **EHS PPE solution**. Introduced in May 2020 for Hera and Herambiente, the app with the EHS PPE information system computerises and makes it easier to manage personal protective equipment (PPE) and work clothes in the company, and is available on PC, tablet, smartphone or totem. To date, over 270 thousand PPE items have been collected via the app and over 6,500 check lists have been conducted. Almost 4 thousand co-workers have been involved in training and awareness-raising events. In 2022, the app will also be extended to AcegasApsAmga and then to Marche Multiservizi.

7.07 Industrial relations

The health emergency had a great impact on the planning of industrial relations activities in 2021 and this had an impact on the number of trade union discussions.

The **corporate protocol** on the measures to combat and contain the spread of the Covid-19 virus in the workplace of 15 May 2020 was updated three times during 2021, leading to three revisions of the technical document attached to the protocol. These amendments were necessary due to the continually changing legislative framework. One of the most discontinuous aspects in 2021, was the Green Pass requirement for access to the workplace introduced in October 2021. This entailed the implementation of a verification process and the initiation of disciplinary procedures (where applicable) which were initially manual and then automated after INPS provided ad hoc tools. During 2021, the three Local Area Committees (Emilia-Romagna, Marche and Veneto-Friuli-Venezia Giulia) held 51 meetings to ensure application and verification of the protocol rules.

On 16 April 2021, an end of testing report of the so-called "**man-down**" agreement was signed, thus formally concluding the process envisaged under the agreement of 29 September 2020. The safety device (please refer to the "Health and Safety" paragraph for details), whose use is regulated by the agreement, was initially provided to a part of the employees of the Heratech laboratory, but can now also be extended to the employees of Hera Spa and Inrete Distribuzione Energia.

On 29 April 2021, the **2021 Training Plan** was presented to the Trade Unions, as defined by the Group's Industrial Relations Protocol, and agreements on the 2020 Funded Training Plan were signed.

Three more agreements were signed during 2021, which allow the **funding of several training courses**, drawing on the opportunities under recent Italian Law 77/2020 (New Skills Fund). The law allows the company to recognise the costs of personnel who reschedule their working hours due to a change in the company's organisational and production requirements and use part of their working hours to attend appropriate skills development courses. The rescheduling of working hours and the related training projects need to be the subject of a specific trade union agreement. The dates on which the various trade union agreements were signed and the relevant areas of reference are listed below:

- 21 June 2021, Hera Group (managers);
- 22 June 2021, Group Hera (blue-collar workers, white-collar workers and middle managers);
- 20 April 2021, Hera Comm (specific project).

On 10 May 2021, agreements were signed for Hera Group staff, concerning the finalisation of the **performance bonus indicators for 2020**.

Due to the continuing uncertainty of the reference context, which was strictly related to the health emergency, the Company considered it appropriate to define a **new bridge-agreement** in 2021, both for the **performance bonus** (year 2021) and for the **flexible welfare package** (year 2022); consequently, on 18 May 2021, the parties signed the relevant agreement.

On 3 November 2021, a specific document was signed regarding the **transfer of the Forlì laboratory staff** to the new buildings at Via Romea in Ravenna. The transfer will be carried out in two phases, during the first half of 2022.

In 2021, the Emilia-Romagna Region continued to renew the **Concessions for management of the Waste Management Services** with the publication of the tenders for awarding the concessions for the Modena and Bologna areas. For both these Local Areas, a 15-year concession with effect from 1 January 2022 was awarded to a Temporary Grouping of Enterprises made up of Hera Spa, Consorzio Stabile ECOBI Società Consortile a r.l. and Brodolini Società Cooperativa S.r.l..

On 23 February 2021 and with reference to the **merger by incorporation of Hera Comm NordEst into EstEnergy**, a specific meeting report was signed to perform the joint examination procedure envisaged by Italian Law no. 428/1990.

Regarding **AcegasApsAmga** and its subsidiaries, with a view to further standardisation, an Agreement was signed on 5 May 2021 on use of the "Black Box" tool - a device installed on company vehicles that detects and makes available information on vehicle usage - for AcegasApsAmga Servizi Energetici employees to whom the Metalworking and Mechanical Engineering Industry NCLA applies.

On 20 April 2021, following the awarding to AcegasApsAmga of the municipal sanitation services on behalf of the municipalities of Albignasego, Casalsierugo and Ponte San Nicolò, the seven employees of Sesa Spa were transferred to AcegasApsAmga and received salary compensation and contract terms in line with the level II bargaining in force within the Hera Group.

With regard to **Acantho**, in line with the agreements signed at Group level, on 11 June 2021, both the agreement for the calculation of the performance bonus indicators for 2020 and the "bridge" agreement for the performance bonus (year 2021) and the flexible welfare package (year 2022) were signed.

The process of harmonising the Group's salary remuneration and contract terms in **Aliplast** continued in 2021: a "bridge" agreement for the 2021 performance bonus and 2022 welfare was signed on 1 June 2021.

An agreement was signed on 22 June 2021 for the so-called **Ascoss** companies (Ascopiave Energie, Ascotrade, Blue Meta, Etra Energia and Amgas Blu), in order to harmonise various benefits and arrangements with the rest of the Group (working hours and flexibility, attendance management, delays and overtime, medical examinations, canteen, travel, holidays, leave, reimbursements). On the same date and with a view to gradual integration with the Hera Group, a "bridge" agreement was also signed for the performance bonus (year 2021) and the flexible welfare package (year 2022).

The cooperation with **employers' associations** continued on an ongoing basis in 2021, with Utilitalia taking part in negotiating committees and delegations. The Hera Group was particularly involved in the negotiations which led to renewing the National Collective Labour Agreement for Waste Management

Services (which will continue in 2022, for certain specific topics) and signing an "appendix" agreement to the national collective labour agreement for the electricity sector.

Networking between the industrial relations structure and third-party companies, associations, entities and professional firms were strengthened during the year, enabling constant updating and the chance to gain an insight on the world outside the Group. Similarly, internal awareness-raising and training activities continued on topics of common interest to human resources, as well as advisory activities and cooperation with other departments to identify the correct behaviour to adopt with regard to labour law issues.

OPEN-ENDED CONTRACT WORKERS THAT ARE MEMBERS OF UNIONS (BREAKDOWN BY TRADE UNION)

Number	2019	2020	2021
CGIL	2,122	2,134	2,008
CISL	742	672	665
UIL	555	573	547
CISAL Federenergia	27	25	27
FIADDEL	169	159	158
RDB	0	0	0
ADL	8	8	8
UGL	13	8	8
USB	16	12	12
FESICA CONFSAL	1	1	0
FEDERMANAGER	11	12	8
CIU MIDDLE MANAGERS	0	0	0
SNALV	4	4	3
CONFIAL	1	1	1
Basic confederation	1	2	4
Basic trade union	10	9	7
Total	3,680	3,620	3,456
Percentage of workforce as at 31/12	41%	40%	38%

The figures do not include Aresgas, Vallortiga, Recycla and Eco Gas. 3.8% of Group employees work in these companies.

38% of the Group's open-ended contract workers are members of a union: the percentage value is around two points less than in 2020.

OPEN-ENDED CONTRACT WORKERS THAT ARE MEMBERS OF UNIONS (BREAKDOWN BY POSITION)

%	2019	2020	2021
Middle managers	17%	17%	14%
White-collar workers	38%	37%	34%
Blue-collar workers	52%	51%	49%
Total	41%	40%	38%

The figures do not include Aresgas, Vallortiga, Recycla and Eco Gas. 3.8% of Group employees work in these companies.

In relation to the worker's role, the rate of union membership for all three categories dropped.

HOURS OF STRIKE

Hours	2019	2020	2021
Total time on strike (hours)	1,225	61	16,356
Time on strike (per capita)	0.1	0.0	2.0

The figures do not include Aresgas, Vallortiga, Recycla and Eco Gas. 3.8% of Group employees work in these companies.

A summary of the main strikes during 2021:

- a national strike for the gas-water, energy and waste management sectors announced against the application of article 177 of the Procurement Code;
- a national strike, waste management sector, in relation to the renewal of the Waste Management NCLA expired on 30 June 2019;
- a national confederal strike (CGIL and UIL), in order to amend the Budget Law;
- two national strikes (independent trade unions) for the increase in salaries, for the increase in public investments, against job instability, against the lifting of restrictions on evictions and other recriminations;
- two strikes, electricity sector, regarded the Rimini area (problems regarding the tender for the concession of the distribution service in the Rimini area).

[419-1]

LITIGATION WITH THE WORKFORCE

Number	2019	2020	2021
Litigation pending at the close of the year	23	16	18

As at 31 December 2021, 18 **cases of litigation** against workers were pending, two more than 2020.

The **disciplinary measures** taken against Group employees amounted to 250 in 2021, in compliance with applicable national labour agreements: they involved **oral or written reprimands** (75 cases), **withholdings on salary** and **temporary suspensions from work** (160 cases, 98 of which were disciplinary measures with fines not involving a penalty of more than four hours' work remuneration) and 15 **terminations** one of which with notice and 14 without notice.

8. SUPPLIERS

8.01 Objectives and performance

What we said we would do	What we have done	SDGs	Progress*
Qualification, selection and assessment of suppliers			
Monitoring of the corporate social responsibility of the suppliers vis-à-vis their workers: in 2021 perform at least 30 audits at the suppliers (headquarters and worksites).	Monitoring of the corporate social responsibility of the suppliers vis-à-vis their workers: over 20 assessment questionnaires collected and 38 audits at suppliers (headquarters and worksites) performed in 2021 (see page 263).	8	●
Continue to assign a relevant score to the environmental and social sustainability aspects in tenders held with the most economically advantageous bid method.	38/100 average score reserved for sustainability aspects in tenders held in 2021 with the most economically advantageous bid method (see page 265).	8, 12	●
Continue with the development of the quality, safety, environmental and social responsibility management systems in the choice of suppliers.	The optimisation of certified management systems continued in 2021: 86.8% of the value of the supplies from suppliers with Iso 9001; 67.2% Iso 14001 / Emas; 59.4% Iso 45001; 38.2% Sa 8000 (see page 262).	8, 12	●
9% value of tenders awarded in compliance with circular economy principles by 2021 by applying the new circular procurement guidelines and related operating instructions defined in 2020.	The Guidelines containing the key principles of Green Circular Procurement published. The value of "circularity" contracting reached 9.5% of the value of new contracts awarded in 2021 (see page 334).	12	●
Contract management			
75% value of supplies of services and work in 2021 with monitoring of lost time injuries in the workplace.	84% value of supplies of services and work in 2021 with monitoring of lost time injuries in the workplace (270).	8	●

* ● Result achieved or in line with plans. ● Result with moderate deviation from planning.

What we will do	SDGs
Qualification, selection and assessment of suppliers	
Monitoring of the corporate social responsibility of the suppliers vis-à-vis their workers: in 2022 perform more than 30 audits at the suppliers (headquarters and worksites).	8
Continue to assign a relevant score to the environmental and social sustainability aspects in tenders held with the most economically advantageous bid method.	8, 12
Continue with the development of the quality, safety, environmental and social responsibility management systems in the choice of suppliers.	8, 12
10% value of tenders awarded in 2022 relating to circularity criteria through the application of the new Guidelines for circular purchasing and the related operating instructions defined in 2020.	12
Contract management	
Analyse all accident events communicated by providers of services and works of the Hera Group and report their relative indexes.	8

8.02 Suppliers

[102-9] At the end of 2021, the companies supplying goods, services, professional activities and works to the Hera Group included in the pool numbered 5,901. The presence of a single list of qualified suppliers for

the entire Group represents **an opportunity in terms of growth** for the suppliers themselves, since they are thereby given the opportunity to expand their business relationships on all the commodity groups for which they have requested and obtained the qualification.

The data provided in this chapter, unless otherwise indicated, refer 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, Inrete Distribuzione Energia Spa, Heratech Srl, Marche Multiservizi Spa and Uniflotte Srl; the data does not include intercompany purchases.

The table below reports suppliers by product category that received orders or active contracts with consumption in each year. As regards these suppliers, 65% of the total is qualified to provide services.

ACTIVE SUPPLIERS IN THE YEAR BY PRODUCT CATEGORY

Number	2019	2020	2021
Goods	1,698	1,626	1,522
Services	2,627	2,640	2,615
Works	378	392	435
Total	4,703	4,123	4,043

Some suppliers may belong to more than one class and, consequently, the sum of the individual items does not tally with the total number of suppliers.

The main **activities outsourced** by the Hera Group within the sphere of waste management services concern the mechanised waste collection services, the door-to-door waste collection service, street sweeping and washing (manual and mechanised), the cleaning of street waste bins and the management of the separate waste collection centres. With regard to the grid services, the Group companies mainly resort to outside suppliers for the performance of activities concerning highly specialised maintenance, plant engineering activities and meter services (readings, closures, initialisations, etc.). Furthermore, facility management (global service), commercial and contact individuals call centre activities are outsourced.

In terms of economic value, in 2021 the Hera Group commissioned purchases for **roughly Euro 1.2 billion**, of which almost Euro 23 million for purchases from other European nations and Euro 8.7 million from other non-European countries (United Kingdom, Switzerland, the United States, Canada, Israel and San Marino).

The **impacts generated by the supply chain** of the Hera Group mainly concern the observance of the health and safety in the workplace standards, the social sustainability aspects and the environmental impacts of the outsourced activities.

Raw material supplies

In 2021, **natural gas** sold by the Group sales companies was purchased for around 33% from Eni Gas & Power, around 8% from Axpo Italia, around 5% from Edison Energia, approximately 2% from Enel Trade, roughly 3% from Engie Italia and 49% via Hera Trading (which, in turn, purchased spot gas on the main European hubs and at the virtual exchange point).

With regard to the **electricity market**, 33% of sales to end customers on the free and protected market were covered by bilateral purchases from other operators, and 67% sourced on the power exchange. The methods for trading electricity, both via sourcing on the electricity exchange and in particular through bilateral agreements, do not allow for the tracing of the physical sources of energy. With regard to the **energy mix** used for electricity generation sold by the Hera Comm Group in 2021, please refer to section "Energy transition and renewables" in the chapter "Pursuing carbon neutrality". [Transizione energetica e](#)

8.03 Qualification, selection and assessment of suppliers

The **supplier qualification and assessment system** makes it possible to check the technical, economic, and organisational quality requirements, as well as the compliance with environmental and

safety regulations and corporate social responsibility requisites, as well as the acceptance of the Group Code of Ethics.

The vendor management system

Since 2012 the **vendor management system** has represented the model for the self-registration and qualification of suppliers and addresses all the companies interested in spontaneously proposing themselves in the Hera Group suppliers list, for any product category. The "**e-Procurement**" vendor management portal allows the suppliers to use a **transparent, equal and tracked** tool to qualify themselves and participate in tenders announced by the Hera Group.

Within the qualification area of the supplier portal, the companies can access the procurement product categories, making it possible to use the following services:

- independently update the profiles of interest, putting oneself forward for any new commodity groups within the accredited supplier system;
- independently update one's details, as well as the schedule of the supplier qualification documents;
- check one's qualification and periodic assessment status;
- gain the possibility of being called to present bids;
- gain the possibility of receiving information relating to the awarding of a contract;
- being updated on the Group's initiatives of economic interest.

Inclusion in the Hera supplier qualification system is handled on-line by means of the **e-procurement platform**, which also represents a useful communication instrument between the Group and the suppliers. This platform has an annual fee that reflects the number of product sub-categories of product groups in which the supplier is interested, varying between Euro 50 to 250, in order to reimburse the minimum operating costs to share the expenses among all the subscribers with reference to transparency and access to the documents relating to participation in the tender procedures. This instrument has also been extended to the public tenders since 2011.

During 2021, the Hera Group traded 97% of the total volumes on the e-procurement platform. In using said platform, the suppliers were supported by a dedicated help desk service which, in 2021, received a total of 13,337 information requests, all resolved in the time-scales established in the corporate procedures.

Another important aspect of the vendor management system is the **monitoring of the companies** who jointly take part in the performance of the contracts for the Hera Group in the role of subcontractors and the like, consortium executors or principals in temporary joint ventures. By means of the reporting generated by the monitoring activities, it is possible to improve the governance of the purchases, as well as extend the mechanisms for valuation and control envisaged by the Group procedures to all the companies involved in the execution of the tender, overseeing the entire chain of the economic parties involved in the service for various reasons.

As part of the process innovation projects, the new **supplier qualification portal** was inaugurated in September 2018, with the purpose of simplifying the qualification process, the updating of the data and the usability of the information, guiding the uploading of the data to be input in the system. The new portal, permitting direct access for the supplier to each of the individual questions of the qualification document, considerably reduces both the data input timescales for initial qualification and the timescales for updating the data in the event of changes. The response of the supplier pool was positive: in 2021, **all suppliers on the register of Group suppliers completed the requalification** with the new portal.

Since 2017, an automatic and traceable system has been active for the **alternation of the invitations** to the suppliers to participate in private tenders which, based on a series of parameters including the number of invitations received, their distribution over time and the vendor rating, further guarantees the supplier selection process and the rotation of the same, with the **utmost transparency** and on a consistent basis with the Hera Group guidelines. In the same way, this system permits greater communication between the suppliers and the company and absolute exactitude in the document management. For the purpose of increasing the rate of participation of the suppliers in the tenders, the rotation system was integrated, during 2019, with the new supplier qualification portal so as to assimilate within the rotation also the desire of the suppliers to operate solely in specific geographic areas, as specified by said suppliers in the qualification document. By means of this integration, the intention is to increase the efficiency of the tenders, with the automatic rotation system not selecting suppliers by means of invitation in a specific geographic area if they do not desire to work in those areas.

In 2021, the Hera Group launched the process of evaluation of **alternative solutions to the current e-Procurement** portal. The objective is to adopt a tool which supplements the current Vendor management

and tender management modules also with a “contract management” module, creating a portal which simplifies management of the interfaces in supplier relations, from the qualification phase to that of execution of contract management.

The supplier qualification procedure

[308-1]

[414-1]

The **qualification** and **assessment** of all suppliers is regulated by the verification of the technical, economic, and organisational quality requirements, compliance with environmental and safety regulations and corporate social responsibility requisites, as well as **acceptance of the Group Code of Ethics**. Furthermore, the supply contracts drawn up by the Group companies include termination clauses linked to the failure of suppliers to comply with the principles of the Code of Ethics.

The Hera Group's supplier qualification process has been formalised within a specific procedure, by means of the establishment of a **single list of reliable economic operators**, handled by the Procurement and Tenders Department of Hera Spa. The suppliers to be invited for the performance of the negotiated procedures are selected from this list, as and when necessary. The suppliers are therefore selected for all the Group companies on the basis of qualification requirements divided up into:

- standard requirements: identical for any product category;
- specific requirements: linked to a specific product category.

Among the various **criteria** identified by the Group for the qualification and selection of new suppliers, of particular importance are those of an **environmental and social** nature, for example:

- declaration that the following have been reviewed and accepted: Code of Ethics; **Corruption prevention model**; **General Quality-Safety-Environment-Energy and Social responsibility** Regulations for contractors and/or autonomous workers operating within the sphere of the Hera Group; **Quality and sustainability policy**; **Personal data protection policy**;
- fulfilment of the **workplace safety obligations** envisaged by Italian law;
- observance of the current legislation referring to the **right of the disabled to work**;
- presence of **employees facing social hardship** within the company workforce with respect to the total;
- enrolment in the **regional register of social cooperatives**;
- declaration of full knowledge of the principles and the **rules on Corporate social responsibility**, and of commitment to comply with the principles and requirements included in the same and with the participation in monitoring and audit activities envisaged by the Hera Group, as well as the assessment of any corrective measures required;
- possession of the following **system certifications**: Iso 9001; Iso 14001 (or, alternatively, of Emas registration); Iso 45001; Sa 8000; Iso 50001; Iso 37001 (from 2021);
- possession of the certificate of enrolment in the **national register of environmental operators**, pertinent to the precise activities of the product group;
- possession of enrolment with current validity care of the competent Prefecture for the sectors of interest identified by the Italian Prime Minister's Decree dated 18 April 2013 and subsequently extended by Italian Law no. 40 of 5 June 2020 (conversion law with amendments of Italian Law Decree 23/2020, known as Liquidity Decree), in the **list of suppliers not subject to Mafia infiltration attempts** (so-called **white list**); otherwise presentation of a formal commitment to request the same.

Also in 2021, the automated **system for checking the Inps/Inail (National Social Security Institute/National Institute for Insurance against Accidents at Work) contribution payment regularity** with the applicable One-stop Social Security Point was fully operational, in order to facilitate the monitoring and management of suppliers, along with that for Cassa Edile (Special Construction Workers' Fund) for all suppliers active and present in the Hera Group's list, including parties grouped together in temporary joint ventures (representative and principals), consortiums and specific contractors, subcontractors and the like relating to the individual service purchase document (order and/or contract).

In addition, following the award, it should be noted that the staff structures of the Procurement and Tenders Department **verify** that the relevant authorities **meet the requirements stated in the tender** pursuant to art. 80 of the Tender Code. More specifically, the criminal record certificates, compliance with Law no. 68/99 on the disabled, tax regularity, the Anti-Mafia Database and the Anac Register are verified, involving a total of more than 6,000 checks per year.

For the purpose of ensuring the business operations and **only in exceptional cases, the Group foresees the possibility of making exceptions**:

- **casual** suppliers: in the event of needs motivated by reasons of experimentation, it is possible to issue just one purchase document vis-à-vis a supplier certified using a simplified procedure. These “casual” suppliers, in order to be able to receive additional purchase orders, will have to obtain complete qualification in observance of the Hera Group rules;
- **exclusive** suppliers: in the event of indispensable needs, it is possible to issue purchase documents vis-à-vis a supplier qualified with a simplified procedure, on an exclusive basis;
- procedure for **purchases using order vouchers**: purchase of goods on a case by case basis for a modest economic value, issuing order vouchers on suppliers with which there are specific agreements or even lacking specific agreements;
- procedure for **other purchases** which, having considered their nature (for example: legal, notarial, courier, translation costs) **do not require the prior qualification** of the suppliers.

Otherwise the purchase must be appropriately registered in accordance with the rules established by the Group.

Suppliers by type of certification

Compared to 2020, the portion of purchases from suppliers with Iso 14001 or Emas certification has risen (+1.5 percentage points), as did that from suppliers with the Iso 45001 certification (+2.6 percentage points), while the portion of purchases from suppliers with Iso 9001 and Sa 8000 certification are down slightly compared to the 2020 figure (by -0.8 and -1.2 percentage points respectively), nonetheless remaining in line with the high incidence recorded in 2019.

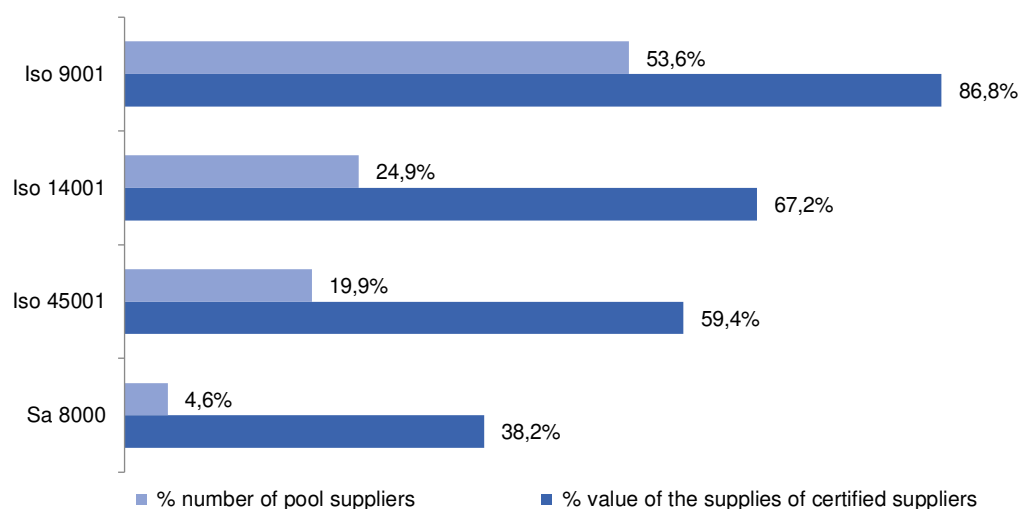
These results are the consequence of both **direct action** taken by the Group companies, which systematically include indication of the **possession of certification** in the calls for tenders or in the supplier qualification stage as a requirement for participation and/or incentive for the tender, and of the greater sensitivity acquired by the companies in considering the certifications as a component of greater competitiveness.

PROCUREMENT FROM CERTIFIED SUPPLIERS - VALUE BREAKDOWN BY TYPE OF CERTIFICATION (% OF TOTAL SUPPLIES)

%	2019	2020	2021
Quality certification (Iso 9001)	86.8%	87.6%	86.8%
Environmental certification (Iso 14001- Emas)	61.9%	65.7%	67.2%
Occupational safety (Iso 45001)	56.8%	56.8%	59.4%
Social certification (Sa 8000)	38.2%	39.4%	38.2%
Total supplies (millions of Euro)	1,010.1	1,136.2	1,199.7

The percentage in value terms of the tenders awarded to certified suppliers is always greater than the percentage of qualified suppliers in possession of certification. This view also highlights the effects of the systematic request for possession of certification in the supplier qualification and selection stage.

PORTION OF SUPPLIES WITH RESPECT TO THE NUMBER OF POOL SUPPLIERS (2020)



Supplier assessment and checking

[403-7]

The periodic assessment makes it possible for suppliers with active contracts to receive an **update of their scoring** for each individual qualifying product in the vendor rating system, with an increase in the event of total absence of anomalies, or a decrease in relation to the seriousness of the anomalies detected. The updated assessment can always be consulted and assessed autonomously by the supplier in their specific reserved area of the supplier portal. The scores have been divided up into **three categories** which contribute towards channelling the rotation, selection and invitation - by the individual buyers - of the qualified suppliers by specific product class affected by the private tenders carried out by the Hera Group. The score assigned to each supplier via the rating system influences the list of the firms invited to participate in tenders. Problematic suppliers are excluded from invitations unless they fall within the qualified brackets, via suitable corrective action and/or accurate improvement plans.

Area type	Scoring interval	Level of reliability
Green area	75 - 100 points	from averagely reliable to very reliable
Yellow area	60 - 74 points	from sufficiently reliable to averagely reliable
Red area	< 60 points	critical

The **supplier assessment management and monitoring model** continues to ensure, via the maintenance of the reporting, the quarterly frequency for the concession of the **bonuses**. By contrast, the methods for the calculation of the decreases takes place by means of the closure of the analysis of the **anomalies** (non-compliance) and the definition of specific corrective actions. By means of the formalities introduced it is therefore possible to assign in a standardised manner the decrease in the score over the specific supplier firms (including subcontractors and the like) responsible for the non-compliant behaviour, who can be inferred from the field monitoring documentation (check list) compiled by the contractual contact individual or their appointee. This allows the company contact individual/works manager to check the contractual performances of suppliers in the fundamental areas of quality, safety, the environment, energy savings and corporate social responsibility. In the event of **serious or very serious non-compliance of the supplier**, there is also the possibility of **temporary suspension** from new invitations to private tenders for a period which ranges from three to six months. In 2021, suspension was activated for **four suppliers** due to very serious non-conformities. In one of the cases, the suspension was for three months and six months for the remaining cases.

Control of suppliers, with particular reference to respect for the environment, energy efficiency, the quality, safety and corporate social responsibility requirements for all entities involved, covers the **entire supply chain**, including therein principals in temporary joint ventures, consortium executors, subcontractors and the like (if present). The system, aimed at ensuring increasingly greater consistency and fairness in the evaluations performed at Group level, is guaranteed by the verification of the

qualification requirements by the vendor management system, by **accurate checks** by the company contract representatives (in turn subject to **internal audits** on respect for the procedures), by **inspections** at the registered office of the companies by a certified third party and supported by the Vendor rating and assurance function and by **internal audits**.

The accurate checks by contractual representatives carried out directly or through their assistants, for the **supplies of goods** at the moment of their receipt, for **services** and **works** during the gradual performance of services; through the compilation and signing of the appropriate **monitoring check-lists**, also relating to the controls performed on all the entities involved (including principals, executor firms, subcontractors and the like, if present), guarantee the correct **periodic assessment** of suppliers qualified with active contracts. The number of checks on services and works is defined on the basis of the contractual amount, the duration of the contract, and the impact on quality, safety, the environment and on the corporate social responsibility of the services monitored.

The "non-conformities" recorded, always preceded by the prompt sending of the check-list to the supplier to obtain any applicable counter-findings, are classified on the basis of the main certifications present in the Hera Group: Iso 9001 (service quality), Iso 14001 (respect for the environment), Iso 45001 (respect for workplace safety), Iso 50001 (compliance with energy regulations), Iso 37001 (anti-corruption management), in addition to guaranteeing corporate social responsibility, enable the prompt and correct periodic assessment of qualified companies.

In 2021, **four additional check-lists were reviewed and standardised**, supplementing said documents with the elements also relating to certifications Iso 45001, 50001, 37001 in order to ensure increasingly greater consistency and fairness in the assessments performed at Group level. Once streamlined, agreed on and standardised, the check-lists were made available on the company intranet to the contract representatives, together with the specific instructions for use and the standardisation table of the various anomalies (varying degrees of non-conformities).

NON-CONFORMITIES RECORDED BY TYPE

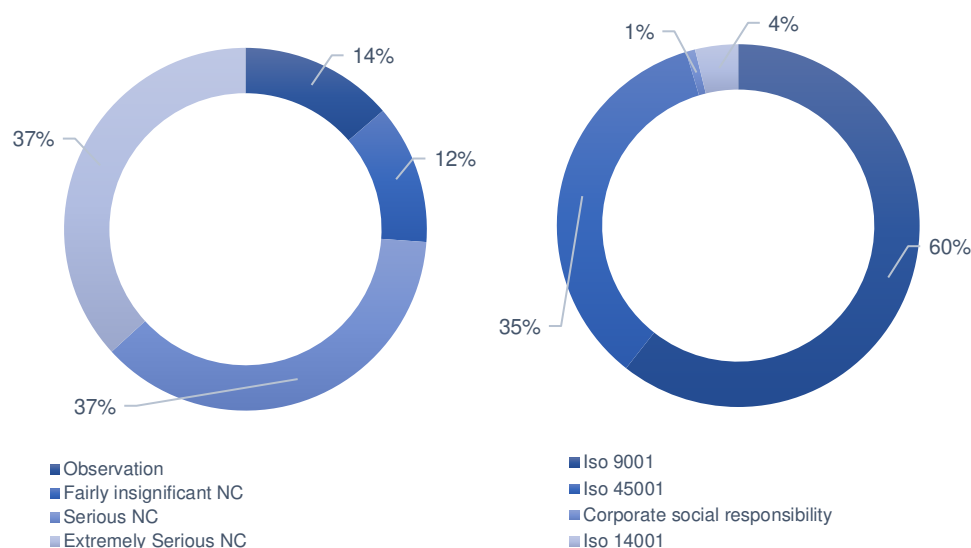
Number	2019	2020	2021
Observation	94	74	100
Fairly insignificant non-conformity	74	58	91
Serious non-conformity	299	236	271
Extremely serious non-conformity	228	204	269
Total	695	572	731

NON-CONFORMITIES IDENTIFIED BY CERTIFICATION

Number	2019	2020	2021
Iso 9001	479	359	443
Iso 45001	191	187	254
Corporate social responsibility	6	8	6
Iso 14001	19	18	28
Total	695	572	731

At Group level, **731 non-conformities** were recorded in 2021, an increase of 27% compared to the previous year, but essentially in line with the 2019 results. 2020 was an anomalous year, the health emergency period being a contributory factor, which affected some works and activities. Of the total, 609 non-conformities (**83%**) were closed as at 31 December 2021. 74% of the non-conformities were found to be serious or extremely serious, down compared to the previous year and up slightly with respect to 2019 (79% in 2020 and 71% in 2019).

NON-CONFORMITIES RECORDED (2021)



As a result of the joint audits carried out, described in the case study "The plan for the monitoring of suppliers with a focus on social responsibility" of the Suppliers chapter, and based on the critical elements identified, the **"training plan for company representatives"** was developed, for which respect for the procedures is verified. The plan illustrated, to more than 200 parties, the innovations introduced in the accurate monitoring of suppliers (including subcontractors and the like) as well as in the field of data loading in the company information system, with the introduction of automation and standardisation of the final communication phase, of anomaly management, to suppliers. On-the-job training sessions were also carried out, aimed at the correct and consistent compilation of the check-lists on site. In addition, in 2021, inspections on Corporate social responsibility continued at suppliers' facilities, as described in the dedicated case study. In some cases, partially non-compliant conduct was identified, which was promptly highlighted, with the subsequent launch of **corrective actions** and their prompt verification.

The selection of suppliers: tenders awarded adopting the most economically advantageous bid method

The Hera Group **Guidelines on Procurement**, since 2008, favour the most economically advantageous bid method as the approach for assessing bids, using sustainability criteria consistent with the principles of the Code of Ethics and in compliance with prevailing laws on public contracts.

In the specific areas identified by the Guidelines, and more specifically **"respect for the environment"**, **"social commitment"**, **"quality of services"** and **"economic value"**, sustainability criteria have been defined on the basis of the experience acquired in managing calls for tenders awarded adopting the most economically advantageous bid method and of the regulations on the matter and in line with Group objectives. A **minimum number of sustainability criteria** to be considered for choosing suppliers were established for each business area, based on the amount and importance of the tender (if it is a tender with a significant impact on the environment, occupational safety, the quality of services provided to customers, the term or amount of the contract). The **choice of sustainability criteria** rests with the Procurement and Tenders Department of Hera Spa and the procurement and tenders functions of AcegasApsAmga and Marche Multiservizi which, in agreement with the company contact individuals concerned, choose the criteria to be used for the type of tender, the importance of the sustainability criterion in relation to said tender, and the assessments in respect of previous tenders assigned and their results. The Procurement and Tenders Department of Hera Spa can also use the technical support of the Shared Value and Sustainability Department and the Quality, Safety and Environment Department for the choice of the criteria.

Among the main criteria adopted, mention is made of: the management of atmospheric emissions and sound; prevention, reuse and recyclability of waste; energy efficiency; reduction of the hazardous nature of substances used; reduction of water consumption; supplier's adoption of their own Code of Ethics; hiring of persons with disabilities and persons facing hardship; lost time injury prevention and safety training (the social commitment criterion); quality of materials, equipment and instruments; professional qualifications and skills and technical services and performance. In 2019, said criteria were joined by

others related to the **circular economy** as highlighted further on in this section and in the case study dedicated to the dissemination of circular economy principles in the supply chain.

Within the **Iso 50001** certification process for Hera Spa, the company procedures provided that the business units that so required, if it is found that the outsourced activity or asset has a significant impact on the energy consumption of the Group, proceed with the assessment of the energy efficiency requirements on the basis of an Energy Management document useful for the assessment of the energy impact.

The **main innovations in the Tender 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 **provision of the awarding method according to the economically most advantageous bid approach as mandatory and exclusive in certain cases** (Art. 95) such as, for example, labour-intensive services (such as cleaning or school services), or engineering, architecture services or those of another technical or intellectual nature for amounts greater than Euro 40 thousand.

The Hera Group Procurement guidelines in fact **anticipated these virtuous practices in the selection of suppliers by around ten years.**

PUBLIC TENDERS FOR CONTRACTS ADOPTING THE MOST ECONOMICALLY ADVANTAGEOUS BID METHOD

	2019	2020	2021
No. of public invitations for tenders published	68	72	72
No. of public invitations for tenders published with economically advantageous bid method	44	44	38
Value of the public invitations for tenders published (millions of Euro)	612.4	688.4	426.5
Value of the public invitations for tenders published with economically advantageous bid method (millions of euro)	516.0	590.8	336.1
Value of tenders with economically advantageous bid method (% of total value of the calls)	84.3%	85.8%	78.8%
Average score assigned to aspects relating to sustainability of public tenders awarded during the year	34.8	41.7	38.4

In 2021, the volume of total awards fell considerably compared to 2020, due to both the concentration of long-term tenders in 2020, and a partial rescheduling of some tenders to 2022.

In particular, during 2021, a total of 72 public invitations for tenders were announced, for a total starting price of Euro 426.5 million: 38 of these tenders made provision for the **award according to the most economically advantageous bid method**, for a value of Euro 336 million, equal to 78.8% of the total value of the tenders issued.

The value of the public invitations for tenders decreased by about 38% compared to 2020, while the percentage of the value of the public invitations to tender with the most economically advantageous bid method was down slightly on the previous year: 78.8% in 2021 compared to 85.8% in 2020.

The **average score assigned to the sustainability aspects** in public tenders came to **38.4** (-8% compared with 2020).

In the three-year period considered, the incidence of the economically most advantageous bid criterion was on average over 83% of the total value of the public tender invitations issued by the Group.

TOTAL AWARDS ADOPTING THE MOST ECONOMICALLY ADVANTAGEOUS BID METHOD

2019	2020	2021

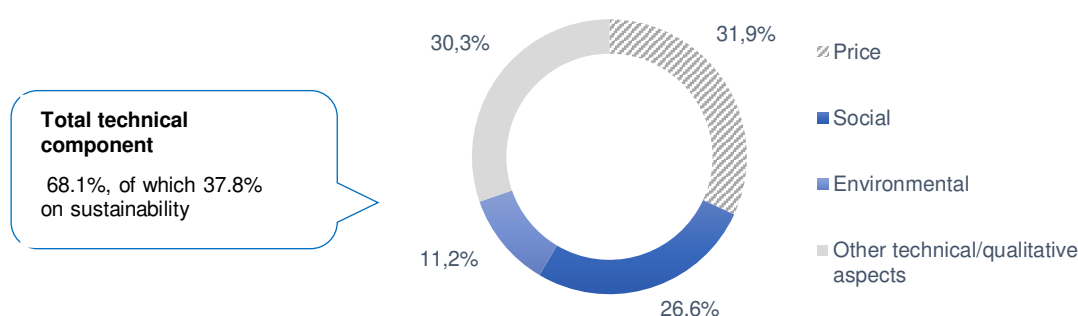
Value of the total awards to which the most economically advantageous bid award method is applicable (millions of Euro)	844.9	1,043.0	681.0
% of the value of the awards adopting the most economically advantageous bid method	67.7%	63.9%	65.1%
% of the value of the awards adopting the most economically advantageous bid method with sustainability criteria	91.4%	96.3%	98.6%
% of the value of the awards adopting the most economically advantageous bid method relating to the circularity criteria	5.7%	12.5%	12.5%
Average score assigned to the sustainability aspects in the awards adopting the most economically advantageous bid method	34.4	40.6	37.8
<i>of which: Average score assigned to the circularity aspects in the awards adopting the most economically advantageous bid method</i>	<i>1.8</i>	<i>8.5</i>	<i>8.3</i>

Extending the analysis to all the awards and not just to the public tenders, at Group level in 2021 **65% of the awards made provision for the most economically advantageous bid award method**. Again at Group level, **98.6%** of the value of the awards with the most economically advantageous bid method was assigned in 2021 using the sustainability criteria (96.3% in 2020). Criteria relating to the circular economy aspects were provided for in over 90% of the new tenders using the most economically advantageous bid method, and it is estimated that the value of the awards with circularity aspects stands at 12.5% (more than Euro 51 million) of the value of the tenders assigned in 2021 (in 2020, the figure always stood at 12.5%, roughly Euro 83 million).

With regard to orders and contracts awarded during 2021 using the economically most advantageous bid award method, the average score assigned to the technical component was 68.1 out of 100 (stable with respect to 2020), of which 37.8 relating to sustainability criteria (11.2 pertaining to environmental aspects and 26.6 to social themes). Circularity aspects accounted for 8.3 of the 11.2 points allocated to environmental sustainability (8.5 points in 2020). The change in the average score assigned to sustainability aspects with respect to the previous year is due mainly to the high volumes awarded for long-term tenders in 2020, with significant scores allocated to this area. By contrast, the 2021 score is higher than the one registered in 2019 (+3.4 percentage points).

Excluding AcegasApsAmga and Marche Multiservizi the average score assigned to the sustainability criteria came to 38.8 points (-1.2 compared to 2020), of which 8.3 have circularity criteria. In AcegasApsAmga, these values amounted to 25.3 points (-18.8 compared to 2020), of which 5.9 relating to circularity criteria, while in Marche Multiservizi, the value amounts to 31.3 (-3.7 compared to 2020) of which 10.3 for the circularity criteria. Please refer to the case study in this chapter for more information on the awards that meet the circular economy principles.

TOTAL AWARDS ADOPTING THE MOST ECONOMICALLY ADVANTAGEOUS BID METHOD: SCORES ASSIGNED TO THE VARIOUS COMPONENTS (WEIGHTED AVERAGE ON THE AMOUNTS) (2021)



The Group sets itself the objective of continuing to assign a **relevant score to the environmental and social sustainability** aspects in the tenders held with the most economically advantageous bid method.

With regard to the importance and significance assigned to sustainability criteria when assessing the bids, the tenders with a value exceeding Euro 5 million awarded in 2021 are indicated below:

Type	Description	Area	Amount (million/euro)	Duration (years)	Technical component	Sustainability score
Open procedure tender	Emergency repair works on water services and sewerage networks and plants	ER	122	3	70	Environmental (15, of which 15 on circularity): <u>Environmental impact of vehicles, use of electric/methane-powered/lpg vehicles, Iso 14001, on-site separate waste collection system, use of materials derived from secondary raw materials, commitment to re-use a percentage of excavated earth and rocks otherwise sent to landfill.</u> Social (38): Sa 8000, Iso 45001, lost time injury rate trend, legality rating, personnel authorised to handle asbestos, suspect and/or confined environments, training initiatives. Other technical aspects (17)
Open procedure public tender	Ducting maintenance cleaning service, septic tanks, sewage pumping stations and transportation of wastewater.	ER	47	4	70	Environmental (10, of which 2 on circularity): <u>average vehicle age, Iso 14001</u> Social (45): fire-fighting and first aid training, possession of requirements for environments suspected of pollution and confined areas, road sign training, training and qualification of person in charge, legality rating, lost time injury trend, Iso 45001 and Sa 8000 Other technical aspects (15)
Open procedure tender	Renovation works on gas networks comprising non-compliant materials.	ER	28	4	70	Environmental (13, of which 13 on circularity): <u>Iso 14001, adoption of on-site separated waste collection system, use of materials made from secondary raw materials, re-use of a percentage of excavated earth and rocks, environmental impact of vehicles and use of electric/methane-powered/lpg vehicles.</u> Social (31): training on first aid, fire fighting, qualification of person in charge, road signs, Iso 45001 and Sa 8000, legality rating, lost time injury rate trend, number of personnel authorised to handle asbestos, additional staff for environments suspected of pollution or confined areas. Other technical aspects (26)

Type	Description	Area	Amount (million/euro)	Duration (years)	Technical component	Sustainability score
Open procedure tender	Service involving mass replacement of gas meters	ER- T - M	16	2.5		Environmental (16, of which 16 on circularity): <u>environmental impact of vehicles and use of fully electric vehicles, Iso 14001</u> Social (19): fire-fighting and first aid training, legality rating, lost time injury trend, Iso 45001 and Sa 8000 Other technical aspects (35)
Open procedure tender	Supply of company vehicles (cars and vans) approved and registered in “category n1”	ER	11	3		Environmental (15, of which 15 on circularity): <u>ecological sustainability of range offered (gas-oil, lpg, methane-powered, hybrid vehicles)</u> Other technical aspects (55)
Private tender	Waste treatment mechanical maintenance service	ER	5	4		Environmental (6, of which 6 on circularity): <u>Iso 50001, Iso 14001</u> Social (49): lost time injury rate trend, site manager safety training, plant visit by the prevention and protection service manager, Iso 45001 and Sa 8000 certifications Other technical aspects (15)

In the pie charts, the points assigned to the price are barred, those assigned to environmental sustainability are in light blue (circularity-related criteria underlined), those to social sustainability are in blue and those to other technical aspects forming part of the technical components are in grey.

In the **private tenders** the Hera Group invited an average of 22 suppliers for each set of negotiations, confirming the approach of the Group based on an open and transparent competition between the suppliers on a consistent basis with the guidelines of current legislation.

8.04 Contract management

The Guidelines on Procurement, in accordance with the Group's Code of Ethics and the organisational model pursuant to Italian Legislative Decree no. 231/2001 and the related “**procurement**” protocol determine the underlying principles of the Hera Group's procurement activities in the event of the acquisition of goods, services and work necessary for the performance of activities carried out under free market conditions and subject to public works contracts (Code of Public Contracts pursuant to Italian Legislative Decree no. 50/2016, as amended).

It should be noted that Hera Spa has been Iso 37001:2016 certified since 2019. Said certification involves the adoption of a management system aimed at **preventing and dealing with possible cases of corruption** and **fostering an ethical corporate culture**. This certification has led to a number of amendments to the contract general terms adopted in the tender procedures, aimed at making this management system operational from a procurement standpoint. In particular, during its meeting on 25 September 2019, the Board of Directors of Hera Spa adopted the Corruption prevention model integrated into the Organisation and Management Model pursuant to Italian Legislative Decree no. 231/2001, which is founded on the principles and values expressed in the Code of Ethics and the Quality and Sustainability Policy adopted by the Hera Group.

The use of subcontracts

With regard to subcontracting and the like, the **procedure** introduced was used in 2021 and saw the full compliance of AcegasApsAmga as well, but not Marche Multiservizi.

The **authorisation to subcontract** makes the works directors and the company contact individuals responsible for document checking activities, and Vendor rating and assurance function of Hera Spa responsible of the process validation, the checking of the social security contribution regularity, the control of the list of qualified suppliers and their rating, the search of the Anac electronic records and, if necessary, the request for anti-Mafia information from the Prefecture with direct access to the National bank of anti-Mafia data, as well as the request of the Criminal Records Certificate. All the documentation regarding the request, checking and authorisation has been **standardised at Group level** and reviewed with updates on the reference legislation, by the Group Regulations and Tender unit. All the documentation is made available to companies in the reserved document area of the supplier portal, and to all the employees via the company intranet.

The obligations necessary for monitoring the activities of the subcontractor companies and the like at the worksite (supplier monitoring check-list) have been consolidated, together with the obligations for permitting simple, correct and accurate monthly administrative reporting, including precise verification of payments.

The Group **standard specifications**, on a consistent basis with the reference legislation, envisage that the contractor pays the subcontractors and the like and that the former provides the works director, on request, with suitable proof of payment with regard to the various Progress Reports (SALs) and/or Performance Certification Forms (MAPs) issued. In the absence of proof, the works director/company contractual contact individual informs the competent administration unit of the suspension of the payment of the quotas not indicated in the subsequent SALs/MAPs until payments are up-to-date. This is an alternative method to the direct payment method of the subcontractors and can be activated directly at the beginning of the contractual relationship for the micro/small enterprises as provided for by law, or during the work activities for the other cases.

In 2021, **Euro 64 million** was subcontracted out (Euro 46 million in 2020), **equal to 6.6%** of the amount of work and services outsourced by the Group, while the amounts disclosed for the subcontracting handled came to Euro 28 million (Euro 15 million in 2020), equal to 3% of the total. The figures reported rose when compared to 2020 due to the notable changes to the regulatory framework, which gradually increased the percentage of contractual amounts to be awarded via subcontracting and the like.

Times of payment as per contract

The **contractual average payment times** of the supplies decreased progressively, standing at 55 days at the end of 2021 (59 days in 2020 and 65 days in 2019), in accordance with the contractual standard which defines average payment times of 60 days for the Hera Group.

The monitoring of work accidents at suppliers

In line with the principles and objectives of the Hera Group and in order to have a complete picture of the lost time injury impact relating to the activities carried out directly and indirectly, the Hera Group monitors the lost time injury indexes for its main suppliers of works and services. The associated specifications and contracts require suppliers to inform Hera of the following:

- accident events, near misses and environmental incidents must be reported, by the first working day after the event, through registration on the Hera Group's E-procurement platform;
- at the contractual expiry or by the middle of February for long-term contracts, the supplier must draft the "Annual accident summary" again through registration on the Hera Group's E-procurement platform;

this phase of collation and analysis of the data was computerised by using the Sap Srm platform.

[403-9] **NUMBER OF ACCIDENTS AND LOST TIME INJURY INDEXES OF THE SUPPLIERS OF SERVICES AND WORKS**

	2019	2020	2021
Number of work injuries	319	288	313
Lost time injury rate (frequency index)	27.9	22.3	22.4
Number of deaths as a result of work injuries	0	0	1
Death rate as a result of work injuries	0	0	0.07
Number of hours worked	11,450,352	12,928,044	13,944,492

The frequency index is the number of lost time injuries per million hours worked. The death rate is equal to the number of deaths divided by millions of hours worked

In 2021, **1,633 suppliers** (1,666 in 2020) **reported data on accidents** for a contract value totalling Euro 728 million (Euro 650 million in 2020), equal to 84% of the value of the supplies of services and works (professional and advisory services excluded given considered insignificant from a workplace safety point of view).

On the whole, **313 accidents** were recorded; the processing of data highlighted an average frequency index of 22.44 (22.3 in 2020) and a severity index of 0.55 (0.52 in 2020). Both indexes increased compared to the previous year, but improved in comparison with 2019, a year in which the frequency index stood at 27.9 and the severity index at 0.66.

An analysis of the data relating to the **most significant product categories from an accident perspective** shows the following indexes:

- for the works category ("general works"), the frequency index is 20.1 and the severity index 0.60 (in 2019 the indexes stood at 15.0 and 0.56 respectively);
- for the waste management services category, the frequency index is 31.6 and the severity index 0.78 (in 2020 the indexes stood at 34.8 and 0.84 respectively).

8.05 Supplier relations

In 2021, Hera took part in a number of **meetings with the main trade associations** such as a meeting with the Associazione delle organizzazioni di ingegneria (Oice) (Association of Engineering Organisations). A report on the impact of the Hera Group on local businesses was presented and the functioning of the e-procurement platform was illustrated during these meetings. Additionally, during the healthcare emergency period, **close dialogue was maintained with the main suppliers** for the most critical supplies in order to constantly monitor the situation and ensure the essential services as best as possible.

In conclusion, as usual, at the end of the year the customary **meetings were held with representatives of social cooperatives** working in the areas served by the Hera Group, to discuss the results achieved in 2021. On the basis of the analysis of the data collected, the work group active in the meetings confirmed the validity of the procedures defined for monitoring. The encounters also pertained to the ways to promote employment projects, illustrated in the section "Economic development and social inclusion". [Sviluppo economico e](#)

Litigation with suppliers

[307-1]
[419-1]

The number of disputes fell: at the end of 2021, there were 25 disputes pending with the suppliers, compared with 36 at the end of 2020. Eleven disputes were initiated in 2021, mainly concerning tender issues.

Focus on shared value, area by area

Sustainable strategy and Shared value	Pursuing carbon neutrality	Regenerating resources and closing the loop	Enabling resilience and innovating
Governance and creation of value	Customers	People	Suppliers

Bologna

THE CREATION OF SHARED VALUE ...

Pursuing carbon neutrality	Regenerating resources and closing the loop	Enabling resilience and innovating
Energy efficiency for households and businesses 33% of customers use energy efficiency services. There are 190 thousand.	Recycling 64% separate waste collection, of which 85% was recycled*. 3% of municipal waste in landfills	Digitalisation 80% of the gas meters are already electronic
Green energy 30% of customers use electricity from renewable sources and gas with CO ₂ emissions offsetting	Reuse Euro 332 thousand of pharmaceuticals that have not yet expired and 194 tonnes of bulky waste collected and reused	Employment 2,707 employees in the Bologna area and 151 hires in 2021
Electricity 25 energy production plants (278.2 MW capacity) of which 12 from renewable sources (52.6 MW capacity)	Wastewater purification 100% of urban areas with >2,000 PE became compliant 77% of urban areas with 200-2,000 PE became compliant	Social inclusion Euro 16 million value of bills paid in instalments, 28 thousand households are involved

* Excluding green waste, figures for 2020

CSV Investments	CSV Case Study	CSV Case Study
Hera, the water supply system serving the Bolognese plain is renovated With the laying of a new 1.6 km section of aqueduct and an investment of Euro 690,000, Hera has upgraded the water service to the areas of Castello d'Argile, Pieve di Cento, Galliera, San Pietro in Casale, Malalbergo, Minerbio and Baricella, increasing the efficiency of the entire system serving a population of approximately 50 thousand inhabitants.	The world's first AWS-certified water treatment plant is in the Bologna area The potability treatment plant in Sasso Marconi, which also serves the city of Bologna, has obtained Alliance for Water Stewardship (AWS) certification, the international standard that guarantees the efficient use and sustainable management of water resources. The Hera Group is the first multi-utility in the world to have a certified potability treatment plant and the third in Italy to achieve this.	Bologna Airport and Hera Group together for increasingly sustainable development The two companies have signed a protocol to collaborate on projects aimed at the circular economy, environmental sustainability and sustainable mobility. The agreement aims, among other things, to identify increasingly sustainable management solutions, reducing the amount of waste produced at the Bologna airport and increasing the recycling of end-of-life materials.

... WITH THE DRIVERS OF CHANGE

Economic value distributed to the Bologna area	A high-quality service... at a lower price
Euro 384 million, of which: 172 million workers 36 million shareholders 13 million PA 163 million suppliers 1.273 jobs created (lead-on employment of suppliers)	Customer satisfaction index in the Bologna area ^{**} : 73/100 Average yearly expense for the waste service for a household ^{***} (Source: Cittadinanzattiva): -17% compared to Italian average (Euro 286 in Bologna, Italian average was 343) Waste collection service expense for non-residential users ^{**} : -29% compared to Italian average (Euro 10.20/m ² for Bologna, Euro 14.30/m ² for Italy)

^{*} 3 people in 100 m². Source: Cittadinanzattiva

^{**} Does not include the Imola-Faenza area where the customer satisfaction index was 71/100

^{***} Hotel of 1,000 m², restaurant of 180 m², supermarket of 200 m², and food industry of 3,000 m². Source: Processing by Hera on data retrieved from the websites of the municipalities

Sustainable strategy and Shared value	Pursuing carbon neutrality	Regenerating resources and closing the loop	Enabling resilience and innovating
Governance and creation of value	Customers	People	Suppliers

Ferrara

THE CREATION OF SHARED VALUE ...

Pursuing carbon neutrality	Regenerating resources and closing the loop	Enabling resilience and innovating
Energy efficiency for households and businesses 25% of customers use energy efficiency services. There are 45 thousand	Recycling 87% separate waste collection, of which 77% was recycled* 0% of municipal waste in landfills	Digitalisation 71% of gas meters are electronic. 99 thousand meters, of which 40 thousand are NexMeter
Green energy 25% of customers use electricity from renewable sources and gas with CO ₂ emissions offsetting	Reuse Euro 42 thousand of pharmaceuticals that have not yet expired and 25 tonnes of bulky waste collected and reused	Employment 465 employees in the Ferrara area and 16 hires in 2021
Electricity 4 energy production plants (55.2 MW capacity) of which 3 from renewable sources (33.9 MW capacity)	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 Euro 7 million value of bills paid in instalments, 13 thousand households are involved

* Excluding green waste, figures for 2020

CSV Investments	CSV Case Study	CSV Case Study
Increasingly extensive and green district heating The Hera Group has concluded an important extension of district heating in the southern area of Ferrara: a new impetus for a source of heating with low environmental impact that uses geothermal energy. Potentially, this makes it possible to save up to 1,810 tonnes of CO ₂ emissions and 78% of primary energy.	"ECO Alberi", Hera Group's new urban reforestation initiative, starts in Ferrara The project, which at a regional level aims to plant 10,000 plants in three years, thanks to an investment of Euro 250,000 by the multi-utilities, got under way in the Estense city. Behind the historic city walls, on an area of almost 20,000 square metres, 420 trees have been planted which will absorb up to 42 tonnes of CO ₂ per year.	Separate waste collection: Ferrara wins the gold medal for the third consecutive year For the third year in a row, Ferrara is once again Italy's leading city in terms of percentage of separate waste collection. This is once again certified by the Ecosistema Urbano report by Legambiente and Il Sole 24 Ore, in its 28th edition. In the 26 th , Ferrara had achieved first place with 86%, in the 27 th with 86.2%, up to today's 87.6%.

... WITH THE DRIVERS OF CHANGE

Economic value distributed to the Ferrara area	A high-quality service... at a lower price
Euro 103 million, of which: 30 million workers 4 million shareholders 9 million PA 60 million suppliers 475 jobs created (lead-on employment of suppliers)	Customer satisfaction index in the Ferrara area: 74/100 Average yearly expense for the waste service for a household (Source: Cittadinanzattiva) -13% compared to Italian average Euro 299 in Ferrara** the Italian average was Euro 343* Annual waste collection service expense for non-residential users*** -28% compared to Italian average Euro 10.37/m ² for Ferrara****, Euro 14.30/m ² for Italy

* 3 people in 100 m². Source: Cittadinanzattiva waste

*** Hotel of 1,000 m², restaurant of 180 m², supermarket of 200 m², and food industry of 3,000 m². Source: Processing by Hera on data retrieved from the websites of the municipalities

**** Considered as annual disposals of mixed waste amounting to 1,200 litres per hotel, 3,120 litres per restaurant, 9,360 litres per supermarket and food industry

Sustainable strategy and Shared value	Pursuing carbon neutrality	Regenerating resources and closing the loop	Enabling resilience and innovating
Governance and creation of value	Customers	People	Suppliers

Forlì-Cesena

THE CREATION OF SHARED VALUE ...

Pursuing carbon neutrality	Regenerating resources and closing the loop	Enabling resilience and innovating
Energy efficiency for households and businesses 25% of customers use energy efficiency services. 61 thousand	Recycling 66% separate waste collection, of which 83% was recycled* 0% of municipal waste in landfills	Digitalisation 87% of the gas meters are already electronic
Green energy 26% customers with electricity from renewable sources and gas with CO ₂ emissions offsetting	Reuse Euro 22 thousand of pharmaceuticals that have not yet expired and 75 tonnes of bulky waste collected and reused	Employment 622 employees in the Forlì-Cesena area and 30 hires in 2021
Electricity 18 energy production plants (67.7 MW capacity) of which 7 from renewable sources (20.3 MW capacity)	Wastewater purification 100% of urban areas with >2,000 PE became compliant 88% of urban areas with 200-2,000 PE became compliant	Social inclusion Euro 9 million value of bills paid in instalments, 19 thousand households are involved

* Excluding green waste, figures for 2020

CSV Investments	CSV Investments	CSV Case Study
Protocol signed for the restoration of the Cesuola River A memorandum of understanding has been signed by the Municipality, Hera, Atersir and the Regional Agency for Territorial Safety and Civil Protection for the environmental, structural and hydraulic restoration of the Cesuola torrent in Cesena: it involves the execution of works to make safe and adapt the watercourse, which extends for about 10 kilometres.	Sustainability and environmental protection, HeraLAB projects kick off in Forlì-Cesena "Green hotels", "The San Mauro Pascoli footwear district", "Protocols with the third sector" and "Good circular economy practices" are the four proposals developed for the Forlì-Cesena area by HeraLAB, the laboratory of ideas in which representatives of the local community discuss how to make the lives of citizens more sustainable and protect resources and the environment.	Municipality of Forlì and Hera Servizi Energia together to upgrade almost 200 public buildings The Forlì municipal administration has entrusted the management of 192 municipal buildings to Hera Servizi Energia, the energy service company of the Hera Group, for nine years. Energy efficiency and seismic improvements are also planned. When fully operational, energy savings will be 17.5% per year.

... WITH THE DRIVERS OF CHANGE

Economic value distributed to the Forlì-Cesena area	A high-quality service... at a lower price
Euro 116 million, of which: 40 million workers 9 million shareholders 13 million PA 54 million suppliers 424 jobs created (lead-on employment of suppliers)	Customer satisfaction index in the Forlì-Cesena area: 72/100 Average yearly expense for the waste service for a household* (Source: Cittadinanzattiva) -22% compared to Italian average Euro 244 in Cesena, the Italian average was 343 Waste collection service expense for non-residential users** -48% compared to Italian average Euro 7.47/m ² for Cesena, Euro 14.30/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 food industry of 3,000 m². Source: Processing by Hera on data retrieved from the websites of the municipalities

Sustainable strategy and Shared value	Pursuing carbon neutrality	Regenerating resources and closing the loop	Enabling resilience and innovating
Governance and creation of value	Customers	People	Suppliers

Modena

THE CREATION OF SHARED VALUE ...

Pursuing carbon neutrality	Regenerating resources and closing the loop	Enabling resilience and innovating
Energy efficiency for households and businesses 33% of customers use energy efficiency services. There are 115 thousand	Recycling 65% separate waste collection, of which 81% was recycled* 0% of municipal waste in landfills	Digitalisation 75% of gas meters are electronic. 176 thousand meters, of which 15 thousand are NexMeter
Green energy 29% of customers use electricity from renewable sources and gas with CO ₂ emissions offsetting	Reuse Euro 165 thousand of pharmaceuticals that have not yet expired and 151 tonnes of bulky waste collected and reused	Employment 887 employees in the Modena area and 41 hires in 2021
Electricity 8 energy production plants (33.1 MW capacity) of which 4 from renewable sources (23.8 MW capacity)	Wastewater purification 100% of urban areas with >2,000 PE became compliant 67% of urban areas with 200-2,000 PE became compliant	Social inclusion Euro 11 million value of bills paid in instalments, 22 thousand households are involved

* Excluding green waste, figures for 2020

CSV Investments	CSV Investments	CSV Case Study
Modena's electricity network becomes smarter thanks to the new primary substation With an investment of almost Euro 7.5 million, the Hera Group has built an electricity transformation plant in East Modena, from high to medium voltage, to project the city into the future and better meet the challenges of growing energy needs and new supply sources.	Hera and Inalca together for biomethane production Hera and Inalca (Cremonini Group) have signed a partnership agreement for the construction of a plant in Spilamberto to produce biomethane and compost from organic waste and food waste. The plant will be operational by 2022.	HeraLAB work concluded The HeraLAB project in Modena was concluded and the plan of local initiatives with four projects, including "The Energy Tutor", was approved. This project aims to increase familiarity with the bonuses available and all the incentives offered (whether or not by Hera) to reduce energy poverty and arrears.

... WITH THE DRIVERS OF CHANGE

Economic value distributed to the Modena area	A high-quality service... at a lower price
Euro 153 million, of which: 56 million workers 16 million shareholders 7 million PA 74 million suppliers 574 jobs created (lead-on employment of suppliers)	customer satisfaction index in the Modena area: 72/100 Average yearly expense for the waste service for a household* (Source: Cittadinanzattiva) -15% compared to Italian average Euro 293 in Modena, the Italian average was 343 Waste collection service expense for non-residential users** -32% compared to Italian average Euro 9.72/m ² for Modena, Euro 14.30/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 food industry of 3,000 m². Source: Processing by Hera on data retrieved from the websites of the municipalities

Sustainable strategy and Shared value	Pursuing carbon neutrality	Regenerating resources and closing the loop	Enabling resilience and innovating
Governance and creation of value	Customers	People	Suppliers

Padua

THE CREATION OF SHARED VALUE ...

Pursuing carbon neutrality	Regenerating resources and closing the loop	Enabling resilience and innovating
Energy efficiency for households and businesses 9% of customers use energy efficiency services. There are 12 thousand.	Recycling 65% separate waste collection, of which 91% was recycled* 0% of municipal waste in landfills	Digitalisation 26% customers with electronic billing
Green energy 21% of customers use electricity from renewable sources and gas with CO ₂ emissions offsetting	Reuse 17 editions of the "Ecological Saturdays" to fight dumping bulky waste and promote the culture of reuse (40 tonnes of bulky waste collected)	Employment 591 employees in the Padua area and 35 hires in 2021
Electricity 3 energy production plants (17.5 MW capacity) of which 1 from renewable sources (7.1 MW capacity)	Wastewater purification 100% of urban areas >2,000 PE became compliant	Social inclusion Euro 2.5 million value of bills paid in instalments, 3 thousand households are involved

* Excluding green waste, figures for 2020

CSV Investments	CSV Case Study	CSV Case Study
State-of-the-art biodryers in the Ca' Nordio wastewater treatment plant Energy efficiency and high yields characterise the two new biodryers at the Padua wastewater treatment plant. The plants guarantee a sludge reduction of up to 80% thanks to a process that uses the thermal energy generated by the bacteria already present in the biosolids. The investment (about Euro 1.2 million) reduces the amount of sludge to be disposed of by about 1,500 tonnes per year.	Hera Luce and the IoTility model In addition to safety and environmental sustainability, the Internet of Things is the key element of Hera Luce's approach. Its "IoTility" model combines sensors, data analysis and predictive maintenance models with service management, creating an interconnected network that anticipates needs and improves plant safety, with special attention to the recovery of used materials. Some energy efficiency measures were carried out in the municipality as part of the UrbeViva project through 215 new LED lighting points.	Aerial leak detection for a more resilient water network Aerial leak detection joins the list of technologies used to map vulnerabilities in the city's water network. SAR technology applied to aircraft, introduced from 2021 as an alternative to satellite photos, is much more accurate as it can detect drinking water in the ground. In the Padua area, 414 kilometres of network were checked and 124 leaks were located.

... WITH THE DRIVERS OF CHANGE

Economic value distributed to the Padua area	A high-quality service... at a lower price
Euro 101 million, of which: 38 million workers 6 million shareholders 1 million PA 56 million suppliers 440 jobs created (lead-on employment of suppliers)	Customer satisfaction index in the Padua area: 71/100 Average yearly expense for the waste service for a household* (Source: Cittadinanzattiva) -36% compared to Italian average Euro 221 in Padua, the Italian average was 343 Waste collection service expense for non-residential users** -27% compared to Italian average Euro 1049/m ² for Padua, Euro 14.30/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 food industry of 3,000 m². Source: Processing by Hera on data retrieved from the websites of the municipalities

Sustainable strategy and Shared value	Pursuing carbon neutrality	Regenerating resources and closing the loop	Enabling resilience and innovating
Governance and creation of value	Customers	People	Suppliers

Pesaro-Urbino

THE CREATION OF SHARED VALUE ...

Pursuing carbon neutrality	Regenerating resources and closing the loop	Enabling resilience and innovating
Energy efficiency for households and businesses 24% of customers use energy efficiency services. There are 28 thousand	Recycling 73% separate waste collection, of which 82% was recycled* 29% of municipal waste in landfills	Digitalisation 78% of the gas meters installed are electronic
Green energy 32% of customers use electricity from renewable sources and gas with CO ₂ emissions offsetting	Reuse 110 tonnes of bulky waste collected and re-used	Employment 533 workers in the Pesaro-Urbino area and 21 hires in 2021
Electricity 1 energy production plant (2.1 MW power)	Wastewater purification 91% of urban areas >2,000 PE became compliant (100% by 2023)	Social inclusion Euro 7 million value of bills paid in instalments, 16 thousand households are involved

* Excluding green waste, figures for 2020

CSV Investments	CSV Investments	CSV Case Study
The new Pesaro wastewater treatment plant In December, the new Borgheria purification plant in Pesaro was inaugurated, upgraded and brought up to standard with an investment of over Euro 25 million. The intervention closes the EU infringement procedure that has been ongoing since 2009.	Biomethane from organic waste soon to be available in Pesaro A new composting and anaerobic biodegradation plant will be used to recover the organic fraction from separate waste collection and from waste from the maintenance of green areas. Starting in 2023, the plant will produce 6 million m ³ of biomethane per year and 28 thousand tonnes per year of high-quality compost	Energy efficiency in Marche Multiservizi Marche Multiservizi's action towards energy efficiency continues with the requalification of the lighting of the Urbino waste collection centre with savings of 65% for about 7,900 kWh and 2.5 tons of greenhouse gases avoided.

... WITH THE DRIVERS OF CHANGE

Economic value distributed to the Pesaro-Urbino area	A high-quality service... at a lower price
Euro 74 million, of which: 38 million workers 9 million shareholders 7 million PA 20 million suppliers 154 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) -22% compared to Italian average Euro 266 in Pesaro, the Italian average was 343 Annual waste collection service expense for non-residential users*** -42% compared to Italian average Euro 8.28/m ² for Pesaro, Euro 14.30/m ² for Italy

* Data for Hera Comm Marche

** 3 people in 100 m². Source: Cittadinanzattiva

*** Hotel of 1,000 m², restaurant of 180 m², supermarket of 200 m², and food industry of 3,000 m². Source: Processing by Hera on data retrieved from the websites of the municipalities

Sustainable strategy and Shared value	Pursuing carbon neutrality	Regenerating resources and closing the loop	Enabling resilience and innovating
Governance and creation of value	Customers	People	Suppliers

Ravenna

THE CREATION OF SHARED VALUE ...

Pursuing carbon neutrality	Regenerating resources and closing the loop	Enabling resilience and innovating
Energy efficiency for households and businesses 31% of customers use energy efficiency services. There are 75 thousand	Recycling 60% separate waste collection, of which 88% recycled* 7% of municipal waste in landfills	Digitalisation 95% of the gas meters installed are electronic
Green energy 33% of customers use electricity from renewable sources and gas with CO ₂ emissions offsetting	Reuse Euro 120 thousand of pharmaceuticals that have not yet expired and 139 tonnes of bulky waste collected and reused	Employment 580 employees in the Ravenna area and 25 hires in 2021
Electricity 14 energy production plants (23.0 MW capacity) of which 9 from renewable sources (11.2 MW capacity)	Wastewater purification 100% of urban areas with >2,000 PE became compliant 96% of urban areas with 200-2,000 PE became compliant	Social inclusion Euro 8 million value of bills paid in instalments, 17 thousand households are involved

* Excluding green waste, figures for 2020

CSV Investments	CSV Case Study	CSV Case Study
More than one million Euro to improve the Lavezzola wastewater treatment plant Work to upgrade the Lavezzola wastewater treatment plant was completed in September, with an investment of more than one million Euro. The project responds to the growth needs of the area and has been developed using the Building Information Modelling software methodology, for the optimisation of planning, implementation and management of the works.	Sustainable Ravenna: study to produce 'green' hydrogen launched A memorandum has been signed with the aim of developing a green hydrogen supply chain in Ravenna and producing renewable energy, to be used mainly in local public transport. Alongside Hera and the Municipal Administration are the municipal subsidiary Ravenna Holding, Start Romagna and the Agency for Energy and Sustainable Development.	Ravenna WiFi: four more oases for an increasingly smart and interconnected city The last four hotspots of the "Ravenna WiFi" project have been installed thanks to the collaboration between the Municipality and Acantho, the Hera Group's telecommunications company. This brings the number of access points to this wireless network up to 40, with the aim of offering citizens and visitors free use of services that are increasingly necessary in everyday life.

... WITH THE DRIVERS OF CHANGE

Economic value distributed to the Ravenna area	A high-quality service... at a lower price
Euro 155 million, of which: 37 million workers 10 million shareholders 8 million PA 100 million suppliers 780 jobs created (lead-on employment of suppliers)	Customer satisfaction index in the Ravenna area**: 74/100 Average yearly expense for the waste service for a household* (Source: Cittadinanzattiva) -28% compared to Italian average Euro 247 in Ravenna, the Italian average was 343 Annual waste collection service expense for non-residential users*** -39% compared to Italian average Euro 8.73/m ² for Ravenna, Euro 14.30/m ² for Italy

* 3 people in 100 m². Source: Cittadinanzattiva

** Does not include the Imola-Faenza area where the customer satisfaction index was 71/100

*** Hotel of 1,000 m², restaurant of 180 m², supermarket of 200 m², and food industry of 3,000 m². Source: Processing by Hera on data retrieved from the websites of the municipalities

Sustainable strategy and Shared value	Pursuing carbon neutrality	Regenerating resources and closing the loop	Enabling resilience and innovating
Governance and creation of value	Customers	People	Suppliers

Rimini

THE CREATION OF SHARED VALUE ...

Pursuing carbon neutrality	Regenerating resources and closing the loop	Enabling resilience and innovating
Energy efficiency for households and businesses 27% of customers with energy efficiency services	Recycling 70% separate waste collection, of which 86% was recycled* 0% of municipal waste in landfills	Digitalisation 31% customers with electronic billing
Green energy 24% of customers use electricity from renewable sources and gas with CO ₂ emissions offsetting	Reuse Euro 36 thousand of pharmaceuticals that have not yet expired and 19 tonnes of bulky waste collected and reused	Employment 512 employees in the Rimini area and 22 hires in 2021
Electricity 4 energy production plants (12.1 MW capacity) of which 4 from renewable sources (6.8 MW capacity)	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 Euro 3 million value of bills paid in instalments, three thousand households involved

* Excluding green waste, figures for 2020

CSV Investments	CSV Case Study	CSV Case Study
Santarcangelo di Romagna water system upgraded Work has begun on upgrading some sections of the aqueduct network and building new pipelines, with an investment of approximately 2.5 million Euro, financed by Romagna Acque. The intervention will improve the safety of the water network and allow the Cappuccini reservoir to operate at full capacity, increasing the resilience of the networks.	Hera customer help desk opened in Riccione Hera's branch office in Riccione has been operational since 21 December. It is dedicated to families and businesses, with a catchment area of around 50 thousand inhabitants. The branch office is equipped with a large and comfortable waiting area and a reception desk to receive and provide faster and more targeted responses to customer needs.	The first four Smarty underground drop-off points in the historic centre of Rimini A restyling project linked to waste collection has begun in Rimini, with the bins being replaced by underground islands featuring Tonino Guerra's characteristic butterflies. Ten more will be added to the first four, which have already been installed, and will allow better organisation of urban spaces and the passage of collection vehicles, to the benefit of the environment.

... WITH THE DRIVERS OF CHANGE

Economic value distributed to the Rimini area	A high-quality service... at a lower price
Euro 104 million, of which: 33 million workers 7 million shareholders 13 million PA 51 million suppliers 402 jobs created (lead-on employment of suppliers)	Customer satisfaction index in the Rimini area: 71/100 Average yearly expense for the waste service for a household* (Source: Cittadinanzattiva) -17% compared to Italian average Euro 286 in Rimini, Italian average was 343 Waste collection service expense for non-residential users** -5% compared to Italian average Euro 13.53/m ² for Rimini, Euro 14.30/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 food industry of 3,000 m². Source: Processing by Hera on data retrieved from the websites of the municipalities

Sustainable strategy and Shared value	Pursuing carbon neutrality	Regenerating resources and closing the loop	Enabling resilience and innovating
Governance and creation of value	Customers	People	Suppliers

Trieste, Udine, Gorizia

THE CREATION OF SHARED VALUE ...

Pursuing carbon neutrality	Regenerating resources and closing the loop	Enabling resilience and innovating
Energy efficiency for households and businesses 20% of customers use energy efficiency services. There are 63 thousand	Recycling 44% separate waste collection, of which 91% was recycled* 0% of municipal waste in landfills	Digitalisation 67% of gas meters are electronic. 215 thousand meters, of which 16 thousand are NexMeter
Green energy 22% of customers use electricity from renewable sources and gas with CO ₂ emissions offsetting	Reuse 8 editions of the "Ecological Saturdays" to fight dumping bulky waste and promote the culture of reuse (72 tonnes of bulky waste collected)	Employment 1,221 workers in the area and 80 hires in 2021
Electricity 3 energy production plants (15.6 MW capacity) of which 2 from renewable sources (7.2 MW capacity)	Wastewater purification 100% of urban areas >2,000 PE became compliant 99% of urban areas with 200-2,000 PE became compliant	Social inclusion Euro 4 million value of bills paid in instalments, seven thousand households involved

* Excluding green waste, figures for 2020

CSV Investments	CSV Case Study	CSV Case Study
A plan for sustainable wastewater management in the Karst region The first lot of the Opicina sewerage redevelopment has been completed, involving the collection of waste water to the Servola wastewater treatment plant, thus avoiding the use of septic tanks and protecting the delicate Karst ecosystem. The intervention (about Euro 1 million) involves almost 500 users.	ReCap for the recovery of used coffee capsules AcegasApsAmga is part of the pilot project launched in four municipalities in Friuli Venezia Giulia for the collection and recovery of used coffee capsules. ReCap is the first European circular economy initiative involving large coffee producers and municipal waste managers. In just three months, 2 tonnes of capsules (equivalent to 222 thousand coffees) have already been collected.	Redevelopment of the Marina Julia quarter in Monfalcone Shared value is at the heart of the implementation of the "Marina Julia Smart Green Village". Starting with energy efficiency measures carried out by AcagasApsAmga Servizi Energetici, which will lead to savings of around 18% in terms of primary energy, the aim of the project is to improve the community's economic and social conditions.

... WITH THE DRIVERS OF CHANGE

Economic value distributed to the Friuli-Venezia Giulia area	A high-quality service... at a lower price
Euro 153 million, of which: 78 million workers 12 million shareholders 8 million PA 55 million suppliers 429 jobs created (lead-on employment of suppliers)	Customer satisfaction index in the Trieste area: 70/100 Customer satisfaction index in the Udine area: 73/100 Average yearly expense for the waste service for a household* (Source: Cittadinanzattiva) -5% compared to Italian average Euro 326 in Trieste, the Italian average was 343 Waste collection service expense for non-residential users** -12% compared to Italian average Euro 12.60/m ² for Trieste, Euro 14.30/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 food industry of 3,000 m². Source: Processing by Hera on data retrieved from the websites of the municipalities

Information concerning environmentally sustainable economic activities - Regulation (EU) 2020/852

What is the European taxonomy

In March 2018, the European Commission published the **Action plan on sustainable finance** to create a body of rules centred on sustainable finance, with the ultimate objective of directing the flow of private capital at a more sustainable, inclusive development model and in line with the commitments undertaken in the Paris Climate Agreement. **The establishment of a unified classification system for sustainable activities**, and therefore of a taxonomy, is the most important and urgent action set forth in the action plan.

What is the taxonomy

The taxonomy of the European Union is the unique classification system at European level which establishes a list of environmentally sustainable economic activities. This classification tool aims to support the European Union in scaling up sustainable investments and implementing the Green Deal. The taxonomy aims to provide companies, investors and policy-makers with the standard criteria for determining the economic activities that contribute to an economy that does not adversely impact the environment. In this way, according to the European Union, it is also possible to create security for investors with respect to the phenomenon of greenwashing, help businesses in the ecological transition, and help the most essential investments get moving.

How it works

The European Union's taxonomy defines six environmental objectives to identify the sustainable economic activities from an environmental perspective:

- **climate change mitigation;**
- **climate change adaptation;**
- **sustainable use and protection of water and marine resources;**
- **transition to a circular economy;**
- **pollution prevention and control;**
- **protection and restoration of biodiversity and ecosystems.**

An economic activity is defined as sustainable from an environmental point of view if: it contributes significantly to the achievement of one of the six environmental objectives; it does not cause significant harm to any of the remaining environmental objectives (Do No Significant Harm - DNSH); it is carried out in respect of the minimum safeguards (based on international guidelines on the respect for human rights); it complies with the technical screening criteria established by the Commission.

The process of definition and entry into force

In July 2018, the European Commission established a Technical Expert Group (**Teg**) on sustainable finance tasked with developing recommendations for defining the criteria that determine the conditions under which a given economic activity may be considered to contribute substantially to climate change mitigation or adaptation, without causing significant harm to the remaining environmental objectives. In 2020, following the publication of the latest technical report, the work of the TEG was completed; the Commission subsequently set up the **Sustainable Finance Platform**, tasking it with providing assistance in developing regulations and supplying guidelines and guidance regarding sustainable finance and taxonomy.

Based on the contribution of the TEG, the platform and a wide range of stakeholders and institutions, **Regulation 852** on the taxonomy was published in the Official Journal of the European Union on 22 June 2020 and entered into force on 12 July of the same year.

Regulation 852 on taxonomy gives the European Commission the power to adopt delegated acts aimed at supplementing said regulation, specifying the technical screening criteria and the methods of respect for the DNSH principle so that an economic activity can be considered sustainable from an environmental perspective, from those contained in the list of eligible activities defined by the Commission. At the date of approval of this report, the Commission published the **first delegated act relating to the two climate mitigation** and adaptation objectives (EU 2021/2139). This identifies 13 economic sectors and 102 activities that contribute substantially to the climate change mitigation and/or adaptation. This list was defined with particular reference to the mitigation objective, by prioritising the high-emitting NACE sectors in terms of scope 1 emissions and considering those that are strategic in promoting the energy transition.

Sustainable strategy and Shared value	Pursuing carbon neutrality	Regenerating resources and closing the loop	Enabling resilience and innovating
Governance and creation of value	Customers	People	Suppliers

The list accounts for more than 93% of total European scope 1 emissions (figures: Eurostat 2018). As regards climate change adaptation, all sectors and activities are expected to be able to make a substantial contribution. Nonetheless, it was not possible to carry out the DNSH assessment for all sectors of the economy, therefore, the starting point for the assessment was the same set of mitigation activities. For each of the activities, the technical screening criteria were identified, which make it possible to determine the conditions under which an economic activity may be considered to contribute substantially to climate change mitigation and adaptation, and whether it causes significant harm to any other relevant environmental objective. The Commission re-examines, and if necessary periodically modifies the technical screening criteria in line with scientific and technological developments.

For the **remaining four environmental objectives**, the Commission is committed to publishing the delegated acts and ensuring they enter into force by the first half of 2022.

On 6 July 2021, the Commission also adopted the **delegated act which specifies the information disclosure obligations** (EU 2021/2178), in terms of content, methodology and representation, for the companies subject to the obligation to annually draft the non-financial statement (Sustainability Report). In the first year of reporting (2021 figures), non-financial companies are required to report the amount of **turnover, opex and capex** of the taxonomy-eligible economic activities, i.e. those activities included in the list defined by the delegated act relating to the first two environmental objectives, regardless of whether they satisfy the technical screening criteria. From the second year of reporting (2022 figures), the turnover, opex and capex of the portion of **taxonomy-aligned** economic activities must be reported, i.e. those that satisfy the technical screening criteria, the DNSHs and the minimum safeguards defined by the European Commission.

The year 2022 can expect to see not only the delegated act relating to the remaining four environmental objectives, but also the conclusion of the regulatory process relating to the supplementary delegated act regarding given activities in the **gas and nuclear sectors** and the publication of the delegated act relating to the **so-called “negative” and “low impact” activities**, i.e. “significantly harmful” activities for the environment and “insignificant impact” activities, i.e. those that, owing to their nature or reduced dimensions do not impact the environment.

The position and commitment of the Hera Group

The Hera Group welcomed the introduction of the taxonomy, in view of the relevance of the ambitious objective of providing a standard definition to all stakeholders of what may be considered sustainable from a scientific objective perspective. Such a regulation can only be viewed as an added value, as it accompanies and supplements the quantification of the shared-value MOL (EBITDA), that the Group has pioneered in quantifying since 2016, with the goal of providing evidence of its response, on the basis of its work, to the needs for change and to the global sustainability challenges.

Despite the taxonomy regulation establishing the obligation to report the portion of turnover, opex and capex of the Group's activities that satisfy the technical screening criteria from the 2022 reporting, **the Hera Group has already committed to providing evidence of it, in relation to the mitigation objective, in this disclosure.** In addition to this, the Group decided to supplement the 2021 reporting by inserting the quantification of the profit margins originating from the Group's activities that satisfy the technical screening criteria, and by introducing the share of investments in aligned activities to the 2021-2025 Business Plan.

During the phase of development of the regulation, Hera actively participated in the various consultation processes, providing both direct contributions, through the official European Commission channels, and indirectly, through the different trade associations in which the Group participates. As part of these processes, it expressed its position on some topics that are important for the Group, which were discussed at the various national and European institutional round-table work groups. These include:

Sale of renewable energy: at present, the regulation does not make provision for the insertion, on the list of eligible activities, of the sale of energy, which by contrast is a key element of the entire chain of value and plays a fundamental role in the decarbonisation process, allowing the sustainable electrification of consumption. Companies that operate in the sale sector and promote renewable energy consumption with customers, may provide a significant contribution to the energy transition, by directing demand. The Group believes that the sale of renewable electricity should be considered a mitigation activity and be afforded the same consideration and relevance associated to electricity generation and distribution activities (today present in the list of eligible activities).

The role of WTEs in the waste hierarchy: Waste-to-energy plants with energy recovery are not included in the list of eligible activities. The Hera Group believes that these types of plants are essential in the phase of transition to a circular economy, as they contribute to the disposal of non-recyclable fractions of waste, avoiding landfills, and can provide the necessary heat for the operation of high-efficiency district heating, hence avoiding the production of CO₂ emissions from fossil fuels.

The role of gas in the energy transition process: on 2 February 2022, the Commission approved, in principle, a supplementary delegated act on climate objectives (mitigation and adaptation) which includes, under rigorous conditions, specific nuclear energy and gas activities in the list of eligible

activities. The criteria for said activities should help, according to the Commission, accelerate the move from solid or liquid fossil fuels, including coal, to a neutral future for the climate. However, the Group believes that the conditions for respecting the technical screening criteria are overly challenging: the emission threshold to be respected by existing plants, for example, equal to 100 gCO₂/kWh, does not appear to take proper account of the state of available technologies and seems to be unrealistic in the absence of coal reduction solutions, whose use involves significant costs and operating complexities that cannot always be overcome.

The Taxonomy and reporting analysis phase

By following the recommendations of delegated act 2021/2178 which introduces obligations for the disclosure of taxonomy-related information, a process has been developed involving different steps through which it has been possible to analyse the applicability of the taxonomy along the entire chain of value, by taking into consideration all the consolidated companies of the Group. The process concerned exclusively the climate change mitigation and adaptation objectives for which delegated act 2021/2139 introduces, to Annexes I and II, the list of activities that contribute substantially to said objectives and the list of technical screening criteria and the DNSHs that said activities must respect in order to be classified as eco-sustainable. The analysis is carried out according to the following phases:

- mapping of the activities reported in Annexes I and II connected with the Hera Group's activities. This analysis aims to determine the Group activities that are **taxonomy-eligible** and **taxonomy non-eligible**;

HERA GROUP ACTIVITIES THAT ARE TAXONOMY-ELIGIBLE AND TAXONOMY NON-ELIGIBLE

Hera Group eligible activities	Hera Group non-eligible activities	
■ Aqueduct ■ Sewerage and purification ■ Industrial waste sorting plants ■ Municipal waste sorting plants ■ Separate waste collection ■ Plastic recycling ■ Anaerobic digestion ■ Composting ■ Landfill gas capture and utilisation ■ Transmission and distribution of electricity ■ Energy efficiency ■ Electric mobility ■ Micro-cogeneration and turbo-expansion ■ Retrofit of gas networks for the transmission of low-carbon gases ■ District Heating (distribution and production from geothermal energy) ■ Data center ■ Corporate fleet	■ Non-separate waste collection ■ Roads Sweeping ■ Waste to energy ■ Hazardous waste treatment plants ■ Management of active landfills ■ Trading and sale of electricity and gas ■ Cogeneration ■ Distribution of methane gas ■ Public illumination ■ Property and facility management ■ IT systems	■ Eligible activities: activity carried out by the Hera Group that has been explicitly included in the taxonomy regulation because it contributes substantially to climate change mitigation or adaptation; ■ Non-eligible activities: activity carried out by the Hera Group that was not explicitly included in the taxonomy regulation because it does not contribute substantially to climate change mitigation or adaptation.

- involvement of technical representatives and controllers of the departments and companies concerned in verifying respect for the technical screening criteria and the DNSHs indicated and determining the availability and granularity of the economic data requested for constructing the KPIs relating to turnover, opex and capex;

Each eligible activity, based on compliance or non-compliance with the technical criteria and the DNSHs, may fall under one of the following cases:

Aligned activity: an eligible activity that, in its entirety (in terms of assets/processes) respects ALL technical sustainability criteria, including the DNSHs

Partially aligned activity: an eligible activity of which a part (in terms of assets/processes) respects ALL technical sustainability criteria, including the DNSHs

Non-aligned activity: an eligible activity for which no asset/process respects ALL technical sustainability criteria, including the DNSHs

- verification of respect for the minimum safeguards, pursuant to Regulation 852;
- quantification of economic KPIs (turnover, opex and capex) by adhering to the accounting principles reported below in the point "The accounting principles used".

Hera respects the minimum safeguards thanks to the adoption of the Code of Ethics by all Group companies. The new Code is inspired by the *Davos Manifesto* of the World Economic Forum (both the first one in 1973 and the new manifesto of December 2019) and the following **acts of the General Assembly of the United Nations: "The Declaration of Human Rights"** adopted in 1948 and the **"Agenda 2030 for Sustainable Development"** adopted in 2015. With reference to the general theme of corporate social responsibility, Hera has also considered **the Uni Iso 26000 guideline** while, as regards

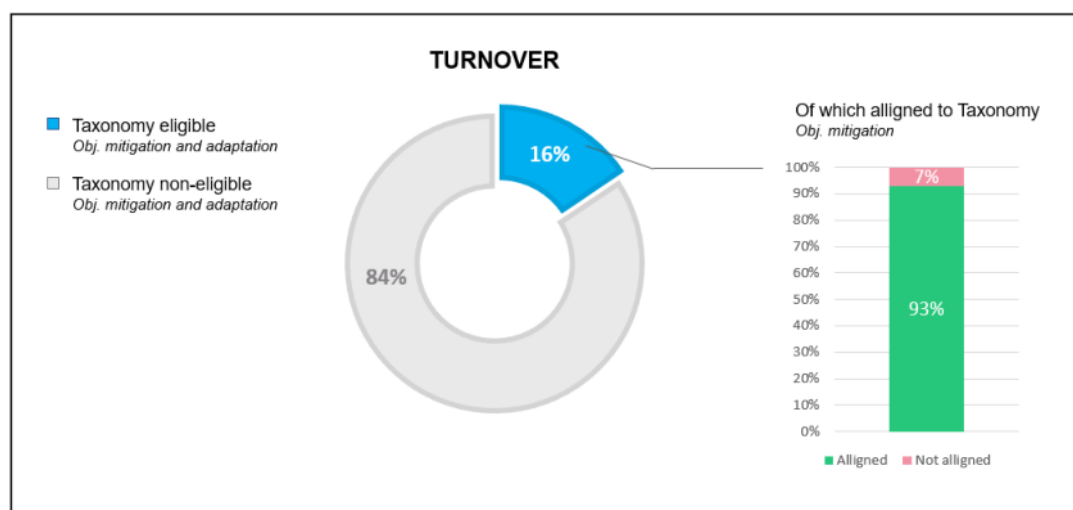
work conditions and workers' rights, it made reference to the **international standard Sa 8000**. Lastly, Hera has taken account of the formal obligations undertaken during its process of integration of the corporate social responsibility and sustainability principles in its operating activities, including **participation in the Global Compact** (since 2004), the signing of the **Charter for Equal Opportunities and Equality at Work** (in 2009) and of the **Ceos Call Csr Europe "a New Deal for Europe"** (in 2019). These are sources that provide the inspiration not only for the Code, but also for the policies adopted by the Hera Group and their implementation.

Our results

For the purposes of the correct representation and interpretation of the results obtained as part of this analysis, it is appropriate to point out that the data relating to turnover, opex and capex **eligible for the taxonomy** refer to both climate mitigation and adaptation objectives.

Solely for the **climate change mitigation objective**, it was possible to identify the alignment percentage, thanks to the analysis implemented in 2021: **the majority of activities were aligned**, as shown by the data presented hereunder. **Data centre** activities are still not aligned with the technical screening criteria or the DNSHs, owing to aspects connected with energy efficiency, still subject to in-depth examination, and **electric mobility**, given that the analyses relating to climate change adaptation required by the DNSHs should be completed in 2022. The partially aligned activities are: the **sewerage and wastewater treatment** service, for a limited number of territories that still do not comply with the energy efficiency thresholds and some built-up areas in the process of compliance with the regulations in force on wastewater treatment, **waste selection** relating to a sole platform which does not reach the required threshold for the recovery of material, the **capture and use of landfill gas**, in the event of a landfill still not permanently closed and, finally, the **company fleet**, given the reduced number of electric vehicles.

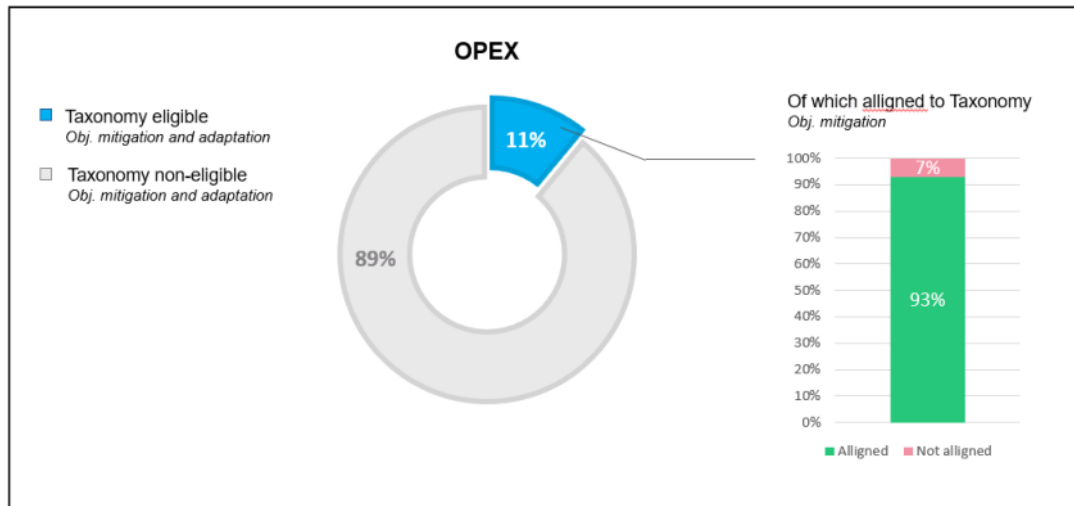
EU TAXONOMY - ECONOMIC KPIS RELATING TO MITIGATION AND ADAPTATION (YEAR 2021)



Turnover: in 2021, **16% of direct revenues** relates to taxonomy-eligible business activities. Of these, **93%** derives from activities **already aligned with the climate change mitigation objective**.

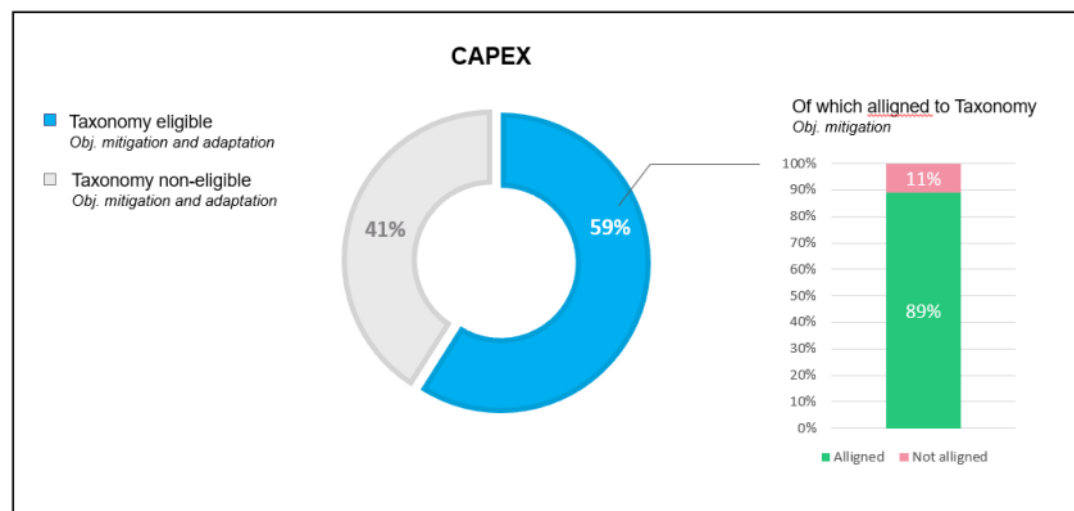
In order to correctly interpret the data, it is important to highlight that a sizeable part of non-eligible turnover (which, on the whole, comes to 84% in 2021) relates to the sale and trading of gas and electricity, activities not included in the list of taxonomy-eligible activities, due to the approach adopted by the Commission, reported previously. These activities are subject to considerable fluctuations in prices due to the energy market and, therefore, may lead to annual variations in the portion of eligible turnover.

For more details on the methods of calculation of the economic data, please refer to the information reported in the "Accounting principles".



Opex: in 2021, **11% of operating expenses** refer to taxonomy-eligible business activities. Of these, 93% derives from activities already aligned with the climate change mitigation objective.

For more details on the methods of calculation of the economic data, please refer to the information reported in the "Accounting principles".



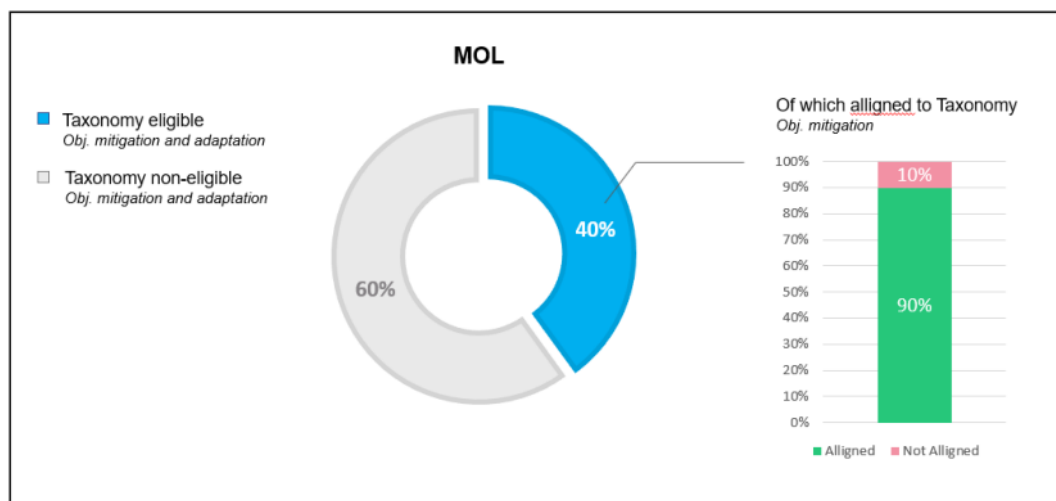
Capex: in 2021, **59% of capital-related expenses** (calculated out of a total of Euro 475 million considering direct investments net of capital grants, excluding structure investments and financial investments) refer to taxonomy-eligible business activities. Of these, **89%** derives from activities **already aligned with the climate change mitigation objective**.

For more details on the methods of calculation of the economic data, please refer to the information reported in the "Accounting principles".

Taxonomy EBITDA vs CSV (creating shared value) EBITDA

As pointed out previously, the Hera Group has already decided to provide data in this disclosure relating to the **gross operating margin (EBITDA)** deriving from **taxonomy-eligible** Group activities and **already aligned with the climate change mitigation objective**. This is a voluntary information, not provided for 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 consolidated financial statements of the Group and is not limited to taking into consideration only the Opex indicated by the regulation and by the delegated acts of the taxonomy.

TAXONOMY EBITDA



In 2021, **40% of EBITDA** refers to taxonomy-eligible business activities. Of this, 90% **derives from activities** already aligned with the climate change mitigation objective.

The "Taxonomy EBITDA" and the shared value EBITDA, in presenting **basic conceptual differences**, are by nature two sets that **do not perfectly overlap**. These differences impact, first and foremost, the list of activities considered for their quantification (the one in the taxonomy is called eligibility) and, secondly, the methods of calculation of the portion of activities to be considered.

From a conceptual point of view, the CSV EBITDA captures, in its impact areas, all six taxonomy environmental objectives. In particular, the responses to mitigation may be found under "promotion of energy efficiency" and "energy transition and renewable energies", and similar to the adaptation objective are found under "resilience and adaptation" (which, however, adopts a broader view of the concept of resilience), while the remaining four environmental objectives of the taxonomy can be identified in the impact areas "transition to a circular economy", "sustainable management of water resources" and "protection of the air, soil and biodiversity". This confirms the effectiveness of the approach the Group has adopted for many years, which has actually anticipated the European regulations.

The key differences between the two approaches, which are and which will always be clear from the numbers, depend mainly on:

- the inclusion in the CSV framework also of activities with social objectives, like the impact area "economic development and social inclusion" and activities which promote innovation and digitalisation;
- the different selection of activities that contribute to the shared value purposes, on the one hand, and the environmental objectives, on the other;
- the different methods of calculating the economic values of the activities included in both the shared value and in the taxonomy.

As regards activities with social objectives, we find included in the CSV EBITDA credit lines to social cooperatives and support initiatives for customers in difficulty, through the division of bills into instalments. In the innovation and digitalisation field, we find the development of projects and investments for the digitalisation of operating processes, of the services offered to cities and the remuneration deriving from investments in innovation.

The CSV EBITDA also includes the other relevant activities from an environmental point of view and for the attainment of sustainable development, which are not included in the list of taxonomy-eligible activities, based on the approach adopted by the Commission (in particular, see the approach for the mitigation objective with reference to Scope 1 emissions in "what is the European taxonomy"):

- sale of renewable electricity;
- sale of natural gas with CO₂ offsetting;
- electricity and gas contracts signed with innovative energy efficiency commercial offers;
- efficient public lighting;
- energy recovery deriving from waste-to-energy production (considered solely for the portion of energy from renewable sources equal to 51%);
- obtainment of white certificates.

As regards the activities included in both shared value and in the taxonomy for which different accounting methods are used, we find:

- sewerage and wastewater treatment, in the CSV EBITDA, the profit margin takes account of the proportion of wastewater that can be reused and the compliance percentage with European and national legislation on the treatment of wastewater in built-up areas > 2,000 inhabitant equivalent;
- water supply, in the CSV EBITDA, the profit margin is quantified by considering the users served by water supply systems "covered" by water safety management plans;
- company fleet, the Taxonomy EBITDA considers solely the profit margin deriving from electric vehicles while the CSV EBITDA also includes methane-powered/lpg vehicles;
- telecommunications, the taxonomy EBITDA considers solely the profit margin of the component deriving from data centre activities, whereas it is fully considered in the CSV EBITDA as it corresponds to the "innovation and digitalisation" impact area;
- waste collection, the taxonomy EBITDA includes solely the profit margin deriving from separate waste collection, while the CSV EBITDA also considers the profit margin from non-separated collection of waste used in the production of energy partly intended for the district heating service.

The accounting principles

In order to fully understand the construction of the economic KPIs, it is appropriate to point out that the reporting regarding the taxonomy in this disclosure and relating to the 2021 data, as already specified, refers solely to the first two objectives of mitigation and adaptation. The reporting for the remaining four environmental objectives, which will become mandatory from 2022, in addition to the adoption of the supplementary delegated act on gas and nuclear activities, will broaden the reporting approach, and this may have repercussions on the KPIs of the taxonomy reported in this disclosure.

The taxonomy KPIs were calculated as follows:

- Turnover KPI: is identified as Turnover connected with eligible economic activities/total turnover, considering the direct revenues of activities that fall under the value of production, excluding other revenues and increases in fixed assets from in-house production.
- OPEX KPI: calculated as opex related to eligible economic activities/total opex, considering ordinary direct operating costs.
- CAPEX KPI: calculated as capex relating to eligible economic activities/total capex. Direct investments are considered net of capital grants, therefore, they do not include structure investments and financial investments are excluded. Therefore, they include increases relating to tangible fixed assets and investment property and intangible fixed assets.

As regards the methods of assignment of the economic aggregates to the numerator, we started from an analysis of the map of activities performed by the Hera Group, identifying those that fall under the description of economic activities included in the taxonomy delegated act.

The economic values incorporated in the KPIs' numerator primarily on the basis of the Group's analytical accounting system were connected to the perimeter of said activities deemed eligible. In some cases, the appropriate drivers have to be used to obtain the best identification of the values relating to the eligible economic activities.

The denominator of the KPIs is constructed in line with the aggregates in the numerator, but relating to the perimeter of the consolidated total of economic activities of the Hera Group.

GRI contents index

[102-55]

GRI standard and other indicators	Section	Page	Omissions
GRI 102: General Disclosures 2016			
Organisational profile			
102-1	Name of the organisation	About us	16
102-2	Activities, brands, products and services	About us	16
102-3	Location of headquarters	About us	16
102-4	Location of operations	About us	16
102-5	Ownership and legal form	The scope of reporting The composition of the shareholding structure	4 190
102-6	Markets served	Services provided	16
102-7	Scale of the organisation	Services provided The production and allocation of value added The composition of the shareholding structure Hera Group's workforce	16 184 190 236
102-8	Information on employees and other workers	Hera Group's workforce	237-237
102-9	Supply chain	Suppliers	258
102-10	Significant changes to the organisation and its supply chain	The scope of reporting	5
102-11	Precautionary Principle or approach	Environmental impact assessments presented during the year	94 Regulations are respected and Environmental Impact Assessments are carried out for new plants
102-12	External initiatives	The reporting standards Breakdown of the information required by Italian Legislative Decree No. 254/2016	5 14
102-13	Membership of associations	Our commitment to sustainability in national and international networks Associations of which Hera is a member	33 197
Strategy			
102-14	Statement from senior decision-maker	Letter to stakeholders	3
Ethics and integrity			
102-16	Values, principles, standards, and norms of behaviour	Mission and values The Code of Ethics	17 182
102-17	Mechanisms for advice and concerns about ethics	The Ethics and Sustainability Committee Compliance system for corruption and fraud prevention	176 178
Governance			
102-18	Governance structure	Company governance Risk management	176 178
102-20	Executive-level responsibility for economic, environmental, and social topics	Company governance Managing sustainability	176 181
102-21	Consulting stakeholders on economic, environmental and social topics	Hera's stakeholders Dialogue and consultation initiatives	6 193
102-22	Composition of the highest governance body and its committees	Company governance Managing sustainability Responsibilities in the social and environmental sphere	176 181 Website

102-23	Chair of the highest governance body	2021 Corporate Governance Report - Board of Directors - Executive Chairperson of the Board of Directors	19
102-24	Nominating and selecting the highest governance body	2020 Corporate Governance Report - Board of Directors - Appointment and replacement	12
102-26	Role of highest governance body in setting purpose, values, and strategy	How we do what we do Company governance Managing sustainability	20 176 181
102-30	Effectiveness of risk management processes	Risk management	177
102-32	Highest governance body's role in sustainability reporting	Methodological guide to the Report	4
102-33	Communicating critical concerns	The Ethics and Sustainability Committee Main activities and results achieved in 2021	176 176
102-34	Nature and total number of critical concerns	The Ethics and Sustainability Committee	176
102-37	Stakeholders' involvement in remuneration	Remuneration and incentives Report on remuneration policy and compensation paid (2021) - Governance model - Process of definition, approval and revision, if necessary, of the remuneration policy	245 12
Stakeholders' engagement			
102-40	List of stakeholder groups	Hera's stakeholders	6
102-41	Collective bargaining agreements	Remuneration and incentives	245
102-42	Identifying and selecting stakeholders	Hera's stakeholders Dialogue and consultation initiatives	6 193
102-43	Approach to stakeholder engagement	Hera's stakeholders Dialogue and consultation initiatives	6 193
102-44	Key topics and concerns raised	Hera's stakeholders Dialogue and consultation initiatives Relationships with the local community Relationships with the Public Administration	6 193 196 203
Reporting practice			
102-45	Entities included in the consolidated financial statements	The scope of reporting	4
102-46	Defining report content and topic Boundaries	The materiality analysis and definition of the contents	7
102-47	List of material topics	The materiality analysis and definition of the contents	8
102-48	Restatements of information	The reporting process	6
102-49	Changes in reporting	The materiality analysis and definition of the contents	8
102-50	Reporting period	Methodological guide to the Report	4
102-51	Date of most recent report	Methodological guide to the Report	4
102-52	Reporting cycle	Methodological guide to the Report	4
102-53	Contact point for questions regarding the report	The Management Review Committee and the work group	8
102-54	Claims of reporting in accordance with the GRI Standards	The reporting standards	5
102-55	GRI contents index	GRI contents reference table	289
102-56	External assurance	Auditing of the report Independent auditors' report	6 297
GRI 103: Management Approach 2016			
103-1	Explanation of the material topic and its Boundary	Breakdown of the information required by Italian Legislative Decree No. 254/2016 and relevant aspects	8
103-2	The management approach and its components	Sustainability and risk management The quality, safety, environmental and social responsibility management system Methods of management of material topics	176 182 340

103-3	Evaluation of the management approach	Sustainability and risk management The quality, safety, environmental and social responsibility management system Methods of management of material topics	176 182 340

ECONOMIC PERFORMANCE

GRI 201: Economic performance 2016 - Management approach disclosures [103-1; 103-2; 103-3]

103-1	Explanation of the material topic and its Boundary	Breakdown of the information required by Italian Legislative Decree No. 254/2016	8 340
103-3	The management approach and its components Evaluation of the management approach	and relevant aspects Methods of management of material topics	
201-1	Direct economic value generated and distributed	The economic value distributed to stakeholders	149
201-4	Financial assistance received from government	The production and allocation of value added	185

GRI 203: Indirect economic impacts 2016 – Management approach disclosures [103-1; 103-2; 103-3]

103-1	Explanation of the material topic and its Boundary	Breakdown of the information required by Italian Legislative Decree No. 254/2016	8 340
103-3	The management approach and its components Evaluation of the management approach	and relevant aspects Methods of management of material topics	
203-1	Infrastructure investments and services supported	“Shared value” investments Investments in innovation The investments	29 128 186
203-2	Significant indirect economic impacts	Focus on economic value distributed to suppliers Placement under supply contracts with social cooperatives	149 156

GRI 204: Procurement practices 2016 - Management approach disclosures [103-1; 103-2; 103-3]

103-1	Explanation of the material topic and its Boundary	Breakdown of the information required by Italian Legislative Decree No. 254/2016	8 340
103-3	The management approach and its components Evaluation of the management approach	and relevant aspects Methods of management of material topics	
204-1	Proportion of spending on local suppliers	Focus on economic value distributed to suppliers	150

GRI 205: Anti-corruption 2016 – Management approach disclosures [103-1; 103-2; 103-3]

103-1	Explanation of the material topic and its Boundary	Breakdown of the information required by Italian Legislative Decree No. 254/2016	8 340
103-3	The management approach and its components Evaluation of the management approach	and relevant aspects Methods of management of material topics	
205-1	Operations assessed for risks related to corruption	231 risk assessment activities	179
205-2	Communication and training on anti-corruption policies and procedures	Training initiatives	241
205-3	Episodes of corruption found and the actions taken	231 risk assessment activities Management and prevention of fraud	180 180

ENVIRONMENTAL PERFORMANCE

GRI 302: Energy 2016 - Management approach disclosures [103-1; 103-2; 103-3]

103-1	Explanation of the material topic and its Boundary	Breakdown of the information required by Italian Legislative Decree No. 254/2016	8 340
103-3	The management approach and its components Evaluation of the management approach	and relevant aspects Methods of management of material topics	
302-1	Energy consumption within the organisation	Primary energy consumption of the Hera Group	38
302-2	Energy consumption outside the organisation	Primary energy consumption of the Hera Group	40

302-3	Energy intensity	Primary energy consumption of the Hera Group	40
302-4	Reduction of energy consumption	Energy efficiency within the Hera Group	40
302-5	Reductions in energy requirements of products and services	District heating: an answer to air quality protection	116
	GB1. Public lighting points using LEDs (%)	Energy efficiency in public lighting	45
GRI 303: Water and Effluents 2018 – Management approach disclosures [103-1; 103-2; 103-3]			
103-1	Explanation of the material topic and its Boundary	Breakdown of the information required by Italian Legislative Decree No. 254/2016 and relevant aspects	8
103-2	The management approach and its components	Methods of management of material topics	340
103-3	Evaluation of the management approach		
303-1 (2018)	Interactions with water as a shared resource	The commitment to reduce the consumption of residential customers and businesses	101
		Water resources	102
		Resilient aqueduct and water source management	171
303-2 (2018)	Management of water discharge related impacts	Wastewater treatment quality	106
303-3 (2018)	Water withdrawal	Water resources	102
	GB2. Quality of treated water [%]	Wastewater treatment quality	106
	GB3. Urban areas >2000 inhabitant equivalents adjusted to wastewater purification regulations (% of inhabitant equivalents)	Wastewater treatment quality	106
GRI 305: Emissions 2016 - Management approach disclosures [103-1; 103-2; 103-3]			
103-1	Explanation of the material topic and its Boundary	Breakdown of the information required by Italian Legislative Decree No. 254/2016 and relevant aspects	8
103-2	The management approach and its components	Methods of management of material topics	340
103-3	Evaluation of the management approach		
305-1	Direct (Scope 1) GHG emissions	Total emissions of the Hera Group	64
305-2	Energy indirect (Scope 2) GHG emissions	Total emissions of the Hera Group	64
305-3	Other indirect (Scope 3) GHG emissions	Total emissions of the Hera Group	64
		Greenhouse gases: metrics and objectives	336
305-4	GHG emissions intensity	Carbon intensity indexes	66
305-5	Reduction of GHG emissions	Emissions avoided	68
305-7	Nitrogen oxides (NOX), sulphur oxides (SOX), and other significant emissions	Atmospheric emissions from waste-to-energy plants	111
		Atmospheric emissions generated by district heating	118
		Emissions of the Imola cogeneration plant	118
	GB4. GHG emissions avoided by selling recycled plastic and with district heating [thousands of tonnes of CO ₂ e avoided]	Aliplast measures the carbon footprint of its products	303
		District heating: an answer to air quality protection	116
	GB5. Atmospheric emissions of the waste-to-energy plants with respect to the regulatory limits [%]	Atmospheric emissions from waste-to-energy plants	111
	GB6. Total direct (scope 1) and indirect (scope 2 + scope 3 from sale of electricity and gas downstream) emissions	Greenhouse gas emissions and science-based reduction targets	112

GRI 306: Waste 2020 - Management approach disclosures [103-1; 103-2; 103-3]

103-1	Explanation of the material topic and its Boundary	Breakdown of the information required by Italian Legislative Decree No. 254/2016	8
103-2	The management approach and its components	and relevant aspects	340
103-3	Evaluation of the management approach	Methods of management of material topics	
306-1	Waste production and significant impacts related to waste	The circular approach within the Hera Group	89-91
306-2	Management of significant impacts related to waste	The circular approach within the Hera Group	90-91
306-3	Waste produced	The circular approach within the Hera Group	89
306-4	Waste not intended for disposal	The circular approach within the Hera Group	90
306-5	Waste intended for disposal	The circular approach within the Hera Group	90
	GB7. Separate waste collection [%]	Separate waste collection	75
	GB8. Waste sent for recovery out of total waste treated in the selection plants [%]	The material and energy recovery in Herambiente's selection plants	85
	GB9. Quantity of plastic recycled by Aliplast	Hera Group's commitment to the new plastics economy	223

GRI 307: Environmental Compliance 2016 - Management approach disclosures [103-1; 103-2; 103-3]

103-1	Explanation of the material topic and its Boundary	Breakdown of the information required by Italian Legislative Decree No. 254/2016	8
103-2	The management approach and its components	and relevant aspects	340
103-3	Evaluation of the management approach	Methods of management of material topics	
307-1	Non-compliance with environmental laws and regulations	Pending legal proceedings The relationship with the Italian regulatory and supervisory authorities Litigation with customers Litigation with suppliers	201 203 232 271

GRI 308: Supplier environmental assessments of 2016 - Management approach disclosures [103-1; 103-2; 103-3]

103-1	Explanation of the material topic and its Boundary	Breakdown of the information required by Italian Legislative Decree No. 254/2016	8
103-2	The management approach and its components	and relevant aspects	340
103-3	Evaluation of the management approach	Methods of management of material topics	
308-1	New suppliers that were evaluated using environmental criteria	The supplier qualification procedure	261

SOCIAL PERFORMANCE

GRI 401: Employment - Management approach disclosures [103-1; 103-2; 103-3]

103-1	Explanation of the material topic and its Boundary	Breakdown of the information required by Italian Legislative Decree No. 254/2016	8
103-2	The management approach and its components	and relevant aspects	340
103-3	Evaluation of the management approach	Methods of management of material topics	
401-1	New employee hires and employee turnover	Stable employment and turnover	158
401-3	Parental leave	Diversity and inclusion	166

GRI 403: Occupational health and safety 2018 - Management approach disclosures [103-1; 103-2; 103-3]

103-1	Explanation of the material topic and its Boundary	Breakdown of the information required by Italian Legislative Decree No. 254/2016	8
103-2	The management approach and its components	and relevant aspects	340
103-3	Evaluation of the management approach	Methods of management of material topics	

Sustainable strategy and Shared value	Pursuing carbon neutrality	Regenerating resources and closing the loop	Enabling resilience and innovating
Governance and creation of value	Customers	People	Suppliers

403-1	Occupational health and safety management system	The quality, safety, environmental and social responsibility management system	182
403-2	Hazard identification, risk assessment and incident investigation	Health and safety	248
403-3	Occupational health services	Health and safety	248
403-4	Worker participation, consultation, and communication regarding occupational health and safety	Health and safety	254
403-5	Worker training on occupational health and safety	Training initiatives Health and safety	240 253
403-6	Promotion of worker health	Welfare	247-248
403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	Supplier assessment and checking	263
403-8	Workers covered by an occupational health and safety management system	The quality, safety, environmental and social responsibility management system Hera's commitment to quality, safety, environment and social responsibility certification	182 183
403-9	Work injuries	The monitoring of work accidents at suppliers	271
GRI 404: Training and Education 2016 - Management approach disclosures [103-1; 103-2; 103-3]			
103-1	Explanation of the material topic and its Boundary	Breakdown of the information required by Italian Legislative Decree No. 254/2016 and relevant aspects	8
103-2	The management approach and its components	Methods of management of material topics	340
103-3	Evaluation of the management approach		
404-1	Average hours of training per year per employee	Training initiatives	240
404-2	Programmes for updating employee skills and transition assistance programmes	Training initiatives Scuola dei Mestieri and the knowledge management system HerAcademy: Hera Group's Corporate University	240 242 242
404-3	Percentage of employees receiving regular performance and career development reviews	The development process	243
GRI 405: Diversity and Equal Opportunity 2016 - Management approach disclosures [103-1; 103-2; 103-3]			
103-1	Explanation of the material topic and its Boundary	Breakdown of the information required by Italian Legislative Decree No. 254/2016 and relevant aspects	8
103-2	The management approach and its components	Methods of management of material topics	340
103-3	Evaluation of the management approach		
405-1	Diversity of governance bodies and employees	Diversity and inclusion Company governance	164 176
405-2	Ratio of basic salary and remuneration of women to men	Diversity and inclusion	165
GRI 413: Local Communities 2016 - Management approach disclosures [103-1; 103-2; 103-3]			
103-1	Explanation of the material topic and its Boundary	Breakdown of the information required by Italian Legislative Decree No. 254/2016 and relevant aspects	8
103-2	The management approach and its components	Methods of management of material topics	340
103-3	Evaluation of the management approach		
413-1	Operations with local community engagement, impact assessments, and development programs	HeraLAB, a tool for listening to the local communities	196

GRI 414: Supplier Social Assessment 2016 – Management approach disclosures [103-1; 103-2; 103-3]

103-1	Explanation of the material topic	Breakdown of the information required by	8
103-2	and its Boundary	Italian Legislative Decree No. 254/2016	340
103-3	The management approach and its components	and relevant aspects Methods of management of material topics	
	Evaluation of the management approach		
414-1	New suppliers that were evaluated using social criteria	The supplier qualification procedure	261

GRI 415: Public policy 2016 – Management approach disclosures [103-1; 103-2; 103-3]

103-1	Explanation of the material topic	Breakdown of the information required by	8
103-2	and its Boundary	Italian Legislative Decree No. 254/2016	340
103-3	The management approach and its components	and relevant aspects Methods of management of material topics	
	Evaluation of the management approach		
415-1	Political contributions	Focus on distributed economic value with donations and sponsorships	198

GRI 416: Customer Health and Safety 2016 – Management approach disclosures [103-1; 103-2; 103-3]

103-1	Explanation of the material topic	Breakdown of the information required by	8
103-2	and its Boundary	Italian Legislative Decree No. 254/2016	340
103-3	The management approach and its components	and relevant aspects Methods of management of material topics	
	Evaluation of the management approach		
416-1	Assessment of the health and safety impacts of product and service categories	Quality of drinking water Safety and continuity of the service	103 226
			Health and safety impact assessments are carried out for the integrated water service and the gas distribution service
416-2	Incidents of non-compliance concerning the health and safety of products and services	Quality of drinking water	103
			The topic of non-compliance with voluntary regulations and codes regarding the impacts on health and safety of services during their life cycle is applicable to the integrated water service only
	GB10. Electronic gas meters installed (number)	Initiatives for improving the quality of readings	224
	GB11. Average number of power outages per customer [number]	Electricity distribution service safety and continuity	226

GRI 417: Marketing and Labelling 2016 – Management approach disclosures [103-1; 103-2; 103-3]

103-1	Explanation of the material topic	Breakdown of the information required by	8
103-2	and its Boundary	Italian Legislative Decree No. 254/2016	340
103-3	The management approach and its components	and relevant aspects Methods of management of material topics	
	Evaluation of the management approach		
417-1	Requirements for product and service information and labelling	Quality of drinking water The gas bill The electricity bill	103 213 215

417-2	Episodes of non-compliance in information and labelling of products and services	The relationship with the Italian regulatory and supervisory authorities	210
417-3	Cases of non-compliance relating to marketing communications	The relationship with the Italian regulatory and supervisory authorities	201
GRI 418: Customer privacy 2016 – Management approach disclosures [103-1; 103-2; 103-3]			
103-1	Explanation of the material topic and its Boundary	Breakdown of the information required by Italian Legislative Decree No. 254/2016 and relevant aspects	8
103-2	The management approach and its components	Methods of management of material topics	340
103-3	Evaluation of the management approach		
418-1	Proven complaints relating to breaches of customer privacy and the loss of customer data	IT security	147
GRI 419: Socio-economic Compliance 2016 – Management approach disclosures [103-1; 103-2; 103-3]			
103-1	Explanation of the material topic and its Boundary	Breakdown of the information required by Italian Legislative Decree No. 254/2016 and relevant aspects	8
103-2	The management approach and its components	Methods of management of material topics	340
103-3	Evaluation of the management approach		
419-1	Non-compliance with laws and regulations governing social and economic issues	Pending legal proceedings	201
		The relationship with the Italian regulatory and supervisory authorities	203
		Sanctions imposed on the Group	205
		Litigation with customers	232
		Industrial relations	257
		Litigation with suppliers	271

Independent auditors' report

[102-56]

Independent auditors' report on the consolidated non-financial disclosure in accordance with article 3, par. 10 of Legislative Decree 254/2016 and with article 5 of CONSOB Regulation adopted with Resolution n. 20267 of January 18, 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 2021, in accordance with article 4 of the Decree and approved by the Board of Directors on 23 March 2022 (hereinafter the "NFD"). Our limited assurance engagement does not cover the information included in the paragraph *Information concerning environmentally sustainable economic activities - Regulation (EU) 2020/852* of the NFD, that are required by article 8 of the European Regulation 2020/852.

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 in order 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

We are responsible for expressing, on the basis of 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 in order 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, in order 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., HERAtch 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 in particular 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, in order to assess, on a sample basis, the proper consolidation of the information.
- for the following companies and sites, which we selected on the basis of 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., HERAtch 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 2021 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 refer to the information included in the paragraph *Information concerning environmentally sustainable economic activities - Regulation (EU) 2020/852* of the NFD, that are required by article 8 of the European Regulation 2020/852.

Bologna, 5 April 2022

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.

Annexes

CASE STUDY

Energy - Pursuing carbon neutrality

Promotion of energy efficiency

Diario dei consumi (Consumption Diary)

The Diario dei consumi (Consumption Diary) is a report based on the principles of **behavioural economics**: all free-market customers can request free activation of the digital service, which **sends personalised** analyses allowing them to compare their consumption with the previous year or with customers with similar characteristics in terms of size and type of house, number of inhabitants, supply location, and energy use. The report is currently **active on over 700 electricity and gas supply points** aiming to make customers constantly **aware of their consumption habits** and the potential effects of optimising them, in order to help them **save energy and money**.

During 2021, a prize competition was launched to **reward customers** who were able to save electricity compared to the previous year, in order to encourage them to periodically check their savings and reduce any waste accordingly.

The service is already in place **for electricity, gas, and district heating**. In 2021, we continued to conduct research together with the Milan Polytechnic University, a unique effort in Italy, extending the report to a sample of **water service** households and to a sample of citizens under **quantity-based charging** in Ferrara to identify the effects of the reports on their consumption behaviour and any synergies that may arise from information pressure on several areas at the same time. Following the monitoring of at least one year of service, the results of this research have shown a positive impact in terms of water savings and a positive and synergistic effect of the water consumption report as well as electricity and gas consumption.

In addition, the Hera Group has presented to the National Energy Services Manager some energy-saving initiatives based on behavioural measures, and the Diario dei consumi (Consumption Diary) is among them, **recognising a saving of around 1,500 toe in total for the first batch of customers**.

How does the initiative contribute to responsible digital transformation? The benefits we obtained in the Corporate digital responsibility dimensions (see the dedicated section "Corporate digital responsibility")

Social		A customised service that helps customers understand the environmental and economic effects of their behaviour and provides practical advice for reducing waste. The report can be consulted from various Hera's online applications (Online Services and the MyHera app).
Economic		Quantification of savings achieved by reducing the waste generated by implementing more sustainable consumption patterns.
Environmental		Creation of a digital service aimed at encouraging more sustainable behaviour, with less waste and greater customer awareness of their consumption patterns.

The Diario dei consumi (Consumption Diary) contributes to **targets 7.3, 11.3, 11.6, and 12.8 of the UN's 2030 Agenda**, as well as - thanks to the involvement of customers and citizens - to **target 17.17**.

Energy transition and renewables

Hydrogen in the gas distribution network in Modena

In 2021, experimental activities to **inject a mixture of hydrogen and methane in gas distribution networks** have started.

The project aims to explore the possibilities of decarbonising domestic and urban gas use by injecting hydrogen (which has no carbon content) into urban distribution networks. This analysis included all ancillary and preparatory activities for the introduction of hydrogen into the distribution network itself:

- the impacts on the different compounds used for the odourisation of the distributed gas (tetrahydrothiophene and mercaptan mixtures);
- any changes (even transient) in the colour of the flame and combustion;
- the presence of gas stratification in the pipeline and its significance (e.g. vertical risers);
- the behaviour and accuracy of residential gas meters;
- the behaviour of equipment dedicated to programmed leak detection, and more generally the impacts on operational activities related to city gas distribution.

This first experience will be carried out in an urban area with 31 users located in Via Terracini in **Castelfranco Emilia**, in close contact with the Municipal Administration, the Fire Brigade and the users concerned. Moreover, the development was carried out in coordination with Snam - which provided a

technical contribution to the design of the field tests - and with the major companies active in the gas distribution and use chains, whose participation was coordinated by their respective trade association (Anima - Confindustria). Several national bodies active in the field of gas distribution and quality also participated in the project.

The final objective of the Castelfranco Emilia project is to create a small-scale experience to **refine the know-how and methodologies** for the management and control of permanent H₂-GN mixtures in urban distribution networks, as well as to **foster a rapid development of ministerial regulations** and standards on the transport and distribution of such mixtures.

In line with the PNRR and the draft Italian Hydrogen Strategy, an update of the Ministerial Decree on the "Technical regulation of natural gas quality" is expected soon to explicitly allow the transport and distribution of natural gas with a maximum hydrogen content of 2%. In fact, CEN work is highlighting a technical invariance to natural gas of H₂-NG mixtures of at least up to 10% hydrogen even for end uses.

If the technical regulations are accompanied by the right economic conditions, the next step could therefore be the permanent **injection of low percentages of hydrogen into the urban environment**, making it possible to directly and rapidly initiate the decarbonisation of urban heating on a large scale, without having to wait for the upgrading of systems inside buildings, therefore regardless of the sensitivity and financial resources of individual citizens.

Hydrogen in the gas distribution network in Modena contributes to the achievement of **targets 7.2, 9.1, 9.2, 9.4 and 11.6 of the UN 2030 Agenda**.

Climate change mitigation

Energy Solutions for the Climate: Hera's commitment to climate change

Since August, "**Energy Solutions for the Climate**" has been available online and at customer help desks. It is the thematic report illustrating the Hera Group's strategy and commitment to the **challenge of climate change** and the main actions aimed at pursuing carbon neutrality. The report was created in a highly topical context, confirmed by the issues discussed at the G20 and COP26 in 2021, and is in fact the evolution of the previous "Value for Energy" report, with a more decisive orientation towards the strategy to combat climate change. For the Hera Group, this commitment takes the form of pursuing carbon neutrality, as set out in its own **strategy oriented towards the creation of shared value**, but also in the **amendment to its articles of association** made in 2021 precisely in this direction.

In addition to a description of Hera's **strategies** and **commitment** to tackling climate change, the report also includes a **timeline** of all the steps taken in this area to date, a **glossary** of technical terms used in the report and, finally, a set of **useful tips for customers and citizens** to help reduce the indirect greenhouse gas emissions that the Group produces through the sale of its services.

The strategic lines and contents reported in the "Energy Solutions for the Climate" report contribute to the achievement of **targets 11.6, 12.8 and 13.2 of the UN 2030 Agenda**.

Aliplast measures the carbon footprint of its products

To make available information on the carbon footprint of some products, Aliplast has been calculating the carbon footprint of five types of products since 2018: PE granules, PE films, PET granules, PET plates, and PET scales.

Aliplast commissioned this study to understand the **environmental performance of these products in relation to global warming**. Therefore, the study quantified the greenhouse gas emission per functional unit of product (set as one kilogram), to be able to **identify** the most environmentally critical phases of their life cycles (LCA, life cycle assessment) and **act** to reduce their environmental impact. The study used the European EF (Environmental Footprint) 3.0 method, developed by the Joint Research Centre for the PEF initiative (European Product Environmental Footprint). One of the outcomes analysed by the LCA is the amount of CO₂ equivalent, whose calculation method is the global warming potential GWP-100 of the IPCC 2013, a part of EF v3.0.

The project involved **analysing the greenhouse gas emissions of Aliplast products** and **comparing them with those of the corresponding virgin products**, expressed in kg of CO₂ equivalent. The analysis showed that in 2021, the production of more than 100 thousand tonnes including PE Granules, PE Films, PET Granules and regenerated PET plate, **avoided the production of more than 170 thousand tonnes of CO₂**, comparable to more than 400 thousand barrels of oil. The CO₂ savings obtained thanks to the contribution of suppliers and customers who believe in Aliplast's recycled products is equivalent to a reduction of more than 100 thousand cars in a year, equal to those of an average Italian city.

Aliplast's business contributes to achieving **targets 11.6, 12.2, 12.4, 12.5, and 13.2 of the UN's 2030 Agenda**.

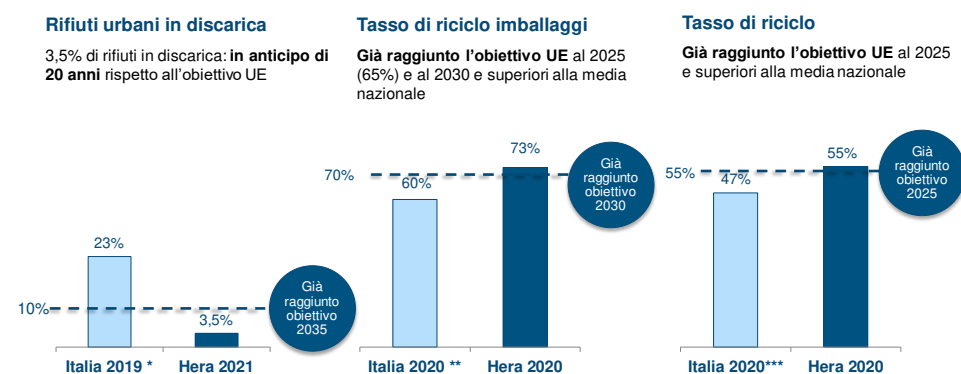
Environment - Regenerating resources and closing the loop

Transition towards a circular economy

European circular economy package: Hera leads the way

Hera confirms its goals on packaging recycling and landfill reduction, showing that it is **ahead of both European targets for urban waste**.

In the Group's service area, in fact, it has achieved all 3 main European targets: the one for landfill (3.5% in 2021 compared to a target of no more than 10% in 2035), the one for packaging (73% in 2020 compared to a target of 65% in 2025 and 70% in 2030) and the one for the overall recycling rate (52% in 2020 compared to a target of 55% in 2025, 60% in 2030 and 65% in 2035). The data for these last two targets will be updated to 2021 in the coming months and as usual published in the "Tracking Waste" report.



* Fonte: Eurostat

** Fonte: Conai, Programma prevenzione rifiuti 2019. I dati si riferiscono ai soli imballaggi da rifiuti urbani.

*** Fonte: Ispra, Rapporto rifiuti urbani 2019, valore calcolato con il metodo 4

Achieving and exceeding the European targets on municipal waste contribute to achieving **targets 12.2, 12.4, and 12.5 of the UN's 2030 Agenda**. The publishing of the "Tracking waste" report contributes to achieving **target 12.8 of the UN's 2030 Agenda**.

Hera measures circularity with Circulytics

In 2019, the Ellen MacArthur Foundation, together with 13 strategic partners and 30 members of its network, including Hera, developed a digital tool for measuring circular economy performance, called **Circulytics V.1**. The tool supports a company's transition towards the circular economy by going beyond simply assessing products and material flows. It uses the broadest set of qualitative and quantitative indicators available divided into two categories: **Enablers**, the 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**, elements helpful for measuring circular inputs and outputs that provide an overview of current performance (such as flows of materials and products used, services performed, assets owned and energy used). The tool supports decision-making and the adoption of circular economy principles in business strategies, demonstrates strengths and highlights areas for improvement, provides transparency to investors and customers on circularity projects, to generate value in a multi-stakeholder perspective.

In August 2021, the Hera Group, with the company Hera Luce, sent its submission to **Circulytics V.2** and obtained a bespoke company scorecard containing the assessment of its circularity score. The assessment highlighted areas where Hera Luce has improved and others where improvement is expected.

The areas in which Hera Luce has improved include:

- **Strategy and planning:** deriving from Hera Luce's contribution to the achievement of the Group's objectives related to CSV EBITDA and to the share of purchases made with circularity criteria.
- **External Engagement:** arising from membership of new networks related to the circular economy.
- **Products and materials:** resulting from an increase in products (lighting systems) designed with circular economy principles (from 60% to 70%).
- **Energy:** deriving from the increase in the share of renewable energy used by Hera Luce to power public lighting systems (from 49% to 57%).

While the areas for which improvement is expected are:

- **Product and materials:** it will be necessary to continue research into alternatives to the use of concrete in the construction of lighting systems.
- **Plant, property and equipment assets:** it will be necessary to work on the definition of initiatives relating to the end-of-life management of certain categories of ancillary assets.



On an overall level, the "B" score obtained by Hera Luce (corresponding to the A- score of the old scoring model) emphasises the commitment put in place to enable the company's transition to a circular economy model, a commitment further supported by the group-wide definition of circular economy activities, initiatives and objectives with a long-term strategic perspective.

The Circulytics tool contributes to achieving targets **12.2, 12.4, 12.5, and 17.16 of the UN's 2030 Agenda**.

Hera Group's commitment to the new plastics economy

Hera is one of the 250 companies worldwide, 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 has the ultimate aim of tackling the problem of plastic pollution at the 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. For this reason, 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 retailers, recycling companies, but also governments and investors.

Hera Group is committed to:

- increase by 2025 the amount of plastic collected in the municipalities served, by 30%;
- increase by 50% the amount of plastic sorted and recycled by the Group's plants;
- increase the plastic recycled by Aliplast by 70%.

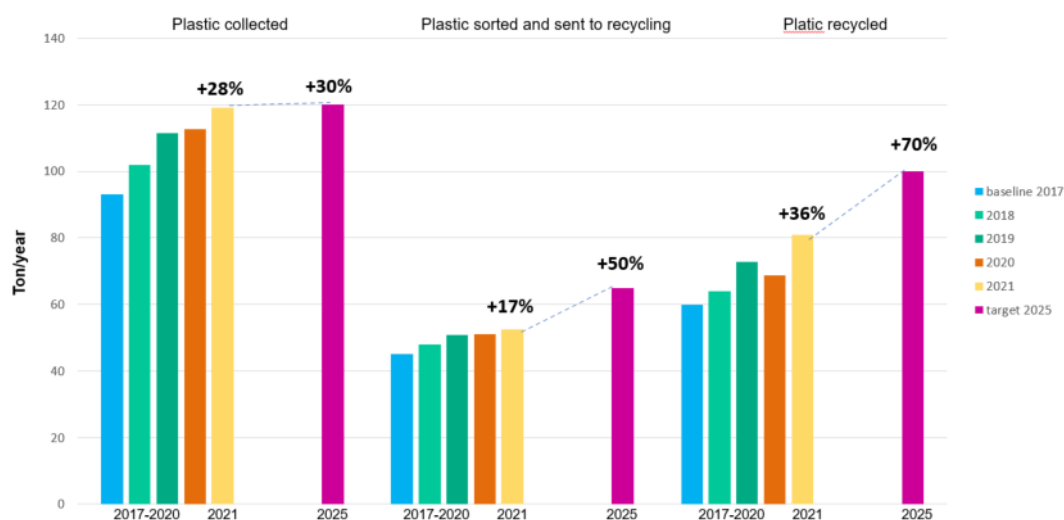
compared to 2017.

To date, the Global Commitment has collected more than 500 signatures worldwide, including governments and public administrations on five continents, companies active at different stages of the plastic packaging value chain, institutions including National Geographic, WWF, the World Economic Forum, the Consumer Goods Forum, the International Union for Conservation of Nature (IUCN), universities and research organisations, and financial institutions.

The third Progress report was published in November 2021, and contained data from 130 companies (98% of those eligible for reporting, depending on the date they became members) and 18 governments/administrations (of the 20 eligible for reporting). The momentum created around the issue of the circular plastic economy is unprecedented and the initial progress made by the signatories is noteworthy. Despite this, efforts to eliminate the problem of plastic waste pollution at source must advance towards a higher level of ambition. The data reported on that occasion by the Hera Group was for 2020.

New Plastics Economy Global Commitment

Progress report 2021



The data of the Hera Group at the end of 2021 show **gradual and positive progress** towards the objectives, showing that **we are going in the right direction**. Achieving the targets will be possible only by continuing the efforts on the innovation front and by leveraging the Group's industrial capacity, but also requires the fundamental contribution of citizens, in the framework of a logic geared towards – also on this front – encouraging reuse and recycling, thus extending as much as possible the average life of products and plastic materials.

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 diffusion of recycled plastics and achieve the European target of ten million tonnes of recycled plastic used for new products by 2025.

Achieving the objectives on the plastics supply chain contributes to achieving **targets 12.2, 12.4, and 12.5 of the UN's 2030 Agenda**.

Recycled plastic bags with Aliplast

In November 2019, Hera and Aliplast launched a circular economy pilot project, to increase the virtuous reuse of reels made of post-consumer recycled plastic to produce bags for separate waste collection. The ultimate goal was to close the loop of the life cycle of products, increasing recycling and reuse, to increase economic sustainability and reduce the environmental impact as much as possible.

In the course of 2021, the actual industrialisation of the process will begin, involving all the areas managed by the Hera Group (including the Triveneto and Marche areas). The main results were:

- production of 1,528 tonnes of coils (+22% compared to 2020) divided respectively: Hera 1,451 tonnes, AcegasApsAmga 64 tonnes and Marche Multiservizi 13 tonnes;
- about 30 million recycled plastic bags were produced.

Going beyond mere numbers, the project has achieved other important positive results: the quality of the bags has improved significantly as Aliplast itself ensures that they meet the technical requirements. In addition, the initiative eliminated the problem of disputes with third-party suppliers who did not comply with product specifications and the service offered to Hera users was improved, resulting in a positive return on image for the Group.

The use of recycled plastic bags for waste collection contributes to achieving **targets 9.4, 11.6, 12.2, 12.4, and 12.5 of the UN's 2030 Agenda**.

Aliplast and NextChem: a state-of-the-art plastic recycling plant

In October 2020 Maire Tecnimont and Hera Group announced that Aliplast and NextChem, a Maire Tecnimont Group's company for the development of energy transition and circular economy projects and technologies signed a strategic agreement. Under the terms of the agreement, Nextchem will provide technology, Engineering, Procurement and Construction services to build a plant that will use its proprietary innovative MyReplast™ technology to upcycle plastic waste into high value-added polymers.

The synergy of these two major players' skills and resources will result in a unique kind of plant in Europe. Built on a site owned by the Hera Group, this plant will leverage the innovative MyReplast™ technology developed by NextChem, which makes it possible to produce high-purity, high-quality recycled polymers with high-level chemical/physical and mechanical performance. The aim of the plant is therefore to

process post-consumer plastic waste into customised recycled products capable of meeting customer requirements and the most stringent quality market standards, with features and properties on par with virgin polymers from fossil sources. All this will create cutting-edge plant engineering experience.

Once fully operational, the new plant will be capable of producing up to 30,000 tonnes of polymer per year. The plant will ensure high security standards and be equipped with innovative features such as maximum process automation and high digitalisation for data analytics, thereby allowing it to maximise energy efficiency, delivering further environmental benefits.

In 2021, the design of the plant began, leading to the planned start-up at the end of 2024.

The state-of-the-art plant described above contributes to achieving **targets 9.4, 11.6, 12.2, 12.4, and 12.5 of the UN's 2030 Agenda**, as well as – thanks to the partnership developed – contributing to achieving **target 17.17**.

State-of-the-art carbon fibre recycling plant

In 2021, an agreement was reached to build the first Italian plant, and one of the first in Europe, using 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 landfill or energy recovery. The challenge launched with the plant project is groundbreaking, because it aims to recover carbon through an innovative pyrogasification process while maintaining the lightness and strength of the fibre, a material that can potentially be recycled countless times.

The advantages of this new technological solution are obvious, with a 70% saving on the environmental impact associated with the life cycle (LCA - Life Cycle Assessment) compared to traditional methods of treating and disposing of carbon fibres. It will also make it possible to obtain around 160 tonnes of recycled carbon fibre with a 90% energy saving compared to the production of virgin fibres and a reduction in CO₂ emissions into the atmosphere of around 7,000 tonnes per year.

The plant will be built in Imola and will operate through an articulated 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, wind energy, to name just a few, but more generally from a market that is determining a 9% annual increase in the demand for carbon fibre, which today is almost entirely virgin raw material.

Construction is expected to start in 2022 and it will be operational in 2023. It will have a maximum total treatment capacity (on two lines) of 320 tonnes per year and will operate for approximately 8,000 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 described above contributes to achieving **targets 9.1, 9.2, 9.4, 11.6, 12.2, 12.4, and 12.5 of the UN's 2030 Agenda**, as well as – thanks to the partnership developed – contributing to achieving **target 17.17**.

Hera and Ducati together for industrial waste management

For Ducati, environmental sustainability is an important aspect that cuts across all areas of the company. Confirming its commitment to the future, the Bologna-based motorbike manufacturer has defined the concrete objectives it wants to achieve in this field in its Environmental Mission; these include reducing the environmental impact of its activities to a minimum, paying particular attention to the efficient use of resources in the production cycle and focusing on activities that have a positive effect on climate change.

Among the various activities put in place to achieve this important goal is the action plan linked to reducing the environmental impact generated by waste; Ducati is collaborating with Herambiente Servizi Industriali (Hasi) to develop it. For Ducati, Hasi provides a 360° personalised service with a strong focus on recycling and recovery.

The results of the collaboration with Hasi are already evident: in the first six months of 2021, the percentage of waste produced by Ducati and sent for recovery reached approximately 98%, with an increase of 3% compared to the same period last year.

The agreement between Hasi and Ducati contributes to achieving **targets 9.2, 11.6, 12.2, 12.4, and 12.5 of the UN's 2030 Agenda**, as well as – thanks to the partnership – contributing to achieving **target 17.17**.

Hera and Eni: a partnership to transform cooking oil into biofuel

As part of the Group's transition towards a circular economy, the collection of used oils has increased its visibility and importance, and has also brought about significant economic returns. The service for **roadside collection of vegetable oil** was launched in 2018, with the use of new attractive bins specially designed to contain residual domestic cooking oil.

The results of this collection will feed into a virtuous **circular economy project**. In fact, under a framework agreement signed with Eni, all discarded cooking oil collected by Hera, once processed in affiliated plants, is sent to Eni's Bio-refinery in Porto Marghera (VE) where it is transformed into **biodiesel** fuel. Under this agreement, Eni supplies Hera with approximately 600,000 litres of biofuel per year, which is used to power 35 waste compactors in the areas served. The compactors bear images and logos on their sides that highlight this initiative.

The total number of containers for the street collection of discarded vegetable oils in the Hera Spa basin amounts to more than 800 units, distributed in 120 municipalities, serving a population of about 2.4 million inhabitants.

In 2021, the results achieved by the collection service reached 1,173 tonnes, a further improvement on previous years. During the same year, the flow collected in the province of Pesaro by the Marche Multiservizi Group company also entered the circuit. In 2021, 128 tonnes of discarded vegetable oils were collected in this area, adding to the amount collected in the historical basin of Hera Spa, reaching a total volume of 1,301 tonnes of oils collected.

In March 2022, the flow of vegetable oil collected in the provinces of Padua and Trieste, by the AcegasApsAmga Group company, is also expected to be sent to the Eni biorefinery with an estimated annual quantity of approximately 150 tonnes.

In addition to the flow of oils from urban collections, in 2021 Hera activated a first flow of vegetable oils collection from commercial users in the area, such as canteens and restaurants. The first contract for the purchase of vegetable oils produced by catering businesses was signed with the catering group CAMST, which joined the project involving 62 catering points of its chain. In addition, Hera has signed other purchase contracts with 25 restaurants/hotels on the Romagna coast in cooperation with some trade associations such as Federalberghi di Rimini.

The extension of the project to this stream has allowed an additional 25 tonnes of vegetable oils to be used for biofuel production at the ENI bio-refinery in Porto Marghera.

It is expected that the quantity collected in 2021 through this circuit may be increased during the year 2022, due to the various commercial agreements being developed.

Hera's partnership with Eni contributes to achieving **targets 9.4, 11.6, 12.2, 12.4, and 12.5 of the UN's 2030 Agenda**, as well as – thanks to the partnership – contributing to achieving **target 17.17**.

Five important partnerships signed to "close the circle"

In 2021 the **Bologna Airport** also joined the **Hera Group's** circular economy partners, signing an agreement on 15 June to implement environmental sustainability initiatives. Over a three-year period, the partnership aims to optimise the choice of materials and resources used within the airport and to identify increasingly sustainable management solutions, reducing the amount of waste produced and increasing the recycling of end-of-life materials. The first projects were launched in 2021, including the Rivinding project to recycle cups from beverage vending machines at the airport. As the first airport in Italy to activate this initiative, Marconi estimates that 300,000 polystyrene cups per year will be recycled (corresponding to about 1 tonne). The final objective of the project is the transformation of the used glass into a new glass, effectively "closing the circle". At the same time, the separate collection of plastic bottles (PET) was promoted, with the placement of new dedicated containers.

One the initiatives to be implemented in the future is the collection of vegetable oils at the intercompany restaurant and at the airport refreshment points, to be used, based on a partnership signed by Hera with Eni, for the production of biodiesel at Eni's biorefinery in Porto Marghera.

There are also plans to measure the organic waste collected at the airport and destined for the production of biomethane and compost at the Hera plant in S. Agata Bolognese, in order to transparently report the virtuous effects of the concrete combination of circular economy and sustainable mobility. Also on the topic of mobility, a study is being carried out into the creation of new electric vehicle recharging points, available to the public and the airport community.

Finally, Hera provides constant support on how to separate and treat waste produced at the airport.

The partnership with **McDonald's** also continues; it was launched in January 2020 with the aim of **enhancing the separate collection of waste** produced at 30 of the brand's restaurants located in 14 municipalities served in Emilia-Romagna.

In the first two years of cooperation, McDonald's and Hera have developed a new waste container, designed to help customers to better separate what is left on the tray at the end of the meal, thanks to a customised co-branding between the parties, the use of the colours of the municipal waste collection that customers are already accustomed to and the display of the Rifiutologo [Wasteologist] logo, the Hera app that allows you to check comfortably from your smartphone, even by scanning the bar code of the packaging, where to throw any type of waste.

To support McDonald's in its journey towards environmental sustainability, Hera organised an **engagement and information event for the staff responsible for the 30 restaurants** involved in the partnership, on the themes of the circular economy and correct waste separation and management methods. This allowed McDonald's to train all restaurant staff in turn, implementing a "cascade" training process.

In 2021, Hera also made itself available to collaborate in a number of sustainability initiatives launched by McDonald's: the third stage of a sustainability roadshow was held in the Via Togliatti store in Bologna, aimed at spreading the word about the virtuous path taken by McDonald's, also thanks to the collaboration of Hera; the CEO of Hera, Stefano Venier, then gave an interview on the subject of combating littering in an episode of the Dossier "La via del riciclo" ["The Road to Recycling"] published on Repubblica's Green&Blue portal. In 2022, the process of measuring the waste produced in the 30 stores will be completed, to assess the increases in separate waste collection resulting from the training, information and awareness-raising activities for McDonald's staff and customers on the correct waste disposal methods envisaged by the partnership.

The project launched in 2019 by **Herambiente and Coprob**, the cooperative of sugar beet producers based in Minerbio (Bo), the only sugar producer in Italy, continues. Herambiente's six quality-certified plants in Emilia-Romagna provided compost for the fertilisation plans of member farms, to restore the organic content that is essential for full soil fertility. The flows managed during 2021 increased to a total of 8,168 tonnes, an increase of almost double (+98%) compared to 2020. In 2022 it will be possible to take further advantage of the availability, albeit limited, of compost allowed in organic farming (requirement obtained by registration with MIPAAF - SIAN from 15/01/2022) by increasing the range of interest to Coprob members operating in organic farming.

The agreement among production sectors that are diverse but consistently representative of a concrete experience of circular economy, offers a complete response to environmental and production issues both in Herambiente plants, with the production of biogas and biomethane, and in the agricultural sector, confirming the production levels of crops, the quality of agricultural production, and a significant improvement of the soil from a biological, chemical and physical point of view.

The partnership with **Camst**, which began in September 2020, to collaborate on **circular economy and environmental** sustainability projects through innovative Business to Community to Consumers approaches, also continued in 2021. On the subject of **sustainable mobility**, Hera has activated the collection of discarded vegetable oils produced at 62 Camst catering outlets, located in the provinces of Modena and Bologna, which will enable around 20 tonnes of oil to be recovered by 2021 and sent in full for the production of biodiesel at the ENI biorefinery in Porto Marghera. In addition, organic waste, collected by Hera and destined for the Group's own plant in Sant'Agata Bolognese, contributes to the production of biomethane. In order to quantify the company's contribution to the production of biomethane and the related environmental impacts, which are lower than the production of fossil fuel, in 2021 Hera measured the production of organic waste in some Camst catering outlets identified for the pilot project.

In the second half of 2020, we started to define an ambitious project to regenerate end-of-life household appliances together with **Dismeco**, which operates in the WEEE recovery sector with a plant located in Marzabotto in the province of Bologna. The project aims to encourage disposal of used washing machines at drop-off points and select them to test, on the ones in best condition, a maintenance and repair process that can make them suitable for use again. The project, which involves collaboration with associations of manufacturers of electrical and electronic equipment (EEE), with associations of installers and repairers, with associations of large-scale retail trade and other interested parties, will also carry out studies and research to determine whether and under what conditions it is actually possible to envisage sales of washing machines (and in general of household appliances) regenerated this way. The project will also be a great opportunity for professional training and development and an opportunity to create potential new jobs to support and develop the Bolognese mountains and their communities. The project became operational during 2021 with the activation of transfer flows from the first 15 drop-off points in the area, to which a further 15 drop-off points already identified at the end of 2021 will be added at the beginning of 2022.

The projects described above contribute to achieving **targets 12.2, 12.4, and 12.5 of the UN's 2030 Agenda**, as well as – thanks to the partnerships developed – contributing to achieving **target 17.17**.

Hera Business Solution, Hera's new multi-service proposal for the circular economy

Circular economy and sustainability are at the heart of the Hera Business Solution (HBS) protocol, the multi-service proposal designed for large companies with which the Hera Group puts the skills of its companies at the service of customers to support them in achieving increasingly high and challenging circularity results along the entire production chain.

With Hera Business Solution, the Hera Group presents itself as a partner of large industrial customers, with a global proposal of integrated, sustainable and turnkey energy and environmental solutions designed for individual companies and taking into account their complexity.

The circular economy, in fact, is a concept that cuts across many areas in which the Hera Group can support companies with its know-how such as, for example, global service solutions to reduce and maximise waste recovery; the management of sewage treatment plants; efficiency improvements in the use of water resources; the sale of energy and web tools for analysing and managing energy consumption in order to assess its effects; and data, internet and data centre connectivity services.

Measurement and reporting are increasingly crucial factors to be competitive in the market, also in terms of reputation. Hera makes its experience available to HBS customers by constructing and producing, together with the company, a report that reports on the sustainability performance achieved with indicators on the main services purchased/paid for.

In 2021 the first Circular Economy Report was drawn up for Frutttagel, which showed that by 2020 100% of the non-hazardous waste produced would be recycled, 30% more water would be recovered and 7% less sludge would be produced for every cubic metre of wastewater treated in the treatment plant, which also achieved a 29% reduction in energy used, equivalent to around 150 tonnes of CO₂.

The Hera Business Solution memorandum of understanding contributes to achieving **targets 12.2, 12.4, and 12.5 of the UN's 2030 Agenda**, as well as – thanks to the partnership developed – contributing to achieving **target 17.17**.

Assessing and measuring the "circularity" in Hera Luce, ASE, HSE and in the new water and gas connections

In 2017, Hera Luce developed a system to measure the circularity of public lighting systems in terms of life cycle, 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 life cycle).

This approach to measuring circularity was already in line at the time with the guidelines of the Ministry for the Environment (MATTM), and was then confirmed to be consistent with the most recent international methodological approaches, such as the Circulytics tool developed by the Ellen MacArthur Foundation. The system used to measure the circularity of Hera Luce's installations also anticipated the requirements of the minimum environmental criteria (CAM) for the public lighting service, approved in March 2018, which introduce the obligation for the bidder to carry out a material balance.

The measurement system in place is a key strategic lever and, together with the awareness-raising process with suppliers, allows the company to obtain higher scores in tenders, giving it an advantage over its competitors. In order to measure its own material circularity, Hera Luce has prepared the measurement tool aimed both at the actual realisation of material balances, and at the collection of input data, providing access to the producers/suppliers of the components used so that they can enter the material data of their own products.

This activity made it possible to create a database containing the material data of all the products used in the redevelopment projects and to start raising awareness among suppliers in order to steer them towards more sustainable supply chains. The material balance measurement and reporting system was developed in accordance with the requirements set forth by a specification for the implementation of management systems for the implementation of material balances, and the process of certifying it to a third party was initiated.

The project was also extended to the companies HSE and ASE, which provide energy efficiency services to public administrations and individuals. In 2021, they continued to refine the assessment system to measure the circularity of the main technologies used to carry out energy-saving measures, from a life-cycle perspective.

In the light of the binding inclusion within the Relaunch Decree on the 110% superbonus, of a circularity measurement system, the approach of ASA and HSE proved to be a strategic advantage. The measurement system will gradually be extended to the markets for public administrations, industrial customers and apartment blocks in which ASE and HSE operate. Furthermore, in 2022 the process for the certification of the system is expected to start, thus further improving the company's competitiveness, as well as consistency with the objectives of the Hera business plan and adherence to the UN SDGs.

In the period 2020-2021, a circularity assessment model was applied to some simpler and more repetitive assets to optimise them for sustainability by redefining Standards and Procedures. The process consisted of the following steps:

- **Project circularity assessment system:** implementation of calculation tools to assess the material circularity of networks and systems throughout their life cycle, as already required for public lighting with the introduction of Minimum Environmental Criteria (MEC).
- **Process optimisation:** application of the analysis system described above to certain types of assets, to optimise processes in terms of choice of materials, construction technologies and maintenance methods, to minimise the impact on material consumption and maximise the use of secondary raw materials.

- **Development of new standards and procedures:** the results of the analyses so developed will be translated into new standards and procedures to design, build, operate and maintain the assessed infrastructure.

The tool for calculating material and economic circularity was implemented in 2020 and later applied to water supply connection operations (2020) and to polyethylene gas supply connection operations (2021).

The assessment and measurement of circularity in Hera Luce, ASE, HSE and in the new water and gas connections contributes to achieving the UN's 2030 Agenda **targets 12.2, 12.4, and 12.5**.

With Riciclandino we help the environment and schools

Riciclandino has been accompanying our children towards greater environmental awareness for over ten years. It is an environmental initiative for young people and families that involves the part of a town's residents that is tied to schools, considered as an institution and community of people. The project gives points for disposing of waste at drop-off points, giving one's school the opportunity to receive economic incentives. Families of students can use their Riciclandino Card to dispose of waste at drop-off points, obtaining a discount on their own bill, as per municipal regulations, and providing a matching incentive to their child's school. The added value of the initiative is raising environmental awareness and sharing actions that create and strengthen the civic and social sense of the community. In the 2020-2021 scholastic year, 8 municipalities in the Ravenna area and 26 municipalities in the Modena area joined the project, for a total of 34 municipalities. In the 2019-2020 school year, Riciclandino involved 177 schools in the province of Ravenna and 186 in the province of Modena, for a total of 65,065 students (about 30,016 in the Ravenna area and about 35,049 in the Modena area). The participating schools were awarded prizes for their work, amounting to Euro 88,603 (Euro 47,715 in the Ravenna area and Euro 40,888 in the Modena area). As part of the project, more than 436 tonnes were delivered to drop-off points in the province of Ravenna, and 623 tonnes in the province of Modena, for a total of 1,059 tonnes of waste brought by children and their families.

The delivery of separated waste to the drop-off points by students and families contributes to achieving targets **11.3, 11.6, 12.2, 12.4, 12.5, and 12.8 of the UN's 2030 Agenda**, as well as – by involving schools and residents – contributing to achieving **target 17.17**.

Cibo Amico (Food Friend): 120 thousand complete meals recovered in Hera's canteens since the beginning 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 that promotes environmental sustainability and the fight against waste, Cibo Amico is a concrete action our company took to promote the development of the circular economy, linking different businesses of the area for a shared social responsibility, addressing a concrete help to the neediest. The recovered meals are donated to non-profit organisations in the area that provide hospitality and daily care for people in need. Six company canteens are currently involved: Bologna, Granarolo dell'Emilia, Imola, Rimini, Ferrara and Ravenna, where the project was started in 2021.

Despite the still ongoing health emergency, which led to the use of remote working by employees, last year, compared to the situation before the emergency (year 2019), the number of meals recovered from the canteens increased significantly by 18.1%.

In 2021 alone, in fact, more than 9,700 complete meals were recovered and given to five local non-profit organisations that assist about 95 people daily thanks to the recovered meals, amounting to more than 4.3 tonnes of food worth over Euro 40 thousand. This also avoided the production of 4.3 tonnes of waste, corresponding to the capacity of about 10 bins and the emission of almost 17.5 tonnes of CO₂ into the environment. In addition, the waste of water, energy and land consumption that was necessary to pack those meals was avoided.

After thirteen years from the start of the project, around over **120,000 meals** have been donated overall for an overall **economic value** of about **Euro 492 thousand**. This avoided the production of about 52 tonnes of waste (about 113 bins worth) and the emission of about 220 tonnes of CO₂.

Many non-profit organisations in the area are involved to guarantee increasingly important results, Fraternità Cristiana Opera di Padre Marella - Pronto Soccorso Sociale of Bologna, Fraternità Cristiana Opera Padre Marella Città Dei Ragazzi of San Lazzaro di Savena, Associazione Comunità Papa Giovanni XXIII of Rimini, Associazione Viale K of Ferrara, Cooperativa Sociale Mano Tesa of Imola and Associazione Volontariato San Rocco ODV in Ravenna. In addition, the recovered meals are served at the many non-profit organisations involved in the initiative: the Pronto Soccorso Sociale of Bologna, the "Gemma Nanni Costa" therapeutic community of San Lazzaro di Savena, Capanna di Betlemme of Rimini, Casa della Donne, Casa Mambro and Mensa in via Gaetano Pesci of Ferrara, the Co-Housing facility for the elderly in via del Tiglio in Sesto Imolese and the social canteen in via Renato Serra in Ravenna.

At the end of 2017, Cibo amico also went beyond company canteens to involve a city market. The initiative, developed at the suggestion of HeraLAB Modena, is jointly supported by the Municipality of Modena and carried out with the collaboration of the Consorzio di Mercato. While in the canteens the objective was the recovery of unconsumed meals, Hera's collaboration with the Albinelli traders aims to

avoid the waste of the fresh products that, at the end of the day, can be left over on the market stalls: food that is still perfectly edible but that, for various reasons, the next day could no longer be sold. Food recoveries from individual retailers takes place every Wednesday and Friday when the Mercato Albinelli is open, it is mainly bread and baked goods, and fresh fruit and vegetables. There is now a virtuous alternative for these products, which otherwise would be thrown away, thanks to the collaboration among the Municipality of Modena, the Hera Group, Last Minute Market and the market itself. Traders can choose to donate their unsold goods to Fondazione CEIS, so they can be recovered and used to benefit people in distress. In 2021, more than 1,384 kg of food was collected and reused by 17 operators who collaborated in the project. The Italian Bike Messenger association (IBM) is among the partners involved in the project, the headquarters of which is within the Mercato Albinelli. It provides support to the non-profit for the delivery of surpluses in case of need.

On an experimental basis during 2020, once again together with the Municipality of Modena, the recovery of surplus food also started at two shops in Modena, Agricola Prima Natura in Via Rainusso and the Agrodolce fruit and vegetable shop in Corso Canalchiaro. This made it possible to extend the cooperation network to Caritas Diocesana di Modena, which carries out the recoveries at its own premises in the city and in Caritas facilities in the parish. More than 3,700 kg of products were collected in 2021.

Waste prevention initiatives, such as Cibo Amico, contribute to achieving **targets 12.2, 12.4, and 12.5 of the UN's 2030 Agenda**, as well as – thanks to the partnerships with non-profit organisations – contributing to achieving target **17.17**.

FarmacoAmico ("MedicineFriend"): more than 400 thousand packages of pharmaceuticals not yet expired have been recovered since the project started

FarmacoAmico is a project promoted by Hera to collect pharmaceuticals that have not yet expired and to create a charitable reuse network in the local area. The intact pharmaceuticals, which must still have at least six months to go before their use-by dates and which have been properly stored, are thus reused by non-profit organisations that operate in local or decentralised cooperation projects. The goal is to prevent the production of waste, spreading good practices on the decrease of waste and supporting the organisations that help the weaker sections of society.

Launched in 2013, in Bologna, FarmacoAmico is jointly organized with Last Minute Market and currently involves 32 municipalities in Emilia-Romagna where there are about 1.6 million inhabitants (66% of the population served by waste management services).

In 2021, more than 55,000 packages of pharmaceuticals (+67% compared to 2020) were sent for reuse, with a total value of approximately Euro 717,000. In spite of the health emergency, there have been significant increases in results, with 2021 being the best year ever in terms of quantity and economic value of reused medicines. A centralised management system for the collection, selection and distribution of pharmaceuticals made it possible to overcome the hurdles encountered in some of the areas participating in the initiative, including in 2021. It is worth noting the new activation during 2021 in Ferrara, which confirms the growth of the project as a whole.

In 2021, the project involved a total of 162 pharmacies (+3.8% compared to 2020) and 31 non-profit organisations, some of which operate in Italy and others abroad, as well as several partners, institutions, trade and business associations, for a total of 52 parties involved.

Since the beginning of the project, more than **400 thousand packages of pharmaceuticals** for a **total value of almost Euro 4.7 million** have been collected and sent for reuse, which, in part, potentially correspond to a reduced cost to the Italian National Health System.

Waste prevention initiatives, such as FarmacoAmico, contribute to achieving **targets 12.2, 12.4, and 12.5 of the UN's 2030 Agenda**, as well as – thanks to the involvement of citizens and municipalities – contributing to achieving **target 17.17**.

Cambia il finale (Change the Ending) is an ongoing success: 858 tonnes of bulky waste collected in 2021

The project, now at its eighth year of activity, makes it possible to intercept all objects in good condition otherwise to be disposed of as bulky waste and allow their reuse, thanks to a network of non-profit organisations throughout the area, giving a new life to the goods donated by citizens. The project is linked to the specific memorandum of understanding signed by Athersir and Hera on the management of bulky waste, developed together with Last Minute Market. The 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 headquarters or door-to-door, giving them to second-hand markets, using them in their offices or donating them to people in need. All of Hera Group's communication tools promote the collection of goods carried out by non-profit organisations, in particular through call centre operators, who offer users the possibility of donating bulky objects in good condition if they intend to dispose of them.

The initiative encourages good habits related to reuse and generates positive social effects thanks to the activities of the non-profit organisations involved, in line with Hera Group's social responsibility and environmental protection principles. It also responds to current developments in environmental regulations, which aim to establish a management model based on the concepts of prevention and reuse.

At the end of 2021, there were 17 participating non-profit partner organisations throughout the Emilia-Romagna region served by Hera, ensuring the coverage of all its main cities. In 2021 the organisations received over 9,600 phone calls from residents willing to donate bulky goods and performed over 5,900 collections, for a total of over 360 thousand items and over 858 tonnes collected. The majority of the goods donated were indeed reused, with an average percentage close to 70%: from January to December 2021, the project avoided the production of about **603 tonnes of bulky waste**. Although the health emergency continued to affect the project's operations, such as the closure of activities, the difficulty in moving and collecting goods from residents' homes, and the decrease of volunteer work, there have been significant increases in terms of results (+23.2% tonnes collected compared to 2020) leading to major savings for the environment and lower waste collection costs. More than **4,2 thousand tonnes of waste** have been avoided since the start of the project.

Moreover, within the project "Cambia il finale" ["Change the Ending"], there are four active "reuse boxes" in the municipalities of Cesena, Ferrara, Modena and Ravenna. It is a real box inside the Hera Collection Centres, where residents can bring furniture and small objects that are in good condition, which are then collected and sent for reuse by accredited non-profit organisations. In 2021, 457 donations were made by citizens, (+31.7% compared to 2020) for a total of 2,748 items, corresponding to 5,646 kg of goods.

Waste prevention initiatives, such as Cambia il finale, contribute to achieving targets **12.2, 12.4, and 12.5 of the UN's 2030 Agenda**, as well as – thanks to the partnerships with the non-profit organisations – contributing to achieving **target 17.17**.

SCART®: the beautiful and useful side of waste

SCART® is the Hera Group's art and communication project that has been developing the combination of art and waste for over twenty 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 the many industrial waste products that are disposed of daily as waste and, thanks to the creativity of the artists who collaborate in the Scart Project, are transformed into unique, exclusive pieces of art while fully respecting circular economy principles. Its goal is to encourage responsible behaviour towards environmental matters, offering new stimuli to create art, design, fashion and entertainment objects using only and exclusively waste as a raw material. Sofas, armchairs, tables, chairs, lamps, chests of drawers, games, musical instruments, clothes, paintings, statues, as well as sets for shows and costumes have been made this way. SCART® is an invitation to work towards new styles of smart, creative and most importantly sustainable life.

Many initiatives at Italian and international level, such as the important conventions with the Academies of Fine Arts in Florence, Carrara, Bologna, and Ravenna, involve many students every year at the seminars and workshops held at the SMART® located within Herambiente's complex in Santa Croce sull'Arno and Pisa. These art and training initiatives focus on experimenting with the artistic use of industrial waste and involve not only enrolled students but also many artists that specialise 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 the great tenor was born. About 250 costumes are made for each edition using only industrial waste. In 2020 SCART® also contributed to the creation of more than 100 costumes for the choir and the participants of the event "Andrea Bocelli in concert for the Sicilian Unesco sites" held in Noto (SR).

Over the years SCART® has also participated in many Italian exhibitions – those held at Ravenna, Imola, Modena, Pisa, Udine, Bologna, Padua, Trieste, Rimini and Florence, to name a few – and international exhibitions (Berlin 2016 and Hong Kong 2021).

In 2020 and 2021, it was featured in "RoGUILTLESSPLASTIC", the event by design guru Rossana Orlandi for Milano Design Week, held at the "Leonardo da Vinci" Museum of Science and Technology in Milan. In particular, for the 2021 edition, an event space was created using 100 liquid waste containers, accommodating hundreds of people throughout the event. This Hera Group installation also invites visitors to a broader reflection on the importance of pursuing economic and industrial development that is also sustainable.

In 2021, with the 700th anniversary of the supreme poet's death, the art project was dedicated to "Dante and The Divine Comedy". A new challenge for the students of the Academies who have interpreted the work with the modern Trash Art technique, where scraps of plastic, metal accessories, buttons, zips, leather filaments, glass and exhausted paints are just some of the recycled materials from the numerous industrial processing cycles used to create the works of Dante or the six heads of Dante Alighieri created with different techniques and styles, where the expertise of each course of study shines through. A comparison emerged between the historical importance of the Ravenna mosaicists, the hand of the Carrara marble sculptors and the POP interpretation of the Florentine academy. This project was also characterised by a new collaboration with the San Patrignano Community. They were also entrusted with three heads of Dante and, with great professionalism, gave an artistic interpretation of high communicative power.

Another important initiative of the year 2021 for Scart was the making of the documentary for SkyArte, "Il ciclo della bellezza" ["The Cycle of Beauty"], which allowed us to learn more about the Hera Group's project that talks about the environment through the language of art. Thanks to the contribution of artists, set and costume designers and teachers from prestigious academies, industrial waste has been given new life, creating a large collection over time of unique and original pieces, including furniture, sculptures, paintings, musical instruments, costumes and stage sets.

This is another emotion given by Scart, which after many years of searching for beauty, starting from poor, discarded, no longer used materials, continues to amaze, communicate and raise awareness.

The SCART® project contributes to achieving **targets 12.2, 12.4, 12.5, and 12.8 of the UN's 2030 Agenda**.

Better separate waste collection with the new Smarty bins

Smarty bins are the state-of-the-art waste containers that can be activated via Emerald Card or Smartphone, developed by Uniflotte since 2017 to increase the quantity and quality of separate waste collection. The Smarty bin not only makes waste collection simple, but also tracks it securely: the data collected in the field is communicated securely to the proprietary platform, which operates 24 hours a day, 7 days a week, encouraging quality separate waste collection.

Smarty's innovation lies in its management and maintenance: in fact, the system is able to alert Hera operators when it is full or in the event of faults, so as to ensure an increasingly punctual and efficient service. Smarty bins also improve the hygiene of the delivery through a new opening system without handles or levers.

More than 3,600 Smarty devices have been installed on the territories served by Hera Group since 2019. Of these, about 1,800 were placed in Bologna, 1,600 in Rimini and the remainder in other municipalities of Emilia-Romagna.

In 2021 the latest generation of Smarty products was previewed at Ecomondo, Europe's leading event for ecological transition and new models of circular and regenerative economy.

Regarding the latest generation of Smarty in particular, around 50,000 smart containers are expected to be installed by 2025 in the areas of the Emilia-Romagna region managed by the Hera Group.

The project related to the deployment of smarty bins contributes to achieving **targets 12.2, 12.4, 12.5, and 12.8 of the UN's 2030 Agenda**.

The circular economy manager

In order to facilitate the transition to a circular business model, a course to create a new company figure, the **circular economy manager**, was created in 2021. It plays an active role in disseminating the circular culture and developing projects on circular economy and sustainability. The aim of the course is to **spread the culture of the circular economy** by training activators of circular thinking in companies.

The training course for circular economy managers involved 14 employees and lasted almost 8 months.

The role of the circular economy manager is carried out through activities such as:

- encouraging the gradual expansion of circular economy thinking and awareness;
- proposing/managing projects consistent with circular economy principles;
- implementing monitoring mechanisms to measure the degree of circularity of the identified projects;
- identifying opportunities in terms of products and services to be offered externally;
- guiding the Hera Group and its customers in identifying the best solutions to preserve and maximise value;
- fostering strategic collaborations with a view to "circular thinking".

During the course, the working group was constantly supported in terms of operational guidelines, methodological approach and the provision of continuous training sessions and educational content; in particular, as part of the project, the collective training event "Monitoring and measuring circularity" took place in November 2021 (addressed not only to circular economy managers, but to over 130 colleagues).

The 14 colleagues were divided into two distinct working groups, each of which had the opportunity to develop a specific circular economy project work, in order to actively test the application of circular economy principles to a concrete case; specifically, the selected project works are the **"Recycling of Expanded Polystyrene (EPS)"** project and the **"Circular Management of WEEE"** project. The operational development, which was similar for both project works, was structured according to specific macro-themes addressed by the two groups.

The course, relying on collaboration, synergy and networking, is also the context in which the company's new community dedicated entirely to the circular economy was created, a key tool for ongoing discussion and the identification of opportunities, including innovative ones, with a view to "circular thinking".

The circular economy manager course contributes to the achievement of **targets 12.2 and 12.8 of the UN 2030 Agenda**.

Sustainable management of water resources

AWS certification for the Val di Setta potability treatment plant

In 2021, AWS - Alliance for Water Stewardship - certification was achieved for the Val di Setta potability treatment plant. Achievement of the AWS standard for this potability treatment plant certifies Hera as a water steward, i.e. a sustainable manager of water resources, committed not only to implementing good practices in its own organisation, but above all to promoting collaboration and active communication with local stakeholders, both directly and indirectly linked to the same sources of supply.

One of the main activities carried out to prepare the documentation book, as required by the standard, was a water risk assessment. The analysis is based on the WWF Water Risk Filter, an international tool that uses thematic maps to characterise the risk related to the availability of water resources across the planet. The tool assesses a number of factors: physical (geology, water availability, number of scarcity events that have occurred, number of floods that have occurred, etc.), regulatory (governance, current regulations, etc.) and reputational (cultural importance of water, biodiversity, etc.) and assigns a score to each factor summarised in an overall risk for each territory on a scale of 0 to 5.

As a "global" tool, the level of accuracy of the assessments carried out with the WWF Water Risk Filter needs to be recalibrated in order to refine the analysis, relating it more specifically to specific territorial contexts. In the case of the Val di Setta drinking water plant, the analysis was recalibrated using reports and analyses produced and periodically updated by ARPAE and the Emilia-Romagna Region. In extreme synthesis, the result of the analysis for the catchment area in which the Val di Setta plant falls, an area overlapping with the Reno river basin, determined an overall risk (i.e. a synthesis of all the indicators assessed) between **3.0 and 3.4 - moderate**.

The factor with the greatest impact on the availability of water resources is that defined as "water stress"; an indicator negatively influenced not so much by the availability of the resource, which has shown a constant trend in recent decades, but rather by the variation in the distribution of rainfall in the hydrological year. It has in fact been shown that the distribution of rainfall is less homogeneous than in the past, with peaks of rainfall (extreme weather events) alternating with longer periods of no rain.

The certification for the Setta potability treatment plant contributes to the achievement of **targets 6.2 and 6.4 of the UN 2030 Agenda**.

All the quality of tap water in one report: In good water

In 2021, Hera published the thirteenth edition of the report *In good waters*, dedicated to tap water, completely revised in its graphic form. The report is still the first and only example of a thematic report on tap water in Italy and its environmental and economic benefits. The report contains, area by area, the analysis data relating to 29 non-regulated parameters and parameters, such as emerging contaminants and asbestos fibers.

The report shows that drinking tap water is a sustainable choice for the environment and is also good for your wallet. In fact, tap water makes it possible to avoid the production, transport and disposal of 284 million plastic bottles (more than three million bins) and to save 460 euros a year for a family of three.

For all the contents of the report: www.gruppohera.it/report

Hera, Iren, Smat and A2A together to improve the integrated water service

On 8 April 2014, Hera, Iren, and Smat **signed a five-year partnership agreement to carry out applied research** to develop joint research, **innovation** and training projects in the sectors and activities related to the integrated water service.

Within the framework of the partnership, several activities were developed during 2021 and are briefly reported below.

During 2021, study activities were completed for the development of a **method for controlling Legionella pneumophila** in the water systems they run.

The working group, coordinated by A2A, has drawn up some chapters of a guideline for use by operators and has carried out some monitoring, by checking for the possible presence of Legionella throughout the supply chain starting from the resources up to certain points on the internal network. The results of these control campaigns highlight the absence of Legionella in drinking water.

Particular attention was also paid to the aspect of reporting to stakeholders in cases of proven contamination (usually concerning internal private networks of users). The work carried out significantly contributed to a guideline document for integrated water service Managers developed on the subject by Utilitalia.

During 2021, the activities related to the **chlorites and chlorates** project coordinated by Smat were concluded. Among the main topics for further study:

- criteria currently adopted for the purchase of sodium hypochlorite and sodium chlorite;
- data collection on chlorate concentration (in the supply, after storage and neoformation during the treatment process);
- identification of the causes of degradation of the product during storage;
- definition of technical supply requirements;
- identification of innovative processes and technologies to reduce by-product formation.

The project investigated the presence of these disinfection by-products in the networks operated by our partners and identified the main causes. Possible control and mitigation actions were identified, as a result.

Another joint project, coordinated by Iren, concerning **sensors for early warning**, was concluded in 2021. These are the main topics covered:

- sharing the monitoring experience already acquired;
- examining online monitoring needs, with early warning functions;
- specifying the instruments used, the areas of use, the parameters monitored, the detection limits, and the installation requirements.

The project is focused on the research and evaluation of on-line systems for monitoring the microbiological characteristics of aqueous environmental media. The tests were carried out using parallel surveys, using established laboratory techniques, and assessed the degree of reliability of these instruments in relation to that required to monitor the different environmental media.

Another project to be developed and completed during 2021 is the **study for the production of bioplastics from wastewater treatment sludge** as recovery of polyhydroxyalkanoates (PHA) from wastewater treatment sludge coordinated by Hera. The project included a phase of analysis and quantitative study of the application of full-scale technology (benchmark of the technologies available at the most advanced stage of development) and verification of the implementation of the process of biopolymer recovery and nutrient management (nitrogen and phosphorus) for some target plants (technical-economic feasibility).

All the projects slowed down in 2020 and 2021 due to difficulties caused by the health emergency. New projects are planned to be developed approximately in the two-year period 2022-2023.

The partnership signed by Hera, Iren, A2A, and Smat contributes to achieving **targets 6.3 , 9.1, 9.4 and 17.17 of the UN's 2030 Agenda**.

The Rimini Seawater Protection Plan continues

The Seawater Protection Plan was created in 2013 to eliminate the bans on bathing at beaches following intense rainfall events, by implementing structural measures on the sewage-water purification system of the City of Rimini. Intense rainfall events, in fact, exceed the flow rate manageable by the sewage system, causing the emergency discharge of untreated water into the environment. The gradual implementation of the measures set out in the Plan will gradually eliminate up to 90% 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 system played an essential role in identifying possible synergies between the measures and systemically optimising works and management criteria. The modelling activities, in fact, being able to 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 that had been initially planned.

The development of the Plan, since its implementation start-up, has enabled us to pursue not only the environmental protection of the coastline as was initially foreseen, but also to protect the areas of the Rimini municipality that were subject to flooding. More specifically, in 2014, the following works were included in the Plan: "Mavone spillway", "Via Santa Chiara sewer pumping station", "Ausa backbone sewage collector" (the latter financed for Euro 8.5 million as part of the public funding for hydrogeological instability under the "Italia Sicura" initiative) as well as the modification of the management of rainwater in the plant system serving the Fossa Ausa. Subsequently, in the years 2019 and 2020, the plant systems serving the Colonnella and Rodella Ditches were further optimised, taking advantage of synergies with the sewerage system, which reduced the storage volumes of the tanks, accordingly reducing both the necessary investment and the implementation time, while strengthening the hydraulic protection of the area.

The Plan is essentially made up of the ten measures originally planned, plus additional measures due to the optimisations added subsequently, bringing the **total to 14 measures**.

The ongoing optimisations of the Plan, with the improvements to its design and the required permitting, made achievement of the environmental objectives, initially planned for 2020, slip to 2025. It should be

noted that the works required to reduce the city's hydraulic risk will also be completed within that year. The slippage of the Plan's implementation is closely linked to the substantial improvement of its impact on the city which, as specified above, will benefit from a significant improvement in both hydraulic and environmental aspects, not only with respect to the pre-operational state of the sewage system, but above all with respect to that envisaged at the onset of the project.

The progress of the construction work does not lead us to expect any significant issues and assures the quantity goals we have set are in sight. At the end of 2021, all uncompleted interventions are under construction or planned.

The situation of the 14 measures is as follows:

Measure	Progress at 31 December 2021	Expected/actual year of completion	Motivation/benefits
1. Doubling of the Santa Giustina purification plant	Completed	2016	Purification process improvement
2. Conversion of the Rimini Marecchiese purification plant into a collection tank	Completed	2018	Purification process improvement
3. Construction of the Dorsale Nord backbone, for drainage of the Bellaria purification plant into the S. Giustina treatment plant	Completed	2016	Purification process improvement
4. Completion of the separation of sewage networks in the northern area of Rimini	Construction of second portion in progress (first portion completed in 2018)	2023	Conversion of five sewage drains discharging into the sea into rainwater drains (of which three already done under the first portion)
5. Construction of the Dorsale Sud backbone	The third portion of the pumping stations is under construction (2nd portion completed in 2018 and 3rd portion of the pressure unit concluded in 2021)	2022	Reduction in the number of openings of the AUSA and Colonnella I drains into the sea
6. Completion of the separation in the Roncasso and Pradella basins	Roncasso in progress (progress 9% to 2021) Pradella in the planning stage	2023	Conversion of two sewage drains into the sea into rainwater drains
7. Construction of subsea pipeline and pumping station for the AUSA basin and reservoirs	Completed	2020	Reduction in the number of openings of the AUSA drains into the sea
8. Construction of hospital balancing reservoir	Completed	2016	Reduction in the number of openings of the Colonnella I drains into the sea
9. Construction of conduit between Fossa Colonnella I and Fossa Colonnella II; Vasca Colonnella II and Vasca Rodella and subsea discharge conduit	Design in progress	2025	Reduction in the number of openings of the Colonnella I, Colonnella II and Rodella drains into the sea
10. Isola sewage network restoration	Completed	2014	Optimisation of the sewage system
11. Filling the AUSA beach stretch	Completed	2016	Improvement of the usability of the area and of its environmental conditions
12. Sewage collector of AUSA backbone	Design in progress	2024	Reduction of hydrological risks
13. Mavone spillway	Completed	2018	Reduction of hydrological risks
14. Sewage pumping in via Santa Chiara	Completed	2020	Reduction of hydrological risks

The completion of nine measures has produced significant environmental benefits, reducing the quantities of organic substances (COD/BOD) discharged into the sea during intense weather events.

The measures completed in 2020, led to a major reduction in the pollution load discharged near the shore, improving the quality of the water on the coast. This will mean that the bathing bans that occur if discharges are opened up along a large part of the city's coastline, including both areas where the separation of the sewage networks has been completed and the stretch of sea bordering the Fossa Ausa, will no longer apply. From this point of view, since 2017, **5,584 metres of beach have been "freed" from bathing bans**, which is **more than 50% of the city's coastline**.

Moreover, as a further proof of the Plan's strong link with the City of Rimini, we must point out that a significant part of the measures planned are merging into the urban renovation project called Parco del Mare, 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 the Global Compact and KPMG in 2017, which reports on business opportunities linked to the objectives of the UN's 2030 Agenda.

By applying measures to improve the water and sewage systems, reducing marine pollution, upgrading the infrastructure, while involving municipalities and citizens in the project, the Rimini Seawater Protection Plan contributes to achieving **targets 6.2, 6.3, 6.b, 9.1, 9.4, and 14.1 of the UN's 2030 Agenda**.

A smart system to prevent pollution in sewer networks

in 2019, the Hera Group together with the Israeli startup Kando, developed a smart system made up of control units placed at strategic points, capable of continuously monitoring the sewer network in real time. This new system instantly reports polluting events, often of industrial origin, and provides information to help identify their source.

The experiment, which began in 2019 with a pilot project on the Castelnuovo Rangone network in the Modena area, reduced the concentration of significant pollutants found in wastewater by 50% compared to the historical trend of recent years, and further reduced energy consumption. The system was subsequently extended to Sassuolo in 2020, where an improvement in the quality of sewage sludge was achieved, allowing indirect agricultural recovery to be maintained, and thus improving the Arera technical quality indicator, through a change of class for ATO 4, from class C to class A. The percentage of landfilled sludge in relation to the total sludge produced has decreased significantly, from 18.8% in 2020 to 0.7% in 2021. In 2021, in addition to the agglomerations of Castelnuovo Rangone and Sassuolo, where the system was maintained as an internal control centre, monitoring of the sewage network of Castel S. Pietro Terme in the Bologna area was also started with the aim of improving the quality of the wastewater treatment sludge produced. In the same year, the project saw the integration of the data recorded by the control unit system with that of the company's remote control system.

The project has the objective of implementing and monitoring "critical" agglomerations with regard to the quality of treated wastewater or wastewater treatment sludge and therefore contributes to the achievement of **targets 6.3, 9.1, 9.4 and 14.1 of the UN 2030 Agenda**, as well as - thanks to the partnership developed - the achievement of **target 17.17**.

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 territory in which it operates, confirming its commitment to protecting biodiversity and air quality. **Since 2012, 7,720 trees have been donated to territories** in Emilia-Romagna, Veneto and Friuli-Venezia Giulia, for a total of **almost 800 tonnes of carbon dioxide absorbed each year**, and a further 6,500 trees will be planted by 2024 through numerous initiatives involving employees, Hera Group customers and citizens served. The plantings were the result of reward mechanisms associated with specific virtuous behaviour, such as the delivery of separated waste to drop-off points or the use of electronic bills instead of paper ones.

For example, with the **"ECOAlberi"** ["Eco Trees"] initiative, the Hera Group has joined the Emilia-Romagna Region's project "Mettiamo radici per il Futuro" ["Planting roots for the Future"] aimed at planting 4.5 million trees (one per inhabitant of the region). In particular, Hera aims to achieve the goal of planting **10,000 trees over the next three years** thanks to collaboration with municipalities and other entities participating in the project by making available resources, skills and areas of the territory, and thanks to a financial commitment of Euro 250,000. In this context, the **collaboration of citizens** is crucial as it is **their own choices** of efficient energy consumption and sustainable mobility that support the initiative. In fact, Hera Comm offers its customers a wide range of services and products to reduce consumption and the related environmental impact, and **they contribute to the realisation of the project by opting for these solutions**: for every four products purchased, including LED light bulb kits or smart thermostats, for example, corresponds the 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 e-bikes. The initiative has been launched in **Ferrara** in 2021, where **420 trees** of different varieties have already been planted, which will allow the development of native flora and fauna protecting local biodiversity. After the inauguration in Ferrara, the project will be extended to other areas in Emilia-Romagna served by the Hera Group.

In 2021, the "Più alberi in città" ["**More trees in the city**"] initiative continued in collaboration with some municipal administrations to promote greater use of drop-off points by citizens by launching an urban forestation project: in fact, one tree is donated for every 50 new households that deliver their waste to the drop-off points. The initiative **encourages citizens to use the drop-off points** and thus to recycle, it is beneficial for the environment and cityscape since it helps to reduce waste dumping, and it offers an economic advantage to households since the Municipality discounts their TARI (local waste tax) for each kilogram of waste they deposit. In addition, 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 2021, **220 new trees** have been planted in Modena and Sassuolo.

The "**La fabbrica dell'aria**" ["The Air Factory"] project, active in the Triveneto area, has as its objective the enhancement, sustainability and respect of the environmental context and the territory in which Ascotrade society operates through the **planting of 5,000 trees** in collaboration with Azzero CO₂ (**3,500 trees planted so far**). One of the special features of the project is the **exclusive use of indigenous species** and - where possible - **pioneer plants**, which are important for regenerating degraded land and encouraging the colonisation of other species, fundamental for the creation of ecological corridors and the establishment of birdlife.

Associations that the Hera Group supports through **Hera Solidale** include Treedom, promoter of "**Let's 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 that ensures the protection of biodiversity and at the same time allows local communities 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 figure corresponding to the forthcoming **planting of 2,500 trees has been reached**.

Lastly, the now-completed activities "**Operazione più alberi**" ["Operation More Trees"] in Padua and "**Regala un albero**" ["Give a Tree"] in Emilia-Romagna allowed the **planting of 4,000 trees**, also through the active involvement of citizens and customers.

Further details of the tree-planting initiatives are available at the link alberi.gruppohera.it/hera-per-il-patrimonio-naturale-e-la-biodiversita.

The above-mentioned projects contribute to achieving targets **7.3, 11.3, 11.2, 11.6, 12.2, 12.4, 12.5, and 12.8** of the UN's 2030 Agenda, as well as – thanks to the involvement of citizens and local authorities – achieving **target 17.17**.

"Capiamo" Project: environmental biomonitoring with bees

The "**Capiamo**" ["To Bee Understanding"] project **aims to use bees as bio-indicators of environmental quality** near industrial plants. 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 action to be planned in good time.

Bees have particularly suitable characteristics for biomonitoring. They are in fact social insects, living in large colonies and easy to breed. In addition, their hairy bodies and regular foraging activity - i.e. the collection of nectar and pollen - enable individual colonies to make around **10,000 daily withdrawals** from the air, water and soil with which they come into contact. It should be kept in mind that a single bee normally travels over an area of 7 km² during its daily activity. Substances present in the environment then accumulate within the hive, on the bees and their products (honey, propolis, wax, pollen and royal jelly), **making it easy and quick to recover highly representative samples for analysis**. As bio-indicators, bees offer a lot of useful information in both the short and long term: for example, honey can be used to assess pollution in the short term, as it is the first product in which contaminants can accumulate. On the other hand, wax can be used to assess pollution levels in the long term, as its lipidic nature can absorb and retain non-volatile, lipophilic and persistent contaminants.

The project, called "**Capiamo**", includes two annual sampling and analysis campaigns on the bee population of the three hives (300 thousand) and their products, as well as medical-veterinary checks to check their health and productivity, limit swarming phenomena and position and remove the honeycombs. Samples collected from the hives (bees, honey and wax) are **chemically analysed** in 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.

In spring 2020, **three beehives** were installed within the perimeter of the waste-to-energy plant, to monitor the eastern part of the Venafrò Plain, between the Meta and Matese mountains, where, in

addition to the waste-to-energy plant, there are chemical industries, private healthcare companies, abandoned building sites, and small inhabited agricultural centres.

The most recent results confirm previous observations. Investigations on honey samples showed the **total absence of dioxins, PAHs, PCBs and pesticides**, while the presence of anions (chlorides, sulphates and nitrates) was **in line with the average values for honeys of Italian origin**. The wax analysed in September was **free of dioxins, PCBs and pesticides**, with traces of **PAHs well below regulatory limits** for animal oils and fats in the food sector. The presence of metals in both honey and wax can be traced to the presence of various human activities (abandoned building sites, industries and infrastructures) and to the typical features of the area, characterised by an abundance of marl and dolomite. In both campaigns carried out in 2021, honey samples showed a **total absence of lead**.

In 2021 the "Capiamo" project was also **extended to the composting plant with biomethane production in S. Agata Bolognese**. In spring 2021, **three beehives** were installed within the perimeter of the plant, with the aim of monitoring a wider and more complex area, located in the Bologna plain on the border with the province of Modena, in which industrial, artisan and agricultural activities are located. The 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), as well as veterinary checks on their health and productivity. The samples collected from the hives are subjected to chemical analysis. The first results obtained, which will be further investigated, show a **state of environmental quality**. The honey produced is **free of heavy metals** such as cadmium and lead, PAHs and pesticides, and has a pollen profile characteristic of the lower Emilian Apennines.

This biomonitoring project contributes to achieving **targets 11.6 and 12.4 of the UN's 2030 Agenda**.

Local Area (and Business) – Enabling resilience and innovation

Innovation and digitalisation

Analysing the carbon footprint of IT and telecommunications 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 started in 2021 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 2021 can be estimated at approximately 600 tonnes of CO₂ equivalent; this value is affected by the total electricity consumption profile of the five suppliers, 55% of which is electricity produced from renewable sources (one of the five suppliers has declared that it only buys electricity from renewable sources). CO₂ emissions offset by the purchase of carbon credits (from one of the five suppliers) are around 17% of the total.

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.

Virtual factory, the teams that produce innovation

The Virtual factory project was created to promote new ways of working in order to develop highly innovative projects within the company and at the same time to enhance people's individual characteristics as part of a professional growth process. The focus of the initiatives can be both on internal processes and on processes that have visibility outside the company with different goals aimed at innovation and/or process optimisation and improvement.

A virtual Factory is a **multifunctional team, consisting of 5 to 7 employees, which is called upon to implement innovative solutions in a short period of time**. The criteria for forming the teams take into account on the one hand the need to involve the people of greatest value to the company, and on the other hand the need to combine diversified skills, which together can amplify the value for the team. In fact, the initiative is not only a stimulus for corporate innovation, but also a professional opportunity for the employees involved, who get a chance to collaborate and develop new skills beyond their professional routine. The timeframe for completing the projects ranges from three to six months, with a commitment of one day a week and, in the final phase, the work is presented to top management.

Between 2018 and 2021, **16 Virtual factory experiences** were set up, involving a total of **90 employees**. The projects mainly focused on optimising/improving internal processes, on issues related to the **circular economy** or on improving our **customers' experience**.

Virtual factories completed and presented in 2021 include the **Rinnowatt km0** project, which was created with the aim of analysing costs, benefits and sustainability in relation to the installation of photovoltaic panels for renewable energy sources for the self-production of energy at the premises of Marche Multiservizi, the **Myhera-Alexa** project, which was started with the aim of understanding and promoting the use of voice assistants for dialogue with the customer and which analysed the integration of the MyHera app with the Alexa voice assistant, and, finally, the **deferral management** project started with the aim of automating the deferral management process in order to make its application homogeneous within the Group, increasing the culture of compliance with accounting principles.

In 2022, the initiative will continue with new projects in line with an approach for identifying objectives that is increasingly in line with the strategic priorities of the business units. In addition, all completed projects will continue to be monitored in order to highlight, at a later date, how the work carried out by the virtual factories actually contributed to achieving the agreed improvement targets.

The Rifiutologo, the app for separate waste collection (and more) is getting even smarter

The Rifiutologo [Wasteologist] is a **free app with several features**, available both online on the Hera website and on the App store for smartphones and tablets. As of 31 December 2021, it had almost **766 thousand downloads** on Android and iOS operating systems. The municipality in which the Rifiutologo app was most used was Bologna, with over 552 thousand total sessions and 75 thousand individual

active users, followed by Padua with 327 thousand sessions and 24 thousand users and Ravenna with 257 thousand sessions and 20 thousand users.

With the **Waste Search** function, users can find up-to-the-minute information on where to take their waste or the dates of door-to-door collections scheduled for their address, and even set up a reminder for the day and time of each collection. The Waste Search is confirmed as the most used function, with more **than 2 million searches performed in 2021**.

Thanks to geolocation, the Rifiutologo app also shows the user the **closest drop-off point**, with complete information on the waste types accepted, the schedules, and any discounts provided by their municipality. It also offers information on **Points of Interest** for residents, such as collection of special waste, mobile collection points, distribution points for materials, and underground drop-off points.

The **Environmental Reports** function makes it possible for citizens to report problems related to, for example, abundant waste or damaged containers, sending photos in real time to Hera technicians. The app then informs the user of the date of the solution, possibly via personalised push notifications. In 2021, the **number of reports concerning the emptying of bins**, street cleaning and abandoned waste reached **140 thousand, more than double** compared to the previous year.

The **barcode scanner**, another highly appreciated feature of the Rifiutologo app, recognises materials by the barcode printed on products and shows how to properly dispose of each package, even if it is made up of multiple material types, accessing a **database of 1,740,000 barcodes of the most widely used products** as of 31 December 2021. If a code isn't recognised, or if a product is missing, residents can report the circumstance via the specific function so that the missing information can be added to the system. In 2021, also thanks to **reports** sent by citizens, the barcode database was enriched by 63 thousand codes, while the number of **requests made by scanning** the barcode was about **554 thousand**. As a matter of fact, to date the database covers almost the entire circulation in Italy.

In 2021, furthermore, the Rifiutologo literally began to speak thanks to **Alexa**, the artificial intelligence created by Amazon to give a voice to the smart devices we all own. In fact, Alexa users can now add the Rifiutologo skill, thus obtaining a friendly voice to which they can 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 on the calendar, the **"where should I throw it"** function, which allows them to ask the skill how to dispose of waste in the areas served by Hera, and lastly, information on **drop-off points** and on how to have **bulky items collected** at home.

Thanks to the information contained in the Rifiutologo and the reports from customers, its use contributes to achieving **targets 11.3, 11.6, 12.2, 12.4, 12.5, and 12.8, of the UN's 2030 Agenda** as well as contributing to achieving **target 17.7**.

With Acquologo, the entire water service is smartphone-accessible

Acquologo is a **free application dedicated to the integrated water service**, created to provide a communication channel between Hera and residents living in the areas we serve, helpful both for those who have an active contract with Hera for the supply of drinking water, but also for those who, for example, live in a condominium, and do not have a direct active contract. The number of **downloads (10,784)** and the number of **accesses (38,066)** prove the usefulness of this smart tool which provides information on the water used, on a daily basis.

The app's **available features** range from self-meter reading to checking data on the quality of the water in their municipality, and include alerts for water network interruptions for ordinary maintenance work and reporting breakage or leakage of water on public land.

Customers with **active water contracts** with Hera reported **6,244 meter readings** through the Acquologo app in 2021, up 11% compared to 2020. The operator sent out **14,977 notifications concerning service interruptions**, confirming it as a very useful tool for citizens to be better informed about the service.

The most frequently viewed section continues to be the **Water Quality** section, which allows all residents to check the main data (average values) on the quality of the water supplied for each of the supplies provided by the multi-utility, comparing them with the regulatory limits.

In addition to the most commonly used features mentioned above, there is also the evaluation of the economic savings generated by the consumption of tap water instead of bottled water, in the **"How much you save"** section, and the possibility to contact experts with questions and requests about the local water service or read the answers to the most frequently asked questions, in the **"The expert answers"** section.

As a **pilot project**, and only in some areas, the app can also be used to **report major water leaks** due to breaks in the pipes under the road surface; reports of water leaks sent in through the app (photographic reports and by calling the toll-free number) totalled **758** in 2021.

Sustainable strategy and Shared value	Pursuing carbon neutrality	Regenerating resources and closing the loop	Enabling resilience and innovating
Governance and creation of value	Customers	People	Suppliers

Thanks to the information the Acquologo contains, its use contributes to achieving **targets 6.b and 12.8 of the UN's 2030 Agenda**, as well as – by involving residents – contributing to achieving **target 17.17**.

Digi e Lode, for more digital services and schools

For the Hera Group, innovation and digitalisation are fundamentally important, 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 fifth year, brings customers and the company 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 wants to bring to its service area, as a continuation of the business strategies that identify innovation and sustainable development of the area and the **activation of partnerships between the company, customers, municipalities and schools, as the** leading drivers for the development of shared value, in line with the objectives of the UN's 2030 Global Agenda.

Since the 2019/2020 edition, the project has been **extended** to the Marche and Abruzzo regions, and starting in the 2021/2022 school year also to the Veneto, Friuli-Venezia Giulia, Lombardy and Puglia regions where six Group companies operate (Estenergy, Ascotrade, Ascopiave Energie, Amgas Blu, Blue Meta and Etra Energia).

The project involves **all primary and secondary schools**, both public and private, in Emilia-Romagna, Marche, and Abruzzo, Veneto, Friuli-Venezia Giulia, Lombardy and Apulia, and offers a total of Euro 190 thousand for the 2021-2022 school year to **finance projects benefiting** students of 76 schools. Since the project began in 2017, the Group has already donated **Euro 375 thousand to 150 schools**.

To take part, customers need to activate one or more of the free digital services offered by the Hera Group company: by doing so, they donate points that can be assigned to a specific school (and this way they are multiplied by five) or distributed among the schools in their municipality. The Hera Group rewards the schools in the area that achieve the highest score.

The Digi e Lode project contributes to achieving **targets 4.a and 12.8 of the UN's 2030 Agenda**, as well as – by involving residents and schools – contributing to achieving **target 17.17**.

Economic development and social inclusion

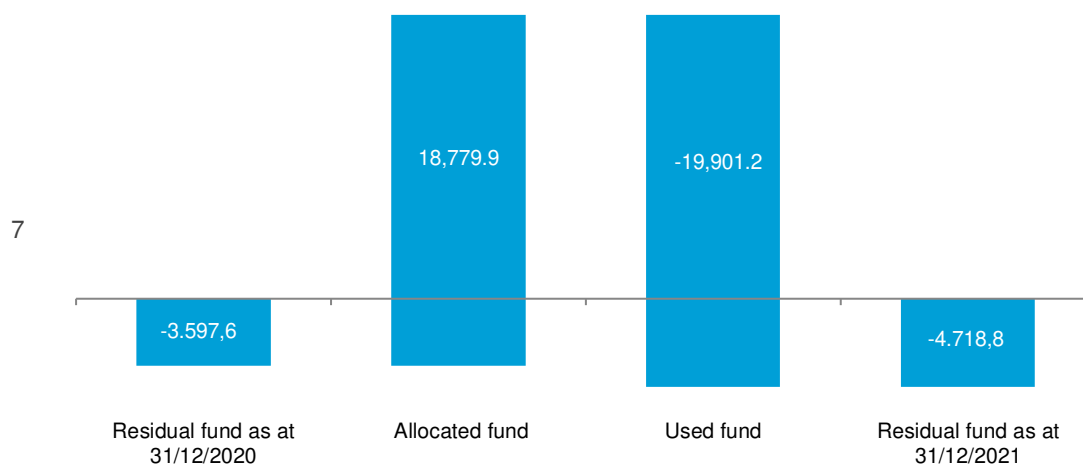
The leak fund for hidden water leaks

In 2014, **Hera Spa** defined a joint regulation across all the local areas it serves that sets 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 Euro 15 per year in their bill, participating customers can receive, for hidden water leaks within their system, a reimbursement for the entire amount for the volumes that exceed their usual average consumption by 80%, up to a maximum of Euro 10,000.

Participation in the fund is not compulsory, and customers may withdraw at any time by simply asking to do so.

The "leak fund" is exclusively designed to cover the additional costs incurred by customers that have a water leak.

WATER LEAK FUND (THOUSANDS OF EURO)



LEAK FUND AND CUSTOMERS THAT HAVE BENEFITED FROM THE FUND

	2019	2020	2021
Funds disbursed (thousands of Euro)	19,790	19,331	19,901
Customers that have benefited from the fund (no.)	13,576	12,996	14,031
Average reimbursement (Euro)	1,458	1,487	1,418

The fund's balance as at 31 December 2021 was negative, at about Euro -4.7 million (including interest income for previous fiscal years). The balance, for 2021 alone, was negative by Euro -1.1 million. Approximately Euro 19.9 million were used against an allocated fund of Euro 18.8 million.

The effect of the growth in the number of leaks downstream of meters, which became apparent significantly from the summer of 2017, continued over subsequent years and was also confirmed in 2021, in which the highest value of refunds issued was recorded since the fund was introduced. Despite the changes applied since 01/01/2019 (a new method of charging the share of participation fee was implemented starting from this date, which consists of a fixed fee of Euro 10/year per contract and a variable fee of Euro 5/year per property unit served) made it possible to increase the annual fee available to users, the number of events reported by users in recent years has been so high that it did not allow the planned recovery.

During 2021, the effects of the new company procedure set up in 2020 became evident. The procedure was introduced to streamline the time it takes to report presumed leaks to users (following detection and analysis of the meter reading) and to reduce water loss time and, therefore, reimbursement through the fund.

As a result of more efficient reporting, average reimbursements dropped from around Euro 1,487 to Euro 1,418 per leak, that is, around Euro 70 less per leak, which, multiplied by over 14 thousand reimbursements, made it possible to control the gap between reimbursements and charges.

Since the fund is exclusively designed to benefit its participating customers, and since the monthly balances were almost negative in 2021, no interest was calculated. Since its creation, the fund has reimbursed more than **92 thousand users with reimbursements of Euro 130 million**. During 2021, 14,031 users (+7.9% compared to the previous year) benefited from the fund with an average reimbursement of Euro 1,418 (+4.6% compared to 2020). Less than 4% of customers is not covered by the "leak fund". During 2021, 111 customers withdrew from the fund.

The Leak Fund Regulation is planned to be updated in 2022, supplementing it with the minimum protections defined by Arera Resolution 609/2021. With this resolution, the Authority introduced certain minimum levels of protection in the event of hidden leaks downstream of the meter. Therefore, the updated Leak Fund Regulations will necessarily have to include not only reimbursement methods compatible with the provisions of Arera, but also reimbursement mechanisms to allow settlement of the current imbalance of the amounts paid in favour of users.

The leak fund contributes to achieving **target 6.b of the UN's 2030 Agenda**.

When
environmental
and social
sustainability go
hand-in-hand

Hera continues to be committed to initiatives dedicated to the support and social inclusion of people in difficulty and in disadvantaged conditions, through the following initiatives that have proven to be effective.

The **RAEEbilitando** project, initiated in 2010 with the collaboration of Consorzio Remedia, Opera dell'Immacolata Onlus (OPIMM) and Tred Carpi Srl, continued its activity until 30 June 2018, when the protocol expired. The partners then agreed to terminate the activity, which had been carried out in the Bologna Laboratory, to allow OPIMM to plan and implement a set of measures to restructure the premises and to reorganise the logistical management of the spaces used for the various activities carried out within the Laboratory. In this period, young people and adults in disadvantaged conditions worked in the laboratory devoting all their energy and their commitment to disassembling no less than **132 thousand kilograms of small electrical and electronic equipment** into about 20 smaller parts, thus ensuring for each part the most appropriate type of recovery and/or recycling. At the end of 2019, the OPIMM Association had confirmed that it intended to resume operation of the Project in July 2020 and that it had started the procedures for obtaining the new authorisation. The difficulties linked to the health emergency of 2020-2021 weighed heavily on this project, since the safe working conditions required for the assisted people could not be met; however, the agreements taken and the willingness to cooperate remain intact, pending the resumption of operations.

The **Manolibera** project commenced in 2011 thanks to the collaboration between the Forlì prison, Hera and the Techne training institute, drawing from the idea of local artists particularly interested in environmental respect, eco-sustainability and social rehabilitation. A large room available inside the Forlì prison was used to create a workshop, in the form of an original artisan paper mill. Inmates work here every day for 15 hours/week making greeting cards, Christmas cards, photo albums, picture frames, large and small notebooks and other paper products of high artistic value. The exclusivity of its production methods - entirely handmade according to an ancient Arab-Chinese technique - and the refined decoration make these products unique, refined and imbued with an important artistic, social, and ecological value that makes them particularly appreciated in the wedding planning field. Thanks to the collaboration with the Cils Cooperative of Cesena, which is responsible for monitoring and checking the work done in the workshop, and with the Berti bookbindery in Forlì, which deals with the commercial management and marketing development aspects of the project, the workshop is able to support its own work and help inmates with appropriate training courses. The collaboration with the national network of prison economics "Freedhome", the concept store dedicated to the excellence of Italian prison economics, helps to give broad visibility to the project. The workshop has developed a wide range of products for weddings and important events: elegant invitations and refined thank-you cards, photo albums complete with boxes, precious wedding favours, frames and paintings. These products were presented at leading fairs and events for the "ceremonies sector". The health emergency situation has caused problems to the sector and the laboratory's activities are not yet back to full capacity. Nevertheless, during 2021, a total of seven inmates were involved in the activities, while more than 40 people have been involved since the start of the project.

The **RAEEincarcere** project continued to be carried out in the prisons of Bologna and Ferrara, while it was concluded in Forlì. The project was launched back in 2008 and aims to promote the social and working inclusion of disadvantaged men and women who are detained in order to help them return to legality and the civil life of their community. Initially developed together with the prisons of Bologna, Ferrara and Forlì thanks to a study and joint collaboration between Hera and the Techne training institute, the project received support from the Regional Government of Emilia-Romagna and involved National Consortia of producers of electrical and electronic equipment, as well as financial players operating in the local areas involved. In the four workshops set up inside and outside the prisons, prisoners attend training and advanced training activities, learning the skills and knowledge necessary to disassemble small and large waste electrical and electronic equipment from the collection streams handled or organised by Hera. Since the project started, **no less than 35 former inmates** have been hired or have been helped to find jobs in local companies, and more than 115 have been able to attend internships and training courses for occupational integration. Considerable environmental benefits have also been obtained from the project: over this period, the workshops have treated **about 5.638 tons of waste electrical and electronic equipment**, which was fragmented into small pieces and sent separately and entirely for recovery.

Upon conclusion of the RAEEincarcere project in the Forlì prison, the promoters of the project, including Hera, decided to transform this partnership into a research laboratory offering new projects to help prisoners return to society. For this purpose, they entered into a new protocol called **Internships**, which started in 2021.

In 2021, the **Informatica Solidale** project - set up in 2018 together with the Techne training institute - was concluded. The purpose of the project was to promote computer literacy and reintegration into work and society, with the further objective of promoting the reuse of assets with residual potential for use. The project envisaged that Hera would donate its IT equipment (no longer suitable for its own business

Sustainable strategy and Shared value	Pursuing carbon neutrality	Regenerating resources and closing the loop	Enabling resilience and innovating
Governance and creation of value	Customers	People	Suppliers

and therefore to be disposed but perfectly able to satisfy the basic needs of users such as those identified and protected by the Project) and Techne would take care of the functional updating and testing, the identification of the recipients and the management of the deliveries. The recipients of such "regenerated" IT equipment were identified mainly among institutional, public and private local organisations, whose vocation is to support the inclusion and integration of disadvantaged people through services and initiatives (educational, training, empowerment) that can find real benefit and strengthening from the availability of appropriate technological tools. In this context, the donated equipment made it possible to set up computer labs at schools, cooperatives/social enterprises, and social promotion associations, prisons, and education centres for adults at risk of "social exclusion". In 2021, the remaining 50 computers of the 100 donated by Hera in 2019, were assigned. Techne gave the equipment to organisations (cooperatives, social promotion associations, prisons) that had requested it on the basis of a suitable training project, but above all to schools that used it, with great benefits to all, in the remote learning courses due to the health emergency. The "Informatica Solidale" project once again contributed to social support and environmental protection.

New procedures for the procurement of IT equipment by Hera, based on the "product as a service" model, means that Hera no longer disposes of IT equipment at the end of its life. As a consequence, this led to interruption of the project.

The projects described in this case study contribute to achieving **targets 8.5, 12.2, 12.4, 12.5, and 17.17 of the UN's 2030 Agenda**.

Adherence to the Manifesto for Energy Poverty

In December 2021, the Hera Group signed the "**Manifesto for combating energy poverty**", promoted by Banco dell'Energia. The aim of the initiative is to raise awareness among the public and institutional representatives and implement concrete actions to address situations of vulnerability with regard to this topic, through the creation of a network of stakeholders who share Banco's mission. The multi-utility has always provided a wide range of instruments to help families who are experiencing financial hardship, especially following the rising prices on global energy markets. Several options were made available: **social bonuses, water tariff per capita** based on the actual number of family components, and **payment of bills in instalments**. The voluntary support tools provided by Hera often further complement the provisions established by sector regulations: alternative instalments, social bonuses for the district heating service, application of memoranda of understanding with municipalities and social services to avoid suspensions. All this information is summarised in the **SOSTegno Hera guide** available on the Group's website and periodically updated.

For further information, please refer to paragraph "[Hera's contribution to social inclusion](#)".

Job creation and development of new skills

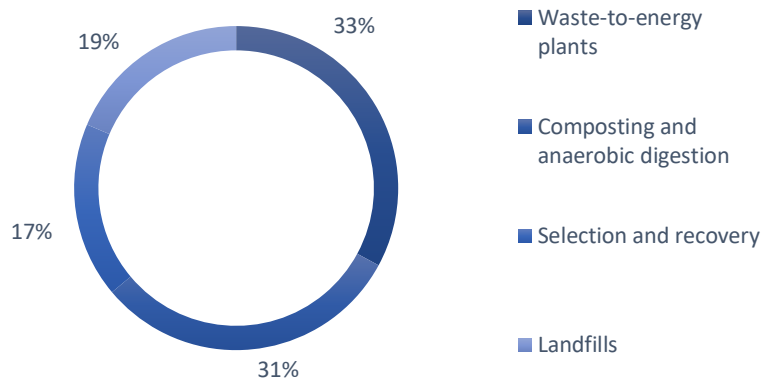
Plant visits for over six thousand people

Through its subsidiary Herambiente Spa, the Hera Group offers **guided tours of its waste treatment and recovery plants** as proof of its attention to environmental issues and the **spread of an environmentally responsible mindset**. The guided tours can also be booked online from the Herambiente website and are designed to spread knowledge about **one of the most advanced plants in Europe** in terms of operating and quality standards and to inform whoever is interested about how the plants operate and are run. The tour describes the methods used to ensure proper waste management, with full respect for the local area, and the solutions adopted to ensure a low overall impact on the environment.

In 2021, **468 visitors** spread over **40 days** visited the Herambiente Group plants. The visits involved waste-to-energy plants (154 visitors), composting and anaerobic digestion plants (145), landfills (87) and selection and recovery plants (82). The figures are down with respect to previous years due to restrictions caused by the health emergency.

In addition, for several years Hera has been offering schools the possibility of organising "**virtual**" **tours of the plants**. This made it possible to continue activities even after the health emergency of 2021, when it was no longer possible for visitors to learn about the plants on site. By doing so, students can listen remotely to an environmental instructor who illustrates the various phases of the plant's operation. There were **6,570 virtual visitors** in 2021, organised as follows: 2,585 participants in waste-to-energy plants and selection and recovery plants, 2,025 in purification plants, and 1,906 in cogeneration plants.

PHYSICAL VISITS BY PLANT TYPE



The tours of the plants contribute to achieving targets **4.7, 6.b and 12.8 of the UN's 2030 Agenda**, as well as target 17.17 **thanks to the involvement of citizens**.

ECOgames: the digital games that are good for the environment!

Edutainment or **educational entertainment** is Hera Group's new frontier for teaching proper separate waste collection in a fun way.

A new platform of games was developed in 2021 which, together with the IIRifiutologo App, became a favourite among the youngest.

Environmental Memory Game, Ecological Labyrinth and **Falling Waste**: these three educational games of the ECOgames series, with their pixelart retro style, offer players a fun and engaging experience, testing their knowledge of separate waste collection and giving general tips/fun facts about the environment through quiz questions and answers.

Created in the local areas where the Hera Group provides waste management services, the ECOgames series launched a prize competition for the top 10 winners in each city: players were able to test and build their green profile from **apprentice, informed, aware to expert** in separate waste collection.

Since 26 October 2021, the date of its launch at the Ecomondo trade fair, many events have been organised to disseminate the game and make the platform known to citizens. In just two months, between 26 October (date of launch) and 31 December (end-date of competition), **ECOgames totalled 13,434 players**, 3,415 of which had registered with the competition, with an average duration of interactive involvement exceeding 9 minutes per person.

The ECOgames project described above contributes to achieving **target 11.3 of the UN's 2030 Agenda**.

Governance and creation of value

The new AlfabEtico continues in 2021

AlfabEtico was introduced in 2008 and addresses all new permanent Group employees. Its aim is to ensure that workers are familiar with the Code of Ethics and to promote positive behaviour, guiding workers towards proper and informed conduct.

In 2020, a redesigning process was launched that took into account both the important discontinuity presented in the fifth edition of the Code of Ethics and the changes in the external environment, including those related to the health emergency. The aim was to **further strengthen its effectiveness** by guaranteeing the distinctive traits of the training process in a dynamic, interactive virtual game enriched with new contents lasting 2.5 hours. The agenda is composed of the following contents: **an introductory video of the Chief Executive Officer** with the launch of the training initiative, **in-depth analysis of the Code of Ethics and the Ethical and Sustainability Committee, individual session** in which participants are asked questions on standard situations for which consultation of the Code of Ethics is called for, **plenary session** where participants engage in discussion to solve cases, ethical dilemmas always on the basis of the contents of the Code and **video insights on the UN 2030 Agenda**.

The **provision of training continued in 2021 in digital mode** (please refer to the section "[Training initiatives](#)") and **an individual e-learning version** of AlfabEtico was designed which follows the same contents of the virtual game and which will be used from 2022.

Hera best multi-utility in the Dow Jones Sustainability Index

The Hera Group was also recognised in 2021 as the **world's best multi-utility** in terms of Environmental, Social and Governance (ESG) aspects by S&P Global, which every year selects the companies to be included in the **Dow Jones Sustainability Index**. In particular, for the second year running, Hera was included in both the global index (Dow Jones Sustainability World Index) and in the European index (Dow Jones Sustainability Europe Index), ranked top in the "Multi-utility and water" sector.

Hera further raised the industry benchmark, reaching a total score of **90/100** (an improvement compared to 87/100 in 2020), against an average of 39/100. The scores obtained were 92/100 in the Environment domain (industry average: 37/100), 90/100 in Economic & Governance (industry average: 40/100) and 88/100 in Social (industry average: 38/100), with a leading position in all three areas subject to assessment.

Hera had already broken all records in 2020, being included in the two above-mentioned indexes after just two years of assessment, while on average it takes companies about 8.5 years to enter.

This recognition was made possible thanks to the **strategy** focussed on sustainability and the creation of **shared value** which the Group has employed for the last 20 years.

Hera among the best multi-utilities in terms of ESG ratings by S&P Global Ratings

Following the entry to the World and Europe Dow Jones Sustainability Indexes, Hera is confirmed among the companies most attentive to sustainability and ESG aspects at international level.

In fact, **Hera's Esg Evaluation** was published in 2021, created by the Sustainable Finance analysts of **S&P Global Ratings**. This is a cross-industry assessment of a company's capability to effectively manage, in the medium and long-term, its exposure to environmental, social and governance risks, as well as seize the opportunities deriving from the changes that occur in the constantly evolving international context.

Hera is the first company in Italy to have published its ESG Evaluation, which obtained an overall score of 81/100, placing it in the top fifteen best companies at international level assessed by S&P Global Ratings. The score obtained (81) is higher than the international (68) and European (73) average and places the Hera Group in fifth place among Utility Networks at international level (the industry average is 74).

In particular, in the ESG Evaluation, Hera is judged to be highly prepared to implement the growth and development strategy, by dealing with the potential risks stemming from the regulations of an economy geared towards the circular model, low emissions and support for the resilience of its well-diversified business model.

Building the future together, a report dedicated to community engagement activities

Hera Group implements concrete projects, through which it involves and collaborates with **citizens, institutions, companies and the third sector in favour of the areas in which it operates**, in the interest of the environment and future generations. These projects are illustrated in the thematic sustainability report "Building the future together", the report is in its fourth edition. The document is dedicated to initiatives in which local communities, involved or enabled by Hera, **take an active role to contribute to the achievement of fundamental objectives in terms of sustainability, efficiency and social inclusion**.

Company and community get involved together generating a long-term relationship and a tangible environmental and/or social impact. Involvement can take place through collaboration with local organizations to create initiatives in which the union of different realities makes it possible to produce benefits for society and the environment. In other cases, Hera empowers customers and citizens by providing tools and knowledge that allow to produce a positive impact on the environment and society and to acquire new awareness. In cases where involvement is greater, Hera involves citizens and customers in initiatives that produce value for the territory.

In addition to working with citizens, local authorities, associations and organizations, **collaborations with other companies** also play a fundamental role in the success of initiatives that bring benefits to society and the environment. The multi-utility, for example, has launched a partnership with Eni to transform the spent vegetable oil collected by Hera into biofuel. In 2020, more than 1,000 tons of oil were sent for recovery.

People

Implementation of physical security in the Group's offices

The Hera Group has taken its physical assets into due consideration ever since its establishment. The growing awareness by Group management on this topic, owing to the increase in malicious actions against its assets, as well as the growing attention by national and international institutions, not to mention possible reputation damage, has led the company to decide to implement and enforce a risk assessment model, for the physical security of its assets. The model is designed to ensure the correct identification, measurement, management and monitoring of the risks threatening the Group's assets, including all necessary measures to prevent and mitigate the threats and impacts caused by fire, regardless of the causes (intentional, negligent or accidental). The decision to adopt a risk assessment model was also prompted by an increasingly structured and complex regulatory framework, as well as the increased activities of technical and regulatory standardisation bodies, requiring considerably greater attention and professional expertise on the matter.

Based on the above and on the risk monitoring results, an overall technical-management project was drawn up, including an investment plan, which was shared with the internal departments and approved by the Corporate Risk Committee. The project:

- guarantees a uniform minimum standard of security for the entire Group through the application of consistent, standardised and modular countermeasures;
- applies advanced technological solutions in compliance with regulations, standards and good practices;
- centrally manages contracts (infrastructure, maintenance and services) ensuring proper standardisation and optimisation of intervention costs;
- makes use of synergies, skills and resources within the Hera Group.

The aim of the project is to reduce the risks threatening the Group's assets. To achieve this a central management function ensures a uniform minimum standard of protection for the entire Group through the application of homogeneous, technologically advanced countermeasures in compliance with regulations and standards. It also coordinates the performance of contracts (for systems, infrastructure, maintenance and services) in order to standardise and optimise procurement costs.

In addition, the project makes full use of the synergies, skills and resources within the Hera Group such as:

- centralisation of the alarm reception point in a control room with viewing of all alarms/alerts regarding the assets, allowing for better management of the event as well as trust services;
- identification in Acantho of the network and system manager and the global contractor for system installation and maintenance and for related surveillance service activation.

In terms of innovation and digital transformation, the Physical Security project has identified important synergies with the Group's Digital Identity project (please refer to the case study in this chapter), particularly as regards the access control process. The digital identity project envisages the creation of a central software platform regulating access to all Group sites through the development of virtual access credentials with high intrinsic security (which can be installed with an app on smartphones or using the company badge) and the implementation of innovative mechatronic systems (cylinders and locks with an onboard electronic component for opening without the need for mechanical keys) to ensure high access security levels at the entrances to industrial sites and plants. In 2021, the call for tenders for the supply of the mechatronic components was concluded and the technological infrastructure and security services were implemented on a sample site. The physical security plan developed by the Group envisages investments of more than Euro seven million over a six-year period.

Circularity, resilience and sustainability also in Hera Group offices

A number of activities were carried out in 2021 to better handle the return to activities following the health emergency.

All the activities started in 2020 regarding the **hygiene and liveability of work environments** were completed, both in terms of offices and of eating areas and canteens. This made it possible to continuously use the production facilities while maintaining strict control of prevention measures: 50% of employees worked in the offices for ordinary activities, while operational services were fully covered.

In addition to completing the studies together with the Milan Polytechnic on the quality and **cleaning of the air ventilation ducts** in the offices, the roughly 30 new air treatment units installed at the end of 2020 were put into service and regulated. This ensured robust stability during system operation in the summer period since the requests for intervention were drastically reduced and there were no significant operation interruptions.

Key focus was also given to the **sanitation and cleaning of work environments**. The canteens were able to address the critical situation caused by the pandemic, proving to be safe environments, as confirmed by the controls carried out by the Local Health Authorities. This was also thanks to the new

supplier in charge of internal canteen management which started to work after the awarding of the tender at the end of 2020.

In the "services to individuals" area, the **installation** of all **recycling bins** in the main offices was completed and the structured monitoring and management of data on the quality of recycled waste was started.

In 2021, the Imola and Modena offices were involved in **seismic improvement activities**; furthermore, the activities to **make the changing rooms of the operational offices more convenient and comfortable** was continued.

For **energy saving** purposes, the expected projects were completed, leading to a saving of 29 toe compared to 2020, exceeding expectations. In addition, the activities regarding the reuse of water resources for irrigation and vehicle washing were completed, reaching savings of 1,270 m³ compared to 2020.

Regarding the **efficiency of the heating systems**, initial extraordinary and urgent works were completed at the Viale Berti Pichat site in Bologna. The entire heating/cooling water distribution network was replaced and all the main offices began to be carefully examined in order to detect the state of the network and prevent any breakage and malfunctioning. The benefits of these works will be measured and accounted for at the end of the 2021/2022 heating season.

With regard to **new constructions**, the following were started: renovation of the changing rooms at the Giugnano a Gaggio Montano (Bologna) and Imola Casalegno sites, and construction of the new HeraTech laboratories in Ravenna, which will be operational in the first months of 2022. The construction of a new public car park in Imola Molino Rosso was also started and completed in 2021. This activity, which was defined in the programme agreement with the Municipality of Imola and the Metropolitan City of Bologna, was the last activity for completion of the urban settlement of Hera's Molino Rosso site in the Municipality of Imola. With the conclusion of works, Hera completed its obligations under the aforementioned agreement entered into in 2006.

Thanks to HeraSolidale, Euro 250 were raised for seven Organisations

HeraSolidale seeks to promote solidarity and support **social and environmental** projects by **involving Hera Group's workforce, its customers and the company**.

The fourth edition of the project (launched in 2020) continued in 2021 and will last until December 2022. The fourth edition of the project involved Group employees who voted for five out of the 15 organisations chosen by the company, according to the following criteria: **reputation and transparency of activities, contribution to one or more goals of the UN's 2030 Agenda, and intervention areas of relevance to Hera services** (accessory criterion).

A new feature of the fourth edition of HeraSolidale is the identification of **two Non-Profit Organisations dealing with environmental sustainability**, in line with the commercial offering of the Group and of Hera Comm - a key partner for the success of HeraSolidale, in addition to the **five Non-Profit Organisations** voted by workers, for a total of **seven Organisations**. Unlike the other editions, the fourth edition of HeraSolidale will last three years.

Already at the end of the second year 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:** purchase of 5,000 saliva tests that the association uses to select potential bone marrow donors and register them with the Italian Register. There are many people that, every year, need a transplant to fight diseases such as lymphoma and leukaemia.
- **ANT Italia Non-Profit Foundation - "Children in ANT". The second goal was achieved:** free home medical care for 12 children with cancer and 4 months of psychological support also for minors coping with the illness of a person they care for; 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 first goal was achieved:** support for a literacy school in Ghana consisting of the purchase of school material and help with the costs of utilities and staff salaries.
- **Marevivo Non-Profit Organisation - "Let's save our seas from plastic". First goal achieved:** commitment to collect 500 kg of plastic in a year, equal to 100,000 plastic bags or 1,250,000 straws, 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. Sogni's special hospital visits". First goal achieved:** 9 months of visits by Dr. Sogni 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:** creation of a tree nursery in Madagascar, with the production and distribution of 2,500 plants to 75 farmers and their families who will receive agro-forestry training.
- **UNHCR - “Education of the children of Chad”.** **First goal achieved:** a year of schooling to around 1,000 refugee children in Chad aimed at improving teacher training, supplying teaching materials and promoting education for girls.

Just as happened for the third edition of the project, in addition to Group **employees** who can take part either by donating a monthly amount withheld directly from their payslip, or through Hextra - the integrated company welfare system -, the project also involved external stakeholders. **New Hera customers** can donate 1 Euro to one of the seven organisations when they sign a contract with Hera.

Furthermore, the Hera Group will give an important contribution through Hera Comm and Hera Comm Marche which will donate 1 Euro for every new customer during the three years of the project.

Between July 2020 and December 2021, **approximately Euro 250 thousand** were collected: roughly Euro 81 thousand donated by employees through payslip withdrawals and Hextra and about Euro 168 thousand donated by customers, Hera Comm and Hera Comm Marche.

To support the HeraSolidale project, in 2021 the company also decided to involve workers in donating a symbolic sum when individual employees decide to redeem company mobile phones and tablets for personal use.

In 2021, the Hera Group also joined the **Community Social Fund of the Metropolitan City of Bologna**, a new welfare tool that gathers resources, assets, projects and ideas to meet citizens' financial and social needs, particularly those that have emerged as a result of the health emergency.

Thanks to the partnership with the Organisations involved and with the public administration, the projects mentioned above contribute to the achievement of **target 17.17 of the UN's 2030 Agenda**.

Digital identity for everyone

The project creates and assigns a Group **digital identity** to all employees. The approach previously adopted, based on which digital services were available only if strictly related to work activities, has changed: this project identifies a minimum set of digital services and, implicitly, a digital identity that all Group employees must have **regardless of their work activity**. These services are: the internal corporate portal, the company e-mail, the corporate collaboration systems of the Microsoft 365 package, and the "SAM" corporate services app.

The devices used for accessing digital identity were extended, and at the end of the project included:

- personal company workstation;
- shared company workstation;
- personal PC;
- company mobile phone or tablet;
- personal mobile phone or tablet;
- PPE totem.

In terms of **training**, a first-time access guide was handed out during distribution, including identity details (login name, e-mail, etc.). Reference was then made in the guide to the training provided for use of the minimum services on the internal training portal (MyAcademy).

Regarding communication, media coverage was given to the initiative, reaching all the project participants both through articles in the paper House Organ (the Group's internal magazine) and through posters in all available offices. Lastly, the distribution process was adjusted to take account of new recruits.

During the initial phase of recovering employees who were not provided with a digital identity, the project involved around 2,000 users. As at 31 December 2021, **81% of project participants** had set up their digital identity and around 28% were using it at least twice a week; 29% had downloaded the intune app.

The aim of the project was to **bridge an initial gap in the digital divide**, namely the availability of services. The challenge for the next years will shift towards the use of services by focusing on training and, more specifically, change management.

Digital identity contributes to achieving **target 8.2 of the UN's 2030 Agenda**.

How does the project contribute to responsible digital transformation? The benefits achieved in the Corporate digital responsibility dimensions (please refer to the dedicated section "Corporate digital responsibility")

Social		Delivery of secure solutions in keeping with privacy regulations 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. Wide-ranging communication channels using digitalisation as a tool to provide workers with all protective measures ensuring their health and safety.
Technological		Secure solutions delivered to the entire workforce to ensure IT security and responsible use of technology, thus reducing exposure to external interference.

Suppliers

The supplier monitoring plan with a focus on social responsibility

During 2021, **more than 20 questionnaires for Corporate Social Responsibility assessment** were further received from suppliers deemed as critical in terms of activities and contractual amounts. The documents were examined and steps were taken to request clarification and additions for incomplete or missing parts.

In addition, in 2021, **eight audits were carried out with a focus on social responsibility**, all at the suppliers' premises: in several cases, specific audits were necessary to check that the agreed improvement process had actually started and that corrective actions had been taken. **30 additional audits** were carried out directly at the Hera Group worksites by the Procurement and Tenders Department, jointly with the Quality, Safety & Environment Department of Hera, Herambiente, AcegasApsAmga and Marche Multiservizi. The audits at the premises of suppliers were carried out by **certified external personnel with references**, selected by means of private negotiation, so as to ensure a transparent and independent process adopted by the Group.

These monitoring activities supplement the periodic checks of the company contract contact individuals, also with regard to the correct handling of subcontracting and the like, where present.

The circular economy in the supply chain

In 2019, the Hera Group implemented a project aimed at managing the transition of the Group's purchasing models in line with the principles of the circular economy, based on the "Resolve" model proposed by the **Ellen MacArthur Foundation** and kick-starting some pilot projects for the next year (worksite management, purchase of meters, tyres and plastic products for waste collection - e.g. small bags and containers).

In 2020, the Procurement and Tenders Department, together with a number of companies in the energy and environmental sector, took part in a work group organised by the **Global Compact Network Italia**, in collaboration with the Università Superiore S. Anna di Pisa, with the goal of defining the guidelines for circular procurement. On conclusion of the works, **Guidelines were drawn up and published** which the Hera Group has acknowledged in the Operating Instruction on procurement sustainability (operational since 2013), introducing the key principles of Green Circular Procurement alongside environmental and social sustainability principles.

More specifically, having reaffirmed the procurement activity principles (with respect to current legislation on tenders, alignment of the entire supply chain to the goals, equality of treatment of suppliers, transparency and traceability of purchases, free competition and rotation of suppliers), four key principles relating to circularity were identified: eco-efficiency, dematerialisation, renewability and recyclability. These principles can be organised into **technical reward criteria** during the tenders awarded with the most economically advantageous bid method, or organised into specific technical specifications when planning the requirements. A reporting model was also developed with the goal of monitoring the impact of the projects started up: in particular, in accordance with what has already been done to monitor the use of sustainability criteria in awards, the technical criteria relating to the principles of the circular economy were mapped.

In continuity with the previous years, also in 2021, provision was made for **circularity criteria for over 90% of the tenders awarded according to the most economically advantageous bid method**, with an average score of 8.3. Considering this score, the value of tenders with the most economically advantageous bid method attributable to circularity criteria stood at 12.5%.

The main tenders awarded **at the lower price with elements of circularity** envisaged in the technical specifications are reported below:

With the purpose of monitoring and optimising the consumption of the Hera Group's vehicles, an open procedure was called for the supply of black boxes, with a starting price for the tender of roughly Euro 1.7 million. These devices enable the collation and processing of data on the mode of transport and the driver's driving style (e.g. acceleration and deceleration, gear change and engine revs) with the goal of optimising consumption and preventing maintenance work.

In private negotiations relating to the performance of remediation works and networks enhancement linked to the Municipality of Bagno di Romagna, with a starting tender price of roughly Euro 3.5 million, with a view to boosting the eco-efficiency of the lifting plant, systems will be adopted for monitoring loads and levels, in order to prevent malfunctions and promptly intervene on those already identified. The technological equipment, together with the provision of a detailed maintenance plan, aim to extend the useful life of the plant and delay its disposal and replacement. The successful tenderer is also required to possess the Emas certification for tender eco-management.

In the private tender for the performance of the non-hazardous special waste recovery service (wood and wood packaging) for a starting auction price of roughly Euro 450 thousand, the waste is assigned to authorised plants which enhance the wood and turn it into goods ready to be introduced to the market (e.g. chipboard panels), actually replacing the raw material deriving from the cutting down of trees.

In the private tender for the performance of the inert urban waste recovery service for a starting auction price of roughly Euro 186 thousand, the waste material originating from construction sites (e.g. cement, bricks, tiles and ceramics) collected in a separated manner at the collection centres in the territory of Modena, is assigned to authorised plants that re-use it as an alternative to other raw materials and re-inject it in the production cycle in the form of additional construction materials.

In 2021, the circularity reporting with the lowest price bid method was extended to all purchases of the Hera Group. By applying the new model of circularity reporting, it is estimated that in the tenders awarded in 2021 with the lowest price bid method, the value generated by circularity elements stood at almost Euro 10 million, equal to 4% of the total value.

As a whole, considering both the tenders awarded with the most economically advantageous bid method and the tenders awarded to the bids with the greatest discounts, the portion of the value of awards connected with circularity elements stood at**9.5% of the value** of all tenders awarded in 2021.

GREENHOUSE GASES: METRICS AND TARGETS

Calculation criteria for GHG emissions

To estimate Scope 1 emissions, the following emission factors have been used: the Ministry of the Environment's coefficient (expressed in CO₂e) for natural gas consumption in stationary plants, and the Defra 2021 coefficients (expressed in CO₂e) for fuel consumption for industrial purposes (diesel, LPG) and in vehicles (diesel, petrol, natural gas, LPG).

Greenhouse gas emissions from landfills have been estimated by considering the methane contained in the biogas that comes out from the landfills and the carbon dioxide resulting from the combustion of the captured biogas, and subtracting the amounts corresponding to the presence of biodegradable matter. For waste-to-energy plants, the estimate considered 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's Fifth Assessment Report).

To estimate electricity consumption emissions (Scope 2), Ipsra's "National Inventory Report 2021" coefficients have been applied for the location-based method and the AIB's "European Residual Mixes, Results for calendar year 2020" for the market-based method (expressed in CO₂e).

The Defra 2021 coefficients (expressed in CO₂e) have been used to estimate Scope 3 emissions, except for emissions from the sales of electricity from non-renewable sources, for which the coefficients of Ipsra's "National Inventory Report 2021" have been used.

The item "Sale of natural gas - downstream" considers emissions deriving from the consumption by customers of the gas sold. The item "Sale of electricity" considers the emissions deriving from the consumption of fuels involved in the generation of the electricity sold to customers (net of the portion of renewable electricity). The item "Sale of natural gas - upstream" considers the emissions deriving from the production of gas sold to customers. The item "Emissions related to energy production and consumption" includes: (i) the production of gas consumed in industrial cogeneration plants installed at third parties' premises (upstream); (ii) the emissions produced by the Tamarete, Teverola and Sparanise joint venture plants (downstream); (iii) electricity network losses (upstream); (iv) the production of fuels involved in the generation of the electricity consumed internally (net of the portion of renewable energy) (upstream). The item "Other indirect emissions" includes: (i) the production of fuels consumed in Group vehicles (upstream); (ii) the use of vehicles by suppliers for waste collection (upstream); (iii) the use of vehicles by suppliers for waste transportation (upstream); (iv) the recycling of glass, plastic and paper sent for recovery and sold (downstream); (v) the printing of bills (upstream).

[305-3]

INDIRECT GREENHOUSE GAS EMISSIONS

tonnes of CO ₂ e	2019	2020	2021
Emissions from the purchase of goods and services	129	169	173
Emissions related to fuel and energy consumption	5,407,633	4,996,684	4,273,095
Emissions from the use of leased assets	85,192	75,489	91,715
Total Scope 3 emissions – upstream	5,492,953	5,072,342	4,364,983
Emissions from treatment of products sold	375,645	341,213	409,862
Emissions from the use of products and services sold	6,263,529	5,914,966	6,214,300
Emissions from investments made	363,280	284,494	327,561
Total Scope 3 emissions – downstream	7,002,454	6,540,672	6,951,723
Total indirect emissions – Scope 3	12,495,407	11,613,015	11,316,706

Sustainable strategy and Shared value	Pursuing carbon neutrality	Regenerating resources and closing the loop	Enabling resilience and innovating
Governance and creation of value	Customers	People	Suppliers

EMISSION INDICATORS

Indicator	2019	2020	2021	Target 2025	Target 2030
Scope 1 direct emissions (kt CO ₂ e)	1,082.6	986.2	981.8	927	814
Scope 1 emissions under Eu-Ets regime (% compared to Scope 1 total)	15.0%	12.1%	15.1%	N/A	N/A
Indirect Scope 2 emissions from consumption of electricity (market-based) (kt CO ₂ e)	48.4	44.4	46.6	0	0
Scope 1+2 emissions (kt CO ₂ e)	1,131.0	1,030.6	1,028.4	902	814
Scope 1+2 emissions (% reduction compared to 2019)	-	-8.9%	-9.1%	-20%	-28%
Scope 3 indirect emissions from sale of natural gas (downstream) (kt CO ₂ e)	6,263.5	5,915.0	6,214.3	5,344	4,384
Scope 3 indirect emissions from sale of natural gas (downstream) (% reduction compared to 2019)	-	-5.6%	-0.8%	-15%	-30%
Scope 3 indirect emissions from the sale of electricity (t CO ₂ e)	4,386.7	4,195.8	3,170.3	2,526	2,141
Scope 3 indirect emissions from the sale of electricity (% reduction compared to 2019)	-	-4.4%	-27.7%	-42%	-51%
Total emissions – Scopes 1+2+3* (kt CO ₂ e)	11,781.2	11,141.3	10,413.0	8,772	7,422
Total emissions – Scopes 1+2+3* (% reduction compared to 2019)	-	-5.4%	-11.6%	-26%	-37%
Total avoided or offset emissions (kt CO ₂ e)	2,335.9	2,204.0	2,543.3	N/A	N/A
<i>Of which: emissions avoided</i>	-	1,946.3	1,960.5	N/A	N/A
<i>Of which: offset emissions</i>	-	257.6	582.8	N/A	N/A

*The Scope 3 value reported relates to the sale of natural gas (downstream) and to the sale of electricity.

EMISSION INTENSITY INDICES

Indicator	2019	2020	2021	Target 2025	Target 2030
Carbon intensity index of electricity sales (t CO ₂ e from electricity sales / MWh electricity sold)	0.365	0.342	0.281	0.241	0.183
Carbon intensity index of electricity sales (t CO ₂ e from electricity sales / MWh electricity sold) (% reduction compared to 2019)	-	-6.3%	-23.2%	-34%	-50%
Carbon intensity index of revenues (t CO ₂ e Scope 1+2 / revenues in millions of Euro)	152	137	94	N/A	N/A
EBITDA carbon intensity index (t CO ₂ e Scope 1 + 2 emissions / EBITDA in millions of Euro)	1,042	918	842	N/A	N/A
Carbon intensity index per resident served (t CO ₂ e Scope 1+2 / residents)	261	244	244	N/A	N/A
Carbon intensity index per customer (t CO ₂ e Scope 3 / thousands of customers)	N/A	5.2	5.0	N/A	N/A

Sustainable strategy and Shared value	Pursuing carbon neutrality	Regenerating resources and closing the loop	Enabling resilience and innovating
Governance and creation of value	Customers	People	Suppliers

RISKS AND OPPORTUNITIES

Indicator	2019	2020	2021	Target 2025	Target 2030
Hera EBITDA aligned with EU taxonomy (climate mitigation and adaptation) (% on eligible EBITDA)	-	-	90%	N/A	N/A
Hera revenues aligned with EU taxonomy (climate mitigation and adaptation) (% on eligible revenues)	-	-	93%	N/A	N/A
EBITDA CSV Energy Driver (millions of Euro)	85.5	136.6	225.1	N/A	N/A
EBITDA CSV Environment Driver (millions of Euro)	260.2	240.1	292.0	N/A	N/A
EBITDA CSV Local area (and Business) Driver - Resilience and adaptation (millions of Euro)	71.7	74.5	93.0	N/A	N/A

INVESTMENTS AND CAPITAL DEPLOYMENT

Indicator	2019	2020	2021	Target 2025	Target 2030
Hera CAPEX aligned with EU taxonomy (climate mitigation and adaptation) (% on eligible CAPEX)	-	-	89%	N/A	N/A
Hera OPEX aligned with EU taxonomy (climate mitigation and adaptation) (% on eligible OPEX)	-	-	93%	N/A	N/A
Investments CSV Energy Driver (millions of Euro)	30.6	28.2	85.0	N/A	N/A
Investments CSV Environment Driver (millions of Euro)	188.0	110.3	164.3	N/A	N/A
Investments CSV Local area (and Business) Driver - Resilience and adaptation (millions of Euro)	78.2	159.0	203.4	N/A	N/A

REMUNERATION

Indicator	2019	2020	2021	Target 2025	Target 2030
Share of BSC premium linked to CSV Energy Driver (% of total variable remuneration)	-	4%	4%	N/A	N/A
Share of BSC premium linked to CSV Environment Driver (% of total variable remuneration)	-	11%	13%	N/A	N/A
Share of BSC premium linked to CSV Local area (and Business) Driver - Resilience and adaptation (% of total variable remuneration)	-	8%	7%	N/A	N/A

Sustainable strategy and Shared value	Pursuing carbon neutrality	Regenerating resources and closing the loop	Enabling resilience and innovating
Governance and creation of value	Customers	People	Suppliers

OTHER TCFD METRICS - ENERGY

Indicator	2019	2020	2021	Target 2025	Target 2030
ISO 50001 energy saving measures (% reduction compared to 2013)	-5.1%	-6.2%	-6.8%	-8%	-10%
Internal consumption of electricity from renewable sources (%)	82.8%	83.0%	82.3%	100%	100%
Contracts at year-end with energy efficiency solutions (% of total electricity and gas contracts, excluding safeguard, default and last resort)	20.1%	20.2%	23.0%	28%	>34%
Electricity from renewable sources sold to free market customers (% of volume sold)	30.0%	32.9%	40.1%	41%	>50%
Natural gas sold with CO ₂ offsetting (% of volumes sold excluding wholesalers, default service and last resort supply)	0.8%	4.4%	9.1%	21%	27%
Photovoltaic power sold (kW)	-	-	850 kW	N/A	N/A
Energy production from renewable sources (GWh)	708.4	710.5	695.5	N/A	N/A
Biomethane generation (Mm ³)	6.5	7.8	8.0	17	>30
District heating energy mix from renewables, cogeneration and turbogas (%)	70%	68%	71%	77%	N/A
<i>of which: from renewable sources (%)</i>	36%	36%	36%	44%	N/A
<i>of which: from cogeneration and turbogas (%)</i>	34%	32%	36%	33%	N/A
Housing unit equivalents served by district heating (no.)	88,307	90,415	91,410	N/A	N/A
Nexmeter smart meters installed (no.)	0.0	19,800	80,000	300,000	N/A
Public and private charging stations installed for electric mobility (no.)	170	404	1,058	4,000	N/A

OTHER TCFD METRICS - RESOURCES

Indicator	2019	2020	2021	Target 2025	Target 2030
Waste sent for material and energy recovery (t)	361,577	329,603	344,360	355,882	N/A
Waste sent for material and energy recovery (%)	83.2%	81.4%	80.8%	88.2%	N/A
Plastic recycled by Aliplast (thousands of tonnes)	72.8	68.8	80.9	134	152
Reduction in internal water consumption (%)	-5.5%	-11.9%	-16.6%	-20%	-25%
Water network leakages (m ³ /km/day)	10.2	9.8	-	10	9.4
Reusable purified wastewater (%)	3.4%	5.2%	6.0%	8.5%	15%
Water contracts with water consumption diary (% of total residential customers)	-	20%	27%	N/A	N/A

METHODS OF MANAGEMENT OF MATERIAL TOPICS

[103-2] The following table describes the management methods and policies for each material topic identified by the Hera Group, as specified in the chapter "Methodological guide to the Report", and their evaluation processes.

[103-3]

Further information on sustainability management and management systems/policies can be found in the sections "Sustainability and risk management" and "The quality, safety, environmental and social responsibility management system" (chapter "Governance and creation of value").

Description of material topic	Management methods and policies	Processes for evaluating policies and management methods
Transition towards a circular economy	Management systems: - ISO 14001 environmental certification - A Circular Economy Project Management System (Afnor) is being implemented Policies: - Quality and sustainability policy - Code of Ethics and related implementing systems (Ethics and Sustainability Committee and its functioning regulations) Declarations of commitment: - New Plastics Economy Global Commitment of the Ellen Mac Arthur Foundation - European strategy for plastics - voluntary pledges 2030 UN Agenda: Goal 12	The Group's activities, commitments, objectives, targets and initiatives in relation to this issue are reported in the section "Transition to a circular economy" ("Environment" chapter). The paragraph also includes the following benchmarks: comparison of separate collection indicators with national performance; comparison of waste destination with Italy and Europe; comparison of network losses with national average and main Italian utilities. The management of this material issue affects the HERA Group's performance in the Esg ratings described in the "Shareholders" chapter.
Reduction of greenhouse gas emissions (climate change)	Management systems: - ISO 14001 environmental certification - ISO 50001 Energy efficiency certification Policies: - Quality and sustainability policy Declarations of commitment: - Greenhouse gas emission reduction targets for 2030 approved by SBTi - Drafting of this report and, specifically, of the "Climate Change Mitigation" paragraph in line with the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) and the European Commission's Guidelines on reporting climate-related information. - Annual participation in CDP project 2030 UN Agenda: Goal 13	The Group's activities, commitments, objectives, targets and initiatives in relation to this issue are reported in the section "Climate change mitigation" ("Energy" chapter). The Sustainability Report shows the final results of the four targets in line with the "well below 2 degrees" reduction scenario approved by SBTi. The management of this material issue affects the HERA Group's performance in the Esg ratings described in the "Shareholders" chapter.

Sustainable strategy and Shared value	Pursuing carbon neutrality	Regenerating resources and closing the loop	Enabling resilience and innovating
Governance and creation of value	Customers	People	Suppliers

Description of material topic	Management methods and policies	Processes for evaluating policies and management methods
Integration of climate change in the governance, the strategy and the analysis of the risks	Management systems: - ISO 14001 environmental certification - ISO 50001 Energy efficiency certification Policies: - Quality and sustainability policy Declarations of commitment: - Greenhouse gas emission reduction targets for 2030 approved by SBTi - Drafting of this report and, specifically, of the "Climate Change Mitigation" paragraph in line with the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) and the European Commission's Guidelines on reporting climate-related information. - Annual participation in CDP project 2030 UN Agenda: Goal 13	The Group's activities, commitments, objectives, targets and initiatives in relation to this issue are reported in the section "Climate change mitigation" ("Energy" chapter). The Sustainability Report describes Hera's governance system, strategy and identified risks/opportunities in relation to climate change. The external scenarios used to outline defined risks and opportunities and the initiatives and management methods identified to respond to opportunities and risks are also reported in detail. The management of this material issue affects the HERA Group's performance in the Esg ratings described in the "Shareholders" chapter.
Resilience and adjustment	Management systems: - ISO 9001 quality certification - ISO 22301 Business continuity management system being implemented Policies: - Quality and sustainability policy 2030 UN Agenda: Goal 13, 11	The Group's activities, commitments, objectives, targets and initiatives in relation to this issue are reported in the section "Resilience and adaptation" ("Area" chapter). The management of this material issue affects the HERA Group's performance in the Esg ratings described in the "Shareholders" chapter.
Quality, costs of waste collection and city integrity service	Management systems: - ISO 9001 quality certification Policies: - Quality and sustainability policy Declarations of commitment: - New Plastics Economy Global Commitment of the Ellen Mac Arthur Foundation - European strategy for plastics - voluntary pledges 2030 UN Agenda: Goal 12	The Group's activities, commitments, objectives and targets in relation to this issue are reported in the sections "Transition to a circular economy" ("Environment" chapter) and "Service costs" ("Customers" chapter). The paragraph also includes the following benchmarks: comparison of separate collection indicators with national performance; comparison of waste destination with Italy and Europe; comparison of network losses with national average and main Italian utilities. In the section "Service Costs", the development of the cost of bills from one year to the next is explained for its main components. This section also includes a comparison of the cost of environmental services for Hera's domestic and non-domestic customers compared to the average for Italy, northern Italy and major Italian municipalities.
Promotion of energy efficiency and spreading renewable energy	Management systems: - ISO 50001 Energy efficiency certification - ISO 14001 environmental certification Policies: - Quality and sustainability policy - Code of Ethics and related implementing systems (Ethics and Sustainability Committee and its functioning regulations) 2030 UN Agenda: Goals 7, 13	The Group's activities, commitments, objectives, targets and initiatives in relation to this issue are reported in the sections "Promotion of energy efficiency" and "Energy transition and renewables" ("Energy" chapter). The management of this material issue affects the HERA Group's performance in the Esg ratings described in the "Shareholders" chapter.
Digitalisation,	Management systems:	The Group's activities, commitments,

Sustainable strategy and Shared value	Pursuing carbon neutrality	Regenerating resources and closing the loop	Enabling resilience and innovating
Governance and creation of value	Customers	People	Suppliers

Description of material topic	Management methods and policies	Processes for evaluating policies and management methods
innovation, data analytics, artificial intelligence, cyber security	- ISO 9001 quality certification - Iso 27000 series information security certification (Acantho) Policies: - Quality and sustainability policy - Data protection policy 2030 UN Agenda: Goals 9, 11	objectives, targets and initiatives in relation to this issue are reported in the section "Innovation and digitalisation" ("Area" chapter). The management of this material issue affects the HERA Group's performance in the Esg ratings described in the "Shareholders" chapter.
Safety, cost and continuity of the service provided to customers	Management systems: - ISO 9001 quality certification - ISO 22301 Business continuity management system being implemented Policies: - Quality and sustainability policy	The Group's activities, commitments, objectives and targets in relation to this issue are reported in the sections "Service costs", "Service quality" and "Safety and continuity of the service" ("Customers" chapter). The paragraph also includes the following benchmarks: comparison between the change in Hera bills over the years, comparison between spending on consumption of bottled or tap water, % of compliance with commercial quality standards (ARERA).
Sustainable management of water resources	Management systems: - ISO 14001 environmental certification - ISO 9001 quality certification - AWS certification for the Val di Setta potability treatment plant Policies: - Quality and sustainability policy Declarations of commitment: - UN CEO Water Mandate 2030 UN Agenda: Goal 6	The Group's activities, commitments, objectives, targets and initiatives in relation to this issue are reported in the section "Sustainable management of water resources" ("Environment" chapter). The section 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 on water leaving purification plants that comply with the law. The management of this material issue affects the HERA Group's performance in the Esg ratings described in the "Shareholders" chapter.
Air and soil quality	Management systems: - ISO 14001 environmental certification - EMAS registration for several sites with waste treatment plants Policies: - Quality and sustainability policy - Code of Ethics and related implementing systems (Ethics and Sustainability Committee and its functioning regulations) 2030 UN Agenda: Goal 11	The Group's activities, commitments, objectives, targets and initiatives in relation to this issue are reported in the section "Sustainable management of water resources" ("Environment" chapter). The section also includes the following benchmarks: atmospheric emissions of waste-to-energy plants compared to legal limits (detail per parameter and per plant), atmospheric emissions of waste-to-energy plants compared to permit limits, atmospheric emissions of the Imola cogeneration plant with legal and permit limits, comparison of the percentage of low environmental impact vehicles between Hera and the main Italian utilities. The management of this material issue affects the HERA Group's performance in the Esg ratings described in the "Shareholders" chapter.
Training and professional development,	Management systems: - ISO 9001 quality certification - ISO 45001 health and safety certification	The Group's activities, commitments, objectives, targets and initiatives in relation to this issue are reported in the section

Sustainable strategy and Shared value	Pursuing carbon neutrality	Regenerating resources and closing the loop	Enabling resilience and innovating
Governance and creation of value	Customers	People	Suppliers

Description of material topic	Management methods and policies	Processes for evaluating policies and management methods
remuneration and incentives	- ISO 37001 corruption prevention certification. - Sa8000 social responsibility certification and Sa8000-inspired management systems Policies: - Quality and sustainability policy - Remuneration policy 2030 UN Agenda: Goal 8	"Management of skills and training", "Development of individuals" and "Welfare" (chapter "People"). The following benchmark is also included in the sections: comparison of average hours per capita in the main Italian utilities. The management of this material issue affects the HERA Group's performance in the Esg ratings described in the "Shareholders" chapter.
Local development of the area, indirect economic impacts and social inclusion	Management systems: - Sa8000 social responsibility certification and Sa8000-inspired management systems Policies: - Quality and sustainability policy - Code of Ethics and related implementing systems (Ethics and Sustainability Committee and its functioning regulations) Declarations of commitment: - Patto Utilitalia for inclusion in the company 2030 UN Agenda: Goal 8	The Group's activities, commitments, objectives, targets and initiatives in relation to this issue are reported in the section "Economic development and social inclusion" ("Area" chapter). The management of this material issue affects the HERA Group's performance in the Esg ratings described in the "Shareholders" chapter.
Quality and consumption of the mains water	Management systems: - ISO 14001 environmental certification - ISO 9001 quality certification - ISO 17025 accreditation of laboratories Policies: - Quality and sustainability policy 2030 UN Agenda: Goal 6	The Group's activities, commitments, objectives, targets and initiatives in relation to this issue are reported in the sections "Sustainable management of water resources" ("Environment" chapter) and "Service quality" ("Customers" chapter). The section 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 on water leaving purification plants that comply with the law. The management of this material issue affects the HERA Group's performance in the Esg ratings described in the "Shareholders" chapter.
Occupational Health and Safety	Management systems: - Sa8000 social responsibility certification and Sa8000-inspired management systems - ISO 45001 occupational safety certification Policies: - Quality and sustainability policy - Code of Ethics and related implementing systems (Ethics and Sustainability Committee and its functioning regulations)	The Group's activities, commitments, objectives and targets in relation to this issue are reported in the sections "Health and safety" (chapter "People") in relation to employees and "Contract management" (chapter "Suppliers") in relation to suppliers. The section also includes the following benchmarks: frequency index comparison in the main Italian utilities. The management of this material issue affects the HERA Group's performance in the Esg ratings described in the "Shareholders" chapter.
Diversity	Management systems: - Sa8000 social responsibility certification and Sa8000-inspired management systems	The Group's activities, commitments, objectives, targets and initiatives in relation to this issue are reported in the sections "Economic development and social inclusion"

Sustainable strategy and Shared value	Pursuing carbon neutrality	Regenerating resources and closing the loop	Enabling resilience and innovating
Governance and creation of value	Customers	People	Suppliers

Description of material topic	Management methods and policies	Processes for evaluating policies and management methods
	Policies: - Quality and sustainability policy - Remuneration policy - Code of Ethics and related implementing systems (Ethics and Sustainability Committee and its functioning regulations) Declarations of commitment: - Charter for equal opportunities and equality in the workplace (furthered by the Italian Ministry of Employment and the Italian Ministry for Equal Opportunities, Sodalitas Foundation, Impronta Etica, AIDAF, AIDDA and UCID) - Manifesto Valore D, for female employment - Patto Utilitalia for inclusion in the company - Women's Empowerment Principles (WEPS) of UN Global Compact and UN Women 2030 UN Agenda: Goal 5	and "Job creation and development of new skills" ("Area" chapter). The section also includes the following benchmark: Women in positions of responsibility in the main Italian utilities. The management of this material issue affects the HERA Group's performance in the Esg ratings described in the "Shareholders" chapter.
Environmental impact of waste treatment plants (NIMBY syndrome)	Management systems: - ISO 14001 environmental certification - ISO 9001 quality certification - EMAS registration for several sites with waste treatment plants Policies: - Quality and sustainability policy - Code of Ethics and related implementing systems (Ethics and Sustainability Committee and its functioning regulations) 2030 UN Agenda: Goal 12	The Group's activities, commitments, objectives, targets and initiatives in relation to this issue are reported in the sections "Transition to a circular economy" and "Protection of air, land, and biodiversity" ("Environment" chapter). The section also includes the following benchmarks: atmospheric emissions of waste-to-energy plants compared to legal limits (detail per parameter and per plant), atmospheric emissions of waste-to-energy plants compared to permit limits, atmospheric emissions of the Imola cogeneration plant with legal and permit limits, comparison of the percentage of low environmental impact vehicles between Hera and the main Italian utilities. The management of this material issue affects the HERA Group's performance in the Esg ratings described in the "Shareholders" chapter.
Compliance with environmental and social regulations	Management systems: - ISO 14001 environmental certification - EMAS registration for several sites with waste treatment plants - Sa8000 social responsibility certification and Sa8000-inspired management systems Policies: - Quality and sustainability policy 2030 UN Agenda: Goals 11, 12	The Group's activities, commitments, objectives, targets and initiatives in relation to this issue are reported in the sections "Sustainable management of water resources" and "Protection of air, land, and biodiversity" ("Environment" chapter). The section also includes the following benchmarks: quality of purified water compared to legal limits, percentage of analyses on water leaving the purification plants that comply with the law, atmospheric emissions of waste-to-energy plants compared to legal limits (detail per parameter and per plant), atmospheric emissions of waste-to-energy plants compared to permit limits, atmospheric emissions of the Imola cogeneration plant with legal and permit limits. In addition, the section "Dialogue with our stakeholders" describes, where appropriate, the sanctions imposed on the Hera Group for non-

Sustainable strategy and Shared value	Pursuing carbon neutrality	Regenerating resources and closing the loop	Enabling resilience and innovating
Governance and creation of value	Customers	People	Suppliers

Description of material topic	Management methods and policies	Processes for evaluating policies and management methods
		compliance with environmental and social regulations.
		The management of this material issue affects the HERA Group's performance in the Esg ratings described in the "Shareholders" chapter.
Management of the supply chain	Management systems: - Sa8000 social responsibility certification and Sa8000-inspired management systems - ISO 9001 quality certification Policies: - Quality and sustainability policy - Code of Ethics and related implementing systems (Ethics and Sustainability Committee and its functioning regulations) Declarations of commitment: - Patto Utilitalia for inclusion in the company 2030 UN Agenda: Goal 8	The Group's activities, commitments, objectives, targets and initiatives in relation to this issue are reported in the section "Economic development and social inclusion" ("Area" chapter) and the "Suppliers" chapter. The management of this material issue affects the HERA Group's performance in the Esg ratings described in the "Shareholders" chapter.
Commercial relations with customers through branches, call centres and the web	Management systems: - ISO 9001 environmental certification Policies: - Quality and sustainability policy - Code of Ethics and related implementing systems (Ethics and Sustainability Committee and its functioning regulations)	The Group's activities, commitments, objectives, targets and initiatives in relation to this issue are reported in the section "Customer relations" ("Customers" chapter).
Economic value for the stakeholders	Management systems: - ISO 9001 quality certification Policies: - Code of Ethics and related implementing systems (Ethics and Sustainability Committee and its functioning regulations) - Quality and sustainability policy	The Group's activities, commitments, objectives, targets and initiatives in relation to this issue are reported in the section "Economic value for the stakeholders" ("Area" chapter).
Anti-corruption activities	Management systems: - Organisational model for corporate crime prevention (Italian Legislative Decree No. 231/2001) - ISO 37001 corruption prevention certification. Policies: - Code of Ethics and related implementing systems (Ethics and Sustainability Committee and its functioning regulations) - Corruption prevention model.	The Group's activities, commitments, objectives, targets and initiatives in relation to this issue are reported in the section "Sustainability and risk management" ("Governance and creation of value" chapter). The management of this material issue affects the HERA Group's performance in the Esg ratings described in the "Shareholders" chapter.

CORRELATION OF MATERIAL ISSUES AND RISKS IDENTIFIED BY ERM ANALYSIS

Material issues	Risks						
	Natural events - catastrophic and climate change events	Operational safety and ICT	Safety and development of individuals	Strategic	Economic-financial	Competitive and regulatory	Legislation and compliance
Transition towards a circular economy				✓		✓	✓
Reduction of greenhouse gas emissions (climate change)	✓			✓	✓	✓	
Integration of climate change in the governance, the strategy and the analysis of the risks			✓	✓			
Resilience and adjustment	✓	✓	✓	✓		✓	
Quality, costs of waste collection and city integrity service	✓	✓		✓		✓	
Promotion of energy efficiency and spreading renewable energy				✓		✓	
Digitalisation, innovation, data analytics, artificial intelligence, cyber security		✓	✓	✓			✓
Safety, cost and continuity of the service provided to customers	✓	✓	✓	✓			
Sustainable management of water resources	✓	✓		✓		✓	✓
Air and soil quality		✓		✓			✓
Training and professional development, remuneration and incentives			✓				
Local development of the area, indirect economic impacts and social inclusion				✓			
Quality and consumption of the mains water		✓		✓		✓	✓
Occupational Health and Safety	✓		✓			✓	✓
Diversity			✓	✓			
Environmental impact of waste treatment plants (NIMBY syndrome)	✓	✓		✓		✓	✓
Compliance with environmental and social regulations				✓		✓	✓
Management of the supply chain				✓			
Commercial relations with customers through branches, call centres and the web	✓	✓					
Economic value for the stakeholders	✓	✓	✓		✓	✓	✓

TABLES LINKING 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 (%)	64
	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	-	57
Fleet fuel management	IF-WM-110b.1	(1) Fleet fuel consumed, (2) percentage natural gas, (3) percentage renewables	Gigajoules (GJ), Percentage (%)	118
	IF-WM-110b.2	Percentage of alternative fuel vehicles in fleet	Percentage (%)	118
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)	110
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 (%)	92
Labor practices	IF-WM-310a.1	Percentage of active workforce covered under collective bargaining agreements	Percentage (%)	245
	IF-WM-310a.2	(1) Number of work stoppages and (2) total days idle	Number, Days idle	248
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	248
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 (%)	84
	IF-WM-420a.2	Percentage of customers receiving (1) recycling and (2) composting services, by customer type	Percentage (%)	74
	IF-WM-420a.3	Amount of material (1) recycled, (2) composted, and (3) processed as waste-to-energy	Metric tons (t)	92
	IF-WM-420a.4	Amount of electronic waste collected, percentage recovered through recycling	Metric tons (t), Percentage (%)	74

WASTE MANAGEMENT - ACTIVITY METRICS

	Activity metric	Unit of measure	Page
IF-WM-000.B	Vehicle fleet size	Number	118
IF-WM-000.C	Number of: (1) landfills, (2) transfer stations, (3) recycling centers, (4) composting centers, (5) incinerators, and (6) all other facilities	Number	92

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 (%)	38

Sustainable strategy and Shared value	Pursuing carbon neutrality	Regenerating resources and closing the loop	Enabling resilience and innovating
Governance and creation of value	Customers	People	Suppliers

Topic		Accounting metric	Unit of measure	Page
Distribution network efficiency	IF-WU-140a.2	Volume of non-revenue real water losses	Thousand cubic meters (m ³)	97
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 (€)	215
	IF-WU-240a.3	Number of residential customer water disconnections for non-payment, percentage reconnected within 30 days	Number, Percentage (%)	221
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	102
	IF-WU-250a.2	Discussion of strategies to manage drinking water contaminants of emerging concern	-	102
End-use efficiency	IF-WU-420a.2	Customer water savings from efficiency measures, by market	Cubic meters (m ³)	101
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 meters (m ³), Percentage (%)	102
	IF-WU-440a.2	Volume of recycled water delivered to customers	Thousand cubic meters (m ³)	100
	IF-WU-440a.3	Discussion of strategies to manage risks associated with the quality and availability of water resources	-	102
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	-	171

WATER UTILITIES AND SERVICES - ACTIVITY METRICS

	Activity metric	Unit of measure	Page
IF-WU-000.B	Total water sourced, percentage by source type	Cubic meters (m ³) Percentage (%)	102
IF-WU-000.E	Length of (1) water mains and (2) sewer pipe	Kilometers (km)	106

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 (€)	213
	IF-GU-240a.3	Number of residential customer gas disconnections for non-payment, percentage reconnected within 30 days	Number, Percentage (%)	221
Integrity of gas delivery infrastructure	IF-GU-540a.3	Percentage of gas (1) transmission and (2) distribution pipelines inspected	Percentage (%) by length	224

Sustainable strategy and Shared value	Pursuing carbon neutrality	Regenerating resources and closing the loop	Enabling resilience and innovating
Governance and creation of value	Customers	People	Suppliers

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	Kilometers (km)	224

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 (%)	64
	IF-EU-110a.2	Greenhouse gas emissions associated with power deliveries	Metric tons (t) CO ₂ e	64
	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	-	57
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 (%)	116
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 meters (m ³), Percentage (%)	116
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 (€)	214
	IF-EU-240a.3	Number of residential customer electric disconnections for non-payment, percentage reconnected within 30 days	Number, Percentage (%)	221
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	226

ELECTRIC UTILITIES AND POWER GENERATORS - ACTIVITY METRICS

	Activity metric	Unit of measure	Page
IF-EU-000.C	Length of transmission and distribution lines	Kilometers (km)	226
IF-EU-000.D	Total electricity generated, percentage by major energy source, percentage in regulated markets	Megawatt hours (MWh), Percentage (%)	50
IF-EU-000.E	Total wholesale electricity purchased	Megawatt hours (MWh)	52