



2019

Half-yearly
financial
report

June 30, 2019



Half-yearly financial report at June 30, 2019

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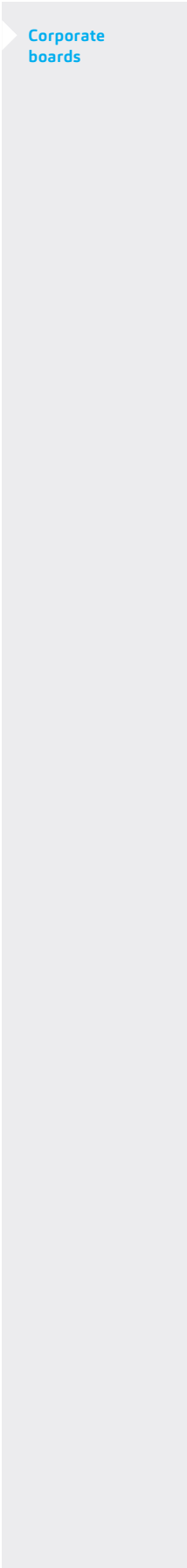
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This is a translation of the Italian original "Relazione finanziaria semestrale al 30 giugno 2019" and has been prepared solely for the convenience of international readers. In the event of any ambiguity the Italian text will prevail. The Italian original is available on the website www.a2a.eu.



Corporate boards



BOARD OF DIRECTORS

CHAIRMAN
Giovanni Valotti
DEPUTY CHAIRMAN
Stefania Bariatti
CEO AND GENERAL MANAGER
Luca Camerano
DIRECTORS
Giambattista Brivio
Giovanni Comboni
Enrico Corali
Luigi De Paoli
Alessandro Fracassi
Maria Chiara Franceschetti
Gaudiana Giusti
Secondina Giulia Ravera
Norberto Rosini

BOARD OF STATUTORY AUDITORS

CHAIRMAN
Giacinto Gaetano Sarubbi
STANDING AUDITORS
Maurizio Leonardo Lombardi
Chiara Segala
ALTERNATE AUDITORS
Sonia Ferrero
Stefano Morri

INDEPENDENT AUDITORS

EY S.p.A.





1

Key figures
of the A2A Group

Business Units

The A2A Group operates in the production, sale and distribution of gas and electricity, district heating, environmental services and the integrated water cycle.

These sectors are in turn attributable to the “Business Units” specified in the following scheme identified following the reorganization made by management:

Generation and Trading

- Thermoelectric and hydroelectric plants
- Energy Management

Market

- Sale of Electricity and Gas
- Energy efficiency
- Electric mobility
- Public lighting

Waste

- Waste collection and street sweeping
- Treatment
- Disposal and energy recovery

Networks and District Heating

- Electricity networks
- Gas networks
- Integrated water cycle
- District Heating services
- Heat management services

This breakdown into Business Units reflects the organization of financial reports regularly analyzed by management and the Board of Directors in order to manage and plan the Group’s business.

International

- Provision of know-how and technologies for the construction of waste pre-treatment plants

A2A Smart City

- Development and management of technological infrastructures for integrated digital services

Corporate

- Corporate services



1
**Key Figures of
the A2A Group**

Business Units

Geographical

areas of activity

Group structure

*Financial
highlights at June
30, 2019*

Shareholdings

*A2A S.p.A. on the
Stock Exchange*

*Alternative
Performance
Indicators (APM)*

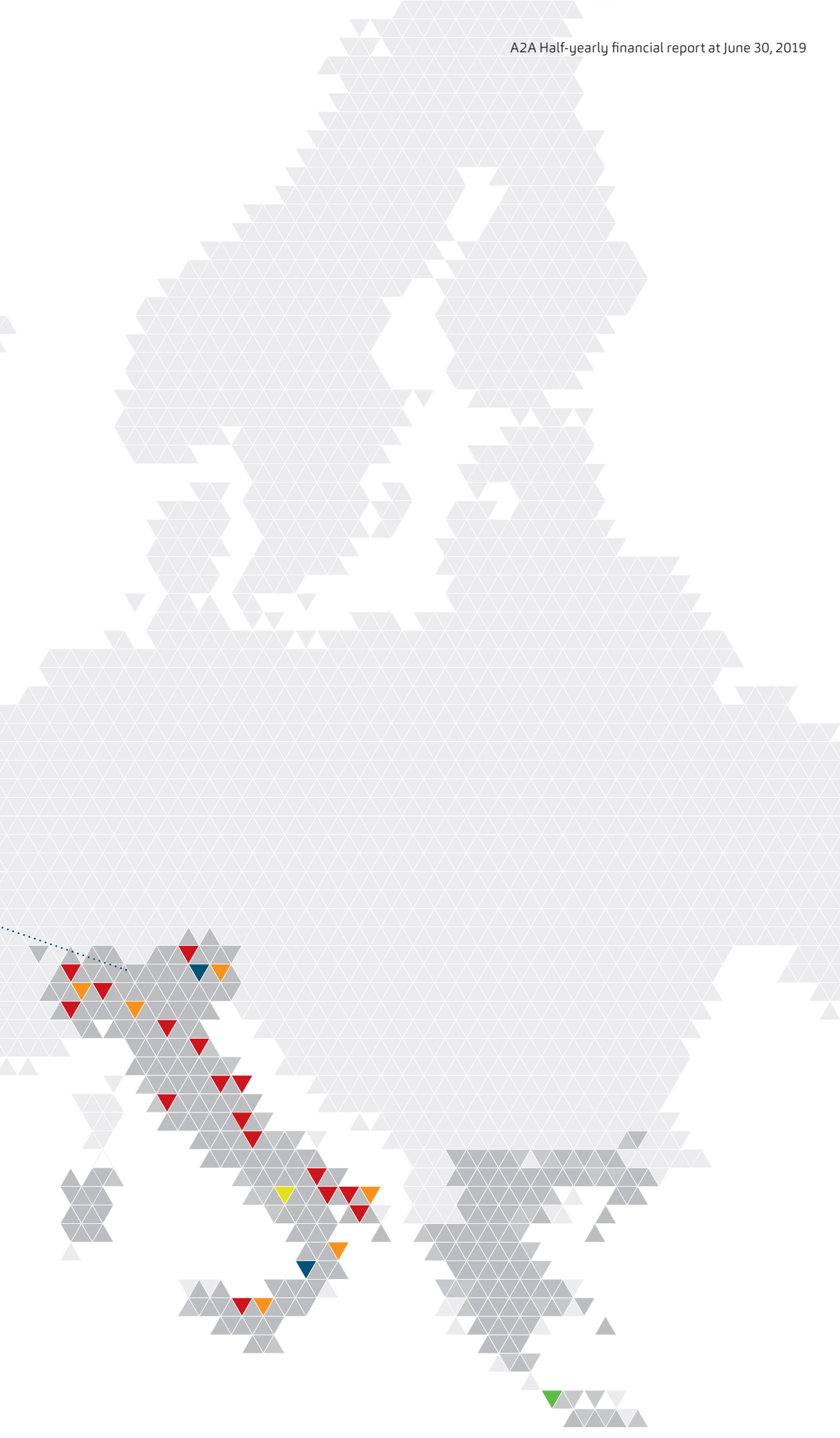


Geographical areas of activity

- Hydroelectric plants
- Thermoelectric plants
- Cogeneration plants
- Waste treatment plants
- Photovoltaic plants
- Technological partnerships

Updated to June 30, 2019





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**Key Figures of
the A2A Group**

Business Units

*Geographical
areas of activity*

Group structure

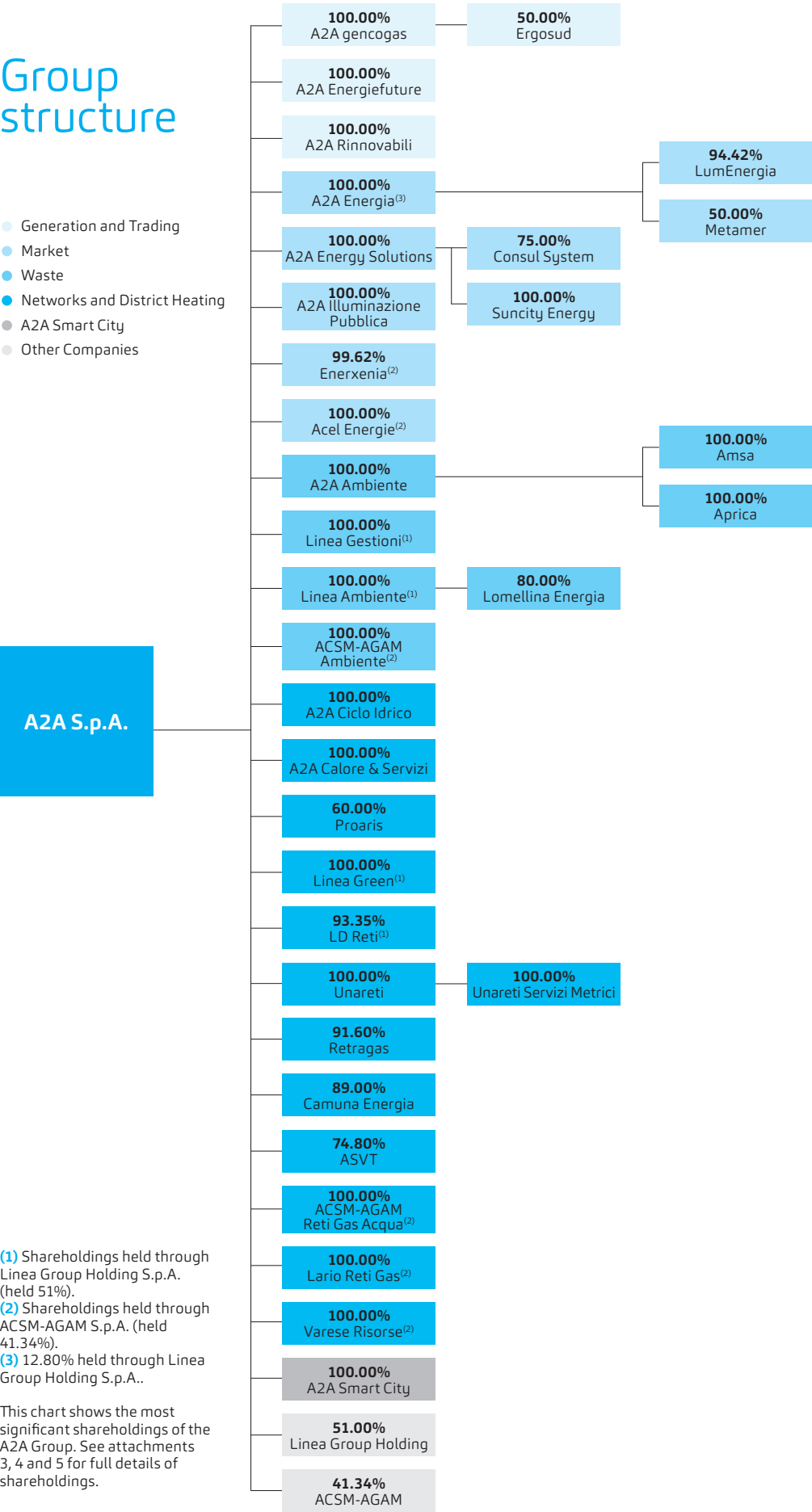
*Financial
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*Shareholdings
A2A S.p.A. on the
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*Alternative
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Group structure

- Generation and Trading
- Market
- Waste
- Networks and District Heating
- A2A Smart City
- Other Companies



(1) Shareholdings held through Linea Group Holding S.p.A. (held 51%).

(2) Shareholdings held through ACSM-AGAM S.p.A. (held 41.34%).

(3) 12.80% held through Linea Group Holding S.p.A..

This chart shows the most significant shareholdings of the A2A Group. See attachments 3, 4 and 5 for full details of shareholdings.

Financial highlights at June 30, 2019 (**)



3,711

millions of euro

REVENUES



582

millions of euro

GROSS OPERATING
INCOME



166

millions of euro

RESULT OF THE PERIOD

Income statement figures

millions of euro

	01 01 2019 06 30 2019	01 01 2018 06 30 2018
Revenues	3,711	3,081
Operating expenses	(2,775)	(2,090)
Labour costs	(354)	(334)
Gross operating income - EBITDA	582	657
Depreciations, amortization, provisions and write-downs	(255)	(221)
Net operating income - EBIT	327	436
Result from non-recurring transactions	-	6
Financial balance	(65)	(54)
Result before taxes	262	388
Income taxes	(87)	(120)
Net result from discontinued operations	-	4
Minorities	(9)	(5)
Group result of the period	166	267
Gross operating income/Revenues	15.7%	21.3%

1 Key Figures of the A2A Group

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Performance
Indicators (APM)

(**) The figures serve as performance indicators as required by CESR/05/178/B

Balance sheet figures <i>millions of euro</i>	06 30 2019	12 31 2018
Net capital employed	6,566	6,545
Equity attributable to the Group and minorities	3,450	3,523
Consolidated net financial position	(3,116)	(3,022)
Consolidated net financial position/Equity attributable to the Group and minorities	0.90	0.86

Financial data <i>millions of euro</i>	01 01 2019 06 30 2019	01 01 2018 06 30 2018
Net cash flows from operating activities	527	584
Net cash used in investing activities	(258)	(175)
Free cash flow (Cash Flow Statement figure)	269	409

Key indicators	06 30 2019	12 31 2018
Average 6-month Euribor	(0.279%)	(0.266%)
Average price of Brent (US\$/bbl)	66.1	71.6
Average of the PUN (Single Nationwide Price) Base load (Euro/MWh)	55.1	61.3
Average of the PUN (Single Nationwide Price) Peak load (Euro/MWh)	60.3	68.0
Average price of coal (Euro/tonne)	57.4	78.8
Average price of gas to the PSV (*) (Euro/MWh)	18.7	24.2
Average price of emission certificates EU ETS (**) (Euro/tonne)	23.9	15.9

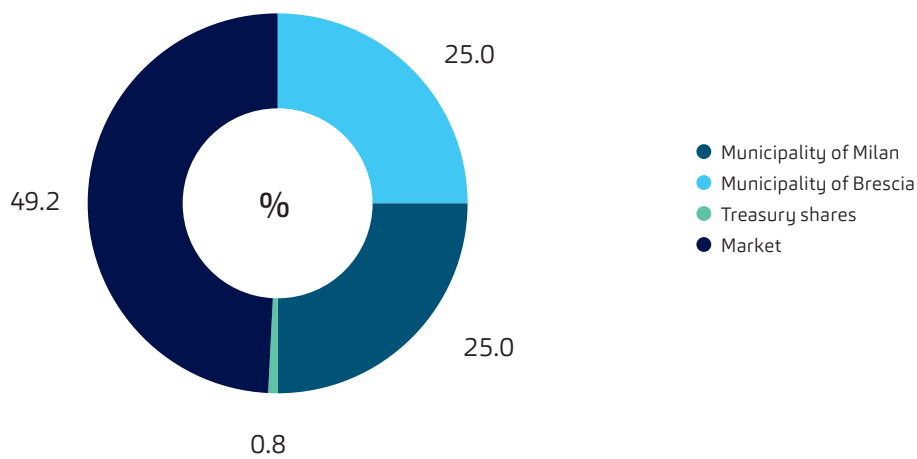
(*) Price of gas of reference for the Italian market

(**) EU Emissions Trading System

Group's key operational indicators	06 30 2019	06 30 2018
Generation and Trading		
Thermoelectric production (GWh)	5,767	5,865
Hydroelectric production (GWh)	1,857	2,086
Electricity sold to wholesale customers (GWh)	5,177	4,920
Electricity sold on the Power Exchange (GWh)	6,404	6,435
Market		
Electricity sold to retail customers (GWh)	6,500	5,133
POD Electricity (#/1000)	1,160	1,063
Gas sold to retail customers (Mcm)	1,392	986
PDR Gas (#/1000)	1,492	1,282
Waste		
Waste collected (Kton)	858	838
Residents served (#/1000)	3,586	3,528
Waste disposed of (Kton)	1,675	1,755
Electricity sold by waste-to-energy (GWh)	877	889
Networks and District Heating		
Electricity distributed (GWh)	5,833	5,878
Gas distributed (Mcm)	1,736	1,510
Water distributed (Mcm)	38	32
RAB Electricity (M€)	649	631
RAB Gas (M€)	1,423	1,194
Heat sales (GWht)	1,641	1,646
Cogeneration production (GWh)	195	194

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	Geographical areas of activity
	Group structure
	Financial highlights at June 30, 2019
	Shareholdings
	A2A S.p.A. on the Stock Exchange
	Alternative Performance Indicators (APM)

Shareholdings (*)



(*) Source CONSOB for stakes higher than 3% (update at June 30, 2019).

Key figures of A2A S.p.A.	06 30 2019	12 31 2018
Share capital (euro)	1,629,110,744	1,629,110,744
Number of ordinary shares (par value 0.52 euro)	3,132,905,277	3,132,905,277
Number of treasury shares (par value 0.52 euro)	23,721,421	23,721,421

A2A S.p.A. on the Stock Exchange

A2A S.p.A. in figures (Italian Stock Exchange)

Market capitalisation at June 30, 2019 (millions of euro)	4,781	
Share capital at June 30, 2019 (shares)	3,132,905,277	

	First six months of 2019	Last 4 quarters
Average market cap (millions of euro)	4,843	4,801
Average daily volumes (shares)	9,548,696	8,871,887
Average price (€/share)	1.55	1.53
Maximum price (€/share)	1.65	1.65
Minimum price (€/share)	1.43	1.40

Source: Bloomberg

A2A stock is also traded on the following platforms: Aquis, BATS, BlockMatch, Chi-X, Equiduct, ITG Posit, Liquidnet, Sigma-X, Tradegate, Tradeweb, Turquoise, UBS MTF.

On May 22, 2019 A2A distributed a dividend equal to 0.070 euro per share.

A2A forms part of the following indices

FTSE MIB
STOXX Europe
EURO STOXX
MSCI Europe Small Cap
WisdomTree International
S&P Global Mid Small Cap

Ethical Indices

FTSE4Good Index
ECPI Indices
Ethibel Sustainability Index Excellence Europe
EURO STOXX Sustainability Index
Euronext Vigeo Index: Eurozone 120
Standard Ethics Italian Index

Source: Bloomberg and company information

Moreover, A2A has been included in the Ethibel Excellence Investment Register and in the Ethibel Pioneer Investment Register.

In 2018 A2A obtained a B- rating on the CDP climate change and CDP Water questionnaires.

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Key Figures of
the A2A Group

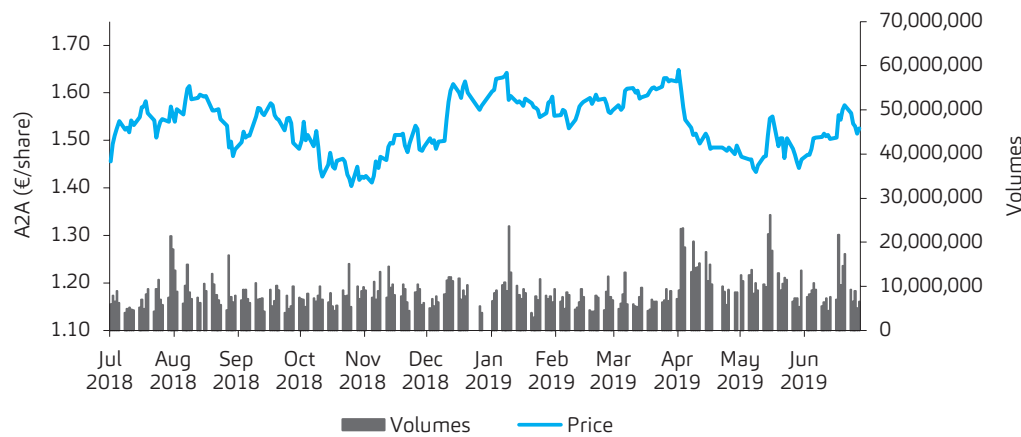
Business Units
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A2A S.p.A. on the
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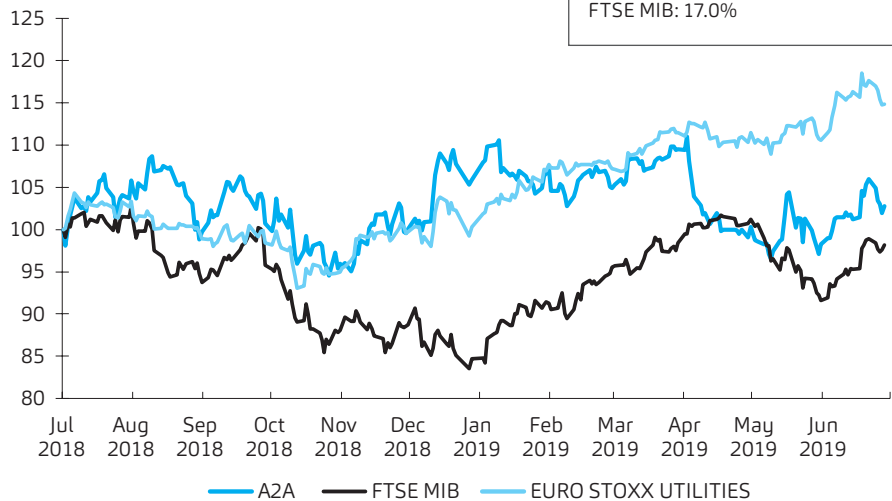
Alternative
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A2A: price and volumes



A2A vs FTSE MIB and EURO STOXX UTILITIES

(Price June 30, 2018 = 100)



Source: Bloomberg

Rating

		Current
Standard & Poor's	M/L Term Rating	BBB
	Short Term Rating	A-2
	Outlook	Stable
Moody's	M/L Term Rating	Baa2
	Outlook	Stable

Source: Rating agencies

Alternative Performance Indicators (APM)

In this Half-yearly financial report, a number of alternative indicators of performance (APM) have been used that are different from the financial indicators expressly provided for by the international accounting standards IFRS-EU adopted by the Group.

These alternative indicators are used by the A2A Group in order to more effectively submit information on the profitability of the business in which it operates as well as on the financial situation, useful to improve the overall capacity to assess financial and equity performance.

These indicators are shown in the "Summary of results and financial position of the A2A Group". For the Income Statement, the comparative figures refer to the values at June 30, 2018, while for the Balance Sheet, the comparative values refer to December 31, 2018.

With reference to alternative indicators, on December 3, 2015, Consob issued Communication no. 92543/15, which transposes the Guidelines on the use and presentation of alternative indicators of performance as part of regulated financial information, issued on October 3, 2015 by the European Securities and Markets Authority (ESMA). These Guidelines - which have updated the CESR Recommendation on alternative indicators of performance (CESR/05 - 178b) - are intended to promote the usefulness and transparency of alternative indicators to improve their comparability, reliability and understanding.

In accordance with the Guidelines, the descriptions, content and bases of calculation used for the construction of the alternative indicators of performance adopted by the Group are described below.

Gross operating margin

Gross operating margin is an alternative indicator of operating performance, calculated as the sum of "Net operating income" plus "Depreciation, amortization, provisions and write-downs".

This APM is used by the A2A Group as financial target in presentations both within the Group (Business Plans) and external (presentations to financial analysts and investors) and represents a useful measure to assess the operating performance of the Group (both as a whole and in terms of individual Business Unit), also through a comparison between the operating results of the reporting period with those relating to previous periods or years. This indicator also allows conducting analyses on operational trends and measure performance in terms of operational efficiency over time.

Result from non-recurring transactions

The **Result from non-recurring transactions** is an alternative performance indicator designed to highlight the capital gains/losses arising from the valuation at fair value of non-current assets sold and the results from the sale of equity investments in unconsolidated subsidiaries and associated companies and other non-operating income/expenses.

This indicator is positioned between net operating income and the financial balance. In this way net operating income is not affected by non-recurring operations, making it easier to measure the effective performance of the Group's ordinary operating activities.

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Alternative
Performance
Indicators (APM)

Net fixed assets

Net fixed assets is determined as the algebraic sum of:

- tangible assets;
- intangible assets;
- capex accounted for using the equity method and other non-current financial assets;
- other non-current assets and liabilities;
- deferred tax assets and deferred tax liabilities;
- provisions for risks, charges and liabilities for landfills;
- employee benefits.

This APM is used by the A2A Group as financial target in presentations both within the Group (Business Plans) and external (presentations to financial analysts and investors) and represents a useful measure of the net fixed assets of the Group as a whole, also through the comparison between the reporting period with those relating to previous periods or years.

This indicator also allows conducting analyses on operational trends and measure performance in terms of operational efficiency over time.

Working capital

Working capital is determined as the algebraic sum of:

- inventories;
- trade receivables and other current assets;
- trade payables and other current liabilities;
- current tax assets/tax liabilities.

This APM is used by the A2A Group as financial objective in presentations both within the Group (Business Plans) and external (presentations to financial analysts and investors); it represents a useful measure of the ability to generate cash flow from operations within a period of twelve months, also through the comparison between the reporting period with those relating to previous periods or years.

This indicator also allows conducting analyses on operational trends and measure performance in terms of operational efficiency over time.

Invested capital/Net invested capital

Invested capital/Net invested capital is calculated as the sum of Net fixed capital, Working capital and Assets/Liabilities held for sale.

This APM is used by the A2A Group as the financial target in presentations both within the Group (Business Plans) and external (presentations to financial analysts and investors); it represents a useful measure for the evaluation of total net assets, both current and fixed.

Sources of funds

Sources of funds are calculated by adding “Shareholders’ Equity” and “Total Net Financial Position”.

This APM is used by the A2A Group as financial target in presentations both within the Group (Business Plans) and external (presentations to financial analysts and investors) and represents the various sources by means of which the A2A Group is financed and the degree of autonomy that the A2A Group has in comparison with third party capital. This indicator also allows measuring the financial strength of the A2A Group.

Net financial position/Net financial debt

Net financial position/Net financial debt is an indicator of the financial structure, calculated as the sum of net financial position beyond one year and net financial position within one year. Specifically, total net financial position beyond one year is obtained from the algebraic sum of:

- Total medium and long-term debt: the item includes the non-current portion of bonds, bank loans, financial leasing and other non-current liabilities;
- Total medium and long-term financial receivables: this item includes Non-current financial assets (including those with related parties) and Other non-current assets.

Total current net debt is derived from the algebraic sum of:

- Total short-term debt: this item includes the portion due within twelve months of bonds, bank loans, financial leasing, current financial liabilities to related parties and other current liabilities;
- Total short-term financial receivables: this item includes Other current financial assets (including to related parties) and Other current assets;
- Cash and cash equivalents and Cash and cash equivalents included in assets held for sale

This APM is used by the A2A Group as financial objective in presentations both within the Group (Business Plans) and external (presentations to financial analysts and investors) and is useful for the purposes of measuring the Group's financial debt, also through the comparison between the reporting period with those relating to previous periods or years.

The net financial position of the A2A Group is calculated in accordance with Consob communication no. DEM/6064293 of July 28, 2006 and in accordance with Recommendation ESMA/2013/319.

Investments in tangible and intangible assets

Investments in tangible and intangible assets are extrapolated from the information contained in the Notes of the Balance Sheet.

This APM is used by the A2A Group as financial target in presentations both within the Group (Business Plans) and external (presentations to financial analysts and investors) and is a useful measure of the resources used in the maintenance and development of the investments of the A2A Group (as a whole and in terms of individual Business Unit), also through the comparison between the reporting period with those relating to previous periods or years. This allows the A2A Group to conduct analyses on investment trends and measure performance in terms of operational efficiency over time.

Investors should not place undue reliance on these APM and should not consider all APM as: (i) an alternative to operating or net profit as calculated in accordance with IFRS; (ii) an assessment of the Group's ability to meet cash needs alternative to as deduced from the cash flow from operating, investing or financing activities (as determined in accordance with IFRS); or (iii) an alternative to any other performance indicator provided by IFRS.

These alternative indicators of performance derive from the historical financial information of the A2A Group and are not intended to provide indications relating to future financial performance, financial position or cash flow of the Group. Moreover, these APM were calculated uniformly for all periods.

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**Key Figures of
the A2A Group**

Business Units

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Shareholdings

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*Alternative
Performance
Indicators (APM)*





2

Consolidated
results and report
on operations

Summary of results, assets and liabilities and financial position

Results

The consolidation scope at June 30, 2019 changed compared to the corresponding period of the previous year due to the following operations:

- line-by-line consolidation of the ACSM-AGAM Group as of July 1, 2018;
- acquisition and line-by-line consolidation, from December 2018 and March 2019 respectively, by the subsidiary A2A Rinnovabili S.p.A. of TS energy Italy S.r.l., the holding company of nine project companies owning photovoltaic plants, and Bellariva Enertel 07 S.r.l., the owner of a photovoltaic plant;
- acquisition by A2A Energy Solutions S.r.l. (100% owned by A2A S.p.A.) of 100% of Suncity Energy S.r.l. (line-by-line consolidation) and 26% of Suncity Group S.r.l. (consolidated using the equity method), groups active in the field of energy efficiency and dispatching;
- establishment and line-by-line consolidation of A2A Integrambiente S.r.l., 74% owned by A2A Ambiente S.p.A., 25% by Amsa S.p.A. and 1% by Aprica S.p.A., in order to provide environmental sanitation services;
- incorporation and line-by-line consolidation of the company Fair Renew S.r.l. held (60%), incorporated in July 2018;
- line-by-line consolidation of the company A2Abroad S.p.A., incorporated in December 2018;
- line-by-line consolidation of the company YADA ENERGIA S.r.l., incorporated in June 2019.

The income statement figures at June 30, 2019 are not comparable with those of the previous year following the line-by-line consolidation of the ACSM-AGAM Group and the exit of the Aspem Group from July 2018.

The results of the A2A Group at June 30, 2019 are set out below together with comparative figures for the half of the previous year.

<i>millions of euro</i>	01 01 2019 06 30 2019	01 01 2018 06 30 2018	Changes
Revenues	3,711	3,081	630
of which:			
- Revenues from the sale of goods and services	3,610	2,969	641
- Other operating income	101	112	(11)
Operating expenses	(2,775)	(2,090)	(685)
Labour costs	(354)	(334)	(20)
Gross operating income - EBITDA	582	657	(75)
Depreciation, amortization and write-downs	(245)	(213)	(32)
Provisions	(10)	(8)	(2)
Net operating income - EBIT	327	436	(109)
Result from non-recurring transactions	-	6	(6)
Net financial charges	(65)	(58)	(7)
Affiliates	-	4	(4)
Result before taxes	262	388	(126)
Income taxes	(87)	(120)	33
Result after taxes from operating activities	175	268	(93)
Net result from discontinued operations	-	4	(4)
Minorities	(9)	(5)	(4)
Group result of the period	166	267	(101)

2	Consolidated results and report on operations
	Summary of results, assets and liabilities and financial position
	Significant events during the period
	Significant events after June 30, 2019
	Outlook for operations

In the first half of 2019, the **Revenues** of the A2A Group amounted to 3,711 million euro, up 20.4% compared to the previous year.

The increase in revenues was mainly due to revenues from the sale of electricity, following higher sales on the free market, in particular large customers, revenues from gas sales thanks to higher volumes sold on the free market and intermediated on the wholesale market, higher unit prices for electricity, partially offset by lower revenues related to environmental markets.

The revenues of the ACSM-AGAM Group, consolidated as of July 2018, were 234 million euro.

EBITDA came in at 582 million euro, a decrease of 75 million euro with respect to the first half of 2018 (-11.4%). The consolidation of the ACSM-AGAM Group as of July 1, 2018 accounted for 36 million euro (the contribution of the former Aspem Group consolidated in the first half of 2018 was 9 million euro).

Net of non-recurring items (26 million euro in the first half of 2018; 7 million euro in the first half of 2019), EBITDA decreased by 56 million euro (-9%).

The following table highlights the composition by Business Unit:

<i>millions of euro</i>	06 30 2019	06 30 2018	Change	Change %
Generation and Trading	117	225	(108)	(48.0%)
Market	116	111	5	4.5%
Waste	135	136	(1)	(0.7%)
Networks and District Heating	223	192	31	16.1%
A2A Smart City	4	4	-	0.0%
International	(1)	-	(1)	n.s.
Other Services and Corporate	(12)	(11)	(1)	(9.1%)
Total	582	657	(75)	(11.4%)

The Gross Operating Margin of the Generation and Trading Business Unit amounted to 117 million euro, down 108 million euro on the first six half of the previous year. Net of the non-recurring items in the two periods considered (+3 million euro in 2019 and +7 million in 2018), the Ordinary Gross Operating Margin fell by 104 million euro.

The comparison with the first half of 2018 is significantly penalized by the exceptional results achieved in the previous year on the environmental markets (-94 million euro) and on the ancillary services market (MSD), following Terna's requests in the first quarter of 2018.

The resulting decline in margins, further amplified by the lower hydroelectric output recorded in the period (-11%), was nevertheless limited by the Business Unit thanks to good performance by combined-cycle plants (both in terms of volume and spread), the improved margins achieved in the photovoltaic sector and the contribution of the gas portfolio, which in 2018 was affected by a particularly penalizing scenario.

EBITDA of the Market Business Unit equalled 116 million euro (111 million euro in the first half of 2018).

Net of non-recurring items (+3 million euro in 2019 and +16 million euro in 2018), the Ordinary Gross Operating Margin of the Business Unit grew by 18 million euro (+19% compared to the first half of the previous year). The variation was brought about by a considerable increase in margins in the energy retail segment (+28 million euro) and a decline in the energy solutions segment (-10 million euro).

The increase in the energy retail segment was partially due to the change in the consolidation perimeter (consolidation of the ACSM-AGAM Group and simultaneous exit of the Aspem Group) for 13 million euro and in part to the excellent performance of the Business Unit (+15 million euro).

In the half-year under review, the contribution margins of the electricity and gas segments were significantly higher (+23 million euro), thanks to the increase in the number of customers on the free market (+104 thousand compared to the end of 2018), higher unit margins and higher sales volumes to large customers, which offset a contraction in unit gas consumption due to the milder temperatures of the current year. This sustained growth was only partly offset by higher costs, mainly for marketing and external communication to attract new customers.

The decrease in margins in the energy solutions segment was due to the lesser opportunities that white certificates market has offered to operators, both in terms of price and volumes exchanged, also following approval of the Decree by the Ministry of Economic Development on May 10, 2018, which regulated the price of sale of Energy Efficiency Certificates (EECs) and the methods of procurement by distributors obliged to cancel the certificates.

EBITDA of the Waste Business Unit equalled 135 million euro (136 million euro at June 30, 2018).

Net of non-recurring items (null balance in 2019 and +2 million euro in 2018), Ordinary EBITDA rose by 1 million euro.

The increase in margins was substantially determined by the prices of sale of electricity produced by the waste-to-energy plants and the positive trend of prices for the conferral of urban waste and greater revenues from conferral to the landfill of inert lots of Corteolona and to the sludge plant.

The positive effects have been reabsorbed by greater costs of disposal and lesser revenues deriving from the conferral to other Group landfills (Grottaglie, Barengo and Comacchio).

EBITDA of the Networks & District Heating business unit amounted to 223 million euro (192 million euro at June 30, 2018). The consolidation of ACSM-AGAM contributed 16 million euro (19 million euro in the first half of 2019; 3 million euro of the former Aspem Group in the first half of 2018).

The change in the Business Unit's marginality was in part attributable to the change in the scope of consolidation mentioned above, in part to the organic growth of the business. The district heating sector in particular made a positive contribution: the increase in unit margins more than compensated for the drop in sales due to mild temperatures, higher environmental costs (CO₂) and the lack of revenues from green certificates in Canavese.

The increase in allowed revenues for gas distribution and the increase in revenues in the water sector linked to the increase in tariffs approved by the Regulatory Authority also contributed positively.

The Gross Operating Margin of the International Business Unit was negative for 1 million euro (nil in the first half of 2018).

A2A Smart City recorded a Gross Operating Margin of 4 million euro in the first half, in line with the same period of the previous year.

"Depreciation, amortization and write-downs" amounted in total to 255 million euro (221 million euro at June 30, 2018).

"Depreciation, amortization and write-downs" totalled 245 million euro (213 million euro at June 30, 2018), representing an overall increase of 32 million euro of which 19 million euro deriving from the consolidation of the ACSM-AGAM Group.

Amortization of intangible assets amounted to 59 million euro (38 million euro at June 30, 2018). The item includes higher amortization for 21 million euro, of which 12 million euro relating to the consolidation of the ACSM-AGAM Group (of which 3 million euro relating to the effects of Purchase Price Allocations), 1 million euro relating to the effects of Purchase Price Allocations of companies operating in the photovoltaic sector acquired in 2019, 3 million euro relating to the plan to replace gas meters, 1 million euro relating to the water distribution network and 4 million euro relating to the implementation of information systems.

Depreciation of tangible assets show an increase of 11 million euro compared to June 30, 2018 and mainly includes:

- higher depreciation of 10 million euro following the application of IFRS 16, including 1 million euro for the ACSM-AGAM Group;
- higher depreciation resulting from the consolidation of the companies operating in the photovoltaic sector acquired starting from the second half of 2018 for 2 million euro;
- higher depreciation of 3 million euro, mainly relating to the investments which went into production after December 31, 2018;
- higher depreciation of 6 million euro, relating to the consolidation of the ACSM-AGAM Group;
- lower depreciation of 8 million euro for the Monfalcone power plant as a result of the write-down made in 2018;
- lower depreciation of 2 million euro for the San Filippo del Mela power plant.

“Provisions for risks” had a net effect of 7 million euro (positive for 5 million euro at June 30, 2018), of which 5 million euro in provisions for public water derivation fees, 6 million euro in provisions for landfill closure and post-closure expenses and 1 million euro in provisions for the effects of the updated appraisal report for the Brindisi power plant, partially adjusted by 5 million euro in surplus of provisions for legal disputes.

The “Bad debts provision” shows a balance of 3 million euro (13 million euro at June 30, 2018), of which 1 million euro deriving from the consolidation of the ACSM-AGAM Group, determined by the provision for the period.

As a result of these changes, “**Net operating result**” amounted to 327 million euro (436 million euro at June 30, 2018).

The “**Result from non-recurring transactions**” had a zero balance at June 30, 2019, while it amounted to 6 million euro at June 30, 2018 and referred to the gain deriving from the sale of the shareholding in the company Rudnik Uglja ad Pljevlja.

“**Net financial charges**” amounted to 65 million euro (54 million euro at June 30, 2018), representing an increase of 7 million euro. This item includes the total costs incurred for the early settlement of the existing bond at the Talesun Group, amounting to 9 million euro.

The “**Portion of result of companies consolidated at equity**” had a zero balance at June 30, 2019, while it was positive for 4 million euro at June 30, 2018 and was mainly attributable to the positive valuations of the shareholding in ACSM-AGAM S.p.A and other minor shareholdings.

“**Income taxes**” in the period in question equalled 87 million euro (120 million euro at June 30, 2018).

The “**Net result from operating assets sold/held for sale**” had a zero balance at June 30, 2019, while it amounted to 4 million euro at June 30, 2018 and included the discounting proceeds to adjust the value of the shareholding of EPCG at fair value following the renegotiation of the agreement with the Government of Montenegro, and approved by the same on April 27, 2018, which provides for the execution of the put option exercised by A2A S.p.A. on July 3, 2017 in four tranches in the period between May 1, 2018 and July 31, 2019, with an acceleration compared to the terms set by the Shareholders' Agreement of August 29, 2016 (i.e. 7 tranches from May 1, 2018 to May 1, 2024).

The “**Group result for the year**”, after the minorities were deducted, was positive and amounted to 166 million euro (positive for 267 million euro at June 30, 2018).

Balance sheet and financial position

It is noted that the consolidation scope at June 30, 2019 changed compared to December 31, 2018 for the following operations:

- acquisition by A2A Rinnovabili S.p.A. and line-by-line consolidation of Bellariva Enertel 07 S.r.l., a project company that owns a photovoltaic plant;
- acquisition by A2A Energy Solutions S.r.l. of 100% of Suncity Energy S.r.l. (line-by-line consolidation) and 26% of Suncity Group S.r.l. (consolidated using the equity method), groups active in the field of energy efficiency and dispatching;
- incorporation by A2A S.p.A. and line-by-line consolidation of YADA ENERGIA S.r.l., the smart services company of the A2A Group.

Net Fixed Assets

The “**Net fixed Assets**” amounted to 6,255 million euro, up by 124 million euro compared to December 31, 2018.

The main changes are detailed below:

- Tangible Assets increased by 96 million euro, net of the contribution of extraordinary items totalling 2 million euro, due mainly to:
 - investments amounting to 151 million euro, essentially in the Networks & District Heating Business Unit for 62 million euro, the Waste Business Unit for 45 million euro and the Generation and Trading Business Unit for 30 million euro. In addition, the Market business unit, A2A Smart City and Corporate recorded combined capex of approximately 14 million euro;
 - decrease of 1 million euro for disposals made during the period net of accumulated depreciation;

- a decrease of 186 million euro for the depreciation charge for the period;
- net increase of 132 million euro for other changes mainly due to the increase for 121 million euro following application of accounting standard IFRS 16, of which 109 million euro relative to the first time adoption and the increase for 12 million euro of assets relative to decommissioning provisions and landfill closing and post-closing expense provisions, as a consequence of updating the discounting rates used to estimate future decommissioning and restoration charges.

Tangible assets include "Right-of-use assets" totalling 162 million euro, recognized in accordance with IFRS 16 and for which the outstanding payable to lessors at June 30, 2019 amounted to 160 million euro. At December 31, 2018, the item came to 54 million euro with reference to financial leases in place as at that date.

- Intangible assets increased by 32 million euro compared to December 31, 2018, due to:
 - the 101 million euro increase generated by capex of the period, essentially in the Networks & District Heating Business Unit (80 million euro), the Market Business Unit for 9 million euro and the Waste, Other Services and Corporate and Generation Business Units, for a total of 12 million euro;
 - decrease of 59 million euro for the depreciation charge for the period;
 - other negative changes amounting to 10 million euro related to the reduction in environmental certificates of the industrial portfolio for 9 million euro and 1 million euro due to period disposal, net of the related amortisation provision.
- equity investments and other non-current financial assets amounted to 31 million euro, up by 8 million euro compared to December 31, 2018, mainly following the acquisition of 26% of Suncity Group S.r.l.;
- other non-current assets and liabilities showed a net increase of 10 million euro mainly due to the growth in other non-current payables for the acquisitions completed by the Group in the first half of 2019;
- prepaid/deferred-tax assets/liabilities totalled 274 million euro, with an increase of 10 million euro, mainly due to deferred IRES (corporate income tax) and IRAP (regional tax on productive activities) resulted from changes on cash flow hedges derivatives valuation and IAS 19 reserves;
- provisions for risks, changes and liabilities for landfills increased by 6 million euro. Period changes are mainly due to provisions made for landfill post-closure expenses for 6 million euro following the update of the discount rate used, to net provisions connected to public water for 5 million euro and release for 5 million euro following a more favourable outcome in legal disputes;
- employee benefits increased by 8 million euro mainly due to the actuarial valuations in the period.

Net Working Capital and Other current assets/liabilities

"Net working capital", defined as the sum of trade receivables, closing inventories and trade payables, amounted to 595 million euro. The change was a rise of 40 million euro compared to 31 December 2018. Comments on the main items are given below:

- "Inventories" amounted to 182 million euro (187 million euro at December 31, 2018), net of the relative obsolescence provision for 17 million euro, unchanged compared to December 31, 2018. The decrease is due mainly to the combined effect of a decrease of 19 million euro in fuel stocks (gas and diesel) due to seasonality and an increase in coal stocks held by third parties for 10 million euro and in material stocks for 3 million euro.
- "Trade receivables" amounted to 1,678 million euro (1,781 million euro at December 31, 2018), with a decrease, net of the first-time consolidation effects of 2 million euro, of 105 million euro, due mainly to seasonal factors.
- The "Bad debts provision" amounted to 150 million euro and showed a net decrease of 13 million euro compared to December 31, 2018, essentially due to provisions during the period for 3 million euro and uses for 16 million euro consequent to write-offs of receivables completely written down.
- "Trade payables" amounted to 1,265 million euro and showed a decrease of 150 million euro, net of the first-time consolidation effects of 2 million euro, due mainly to seasonal factors.

- “Other current assets/liabilities” presented a net increase of 101 million euro, mainly due to:
 - net increase in tax payables for 89 million euro;
 - increase of 29 million euro in payables to CSEA (the energy and environmental service fund);
 - the 82 million euro increase in tax payables for VAT, excise duties and other taxes;
 - the increase in derivative assets for 21 million euro;
 - the 37 million euro increase in prepayments, mainly due to the payment of annual charges during the first half of 2019;
 - decrease in advances paid to suppliers for fuel purchases for 15 million euro;
 - the increase of other current assets for 32 million euro, consequent to the payment of security deposits aimed at allowing for participation in tenders;
 - increase in net receivables for 12 million euro, following recognition by the Authority of white certificates;
 - reduction of 5 million euro in payables for energy tariff components;
 - other increases in current assets for 7 million euro.

“Non-current assets/liabilities held for sale” at June 30, 2019 showed a balance of 70 million euro and refer to the fair value of the investment in EPCG, 11.9% held by A2A S.p.A. (18.7% at December 31, 2018).

Consolidated “Capital Employed” amounted to 6,566 million euro at June 30, 2019, financed by shareholders’ equity (3,450 million euro) and net financial position (3,116 million euro).

Equity

“Equity” amounted to 3,450 million euro and showed a negative change for a total of 73 million euro.

The change was the result of:

- period result for 175 million euro (166 million euro pertaining to the Group and 9 million euro to minorities);
- negative valuation of cash flow hedges and IAS 19 reserves, for 14 million euro.

This distribution of dividends for a total of 218 million euro partially offset this result.

The “Net financial position” amounted to 3,116 million euro (3,022 million euro at December 31, 2018). The cash flow generated in the period was negative and amounted to 19 million euro, after the payment of dividends for 218 million euro and investments in the year for 252 million euro.

The changes in the scope of consolidation led to an improvement in the net financial position of 34 million euro due to the collection of the third instalment of the EPCG put option for 40 million euro, partly offset by the acquisition transactions of the period for 6 million euro. The first-time application of IFRS 16 also resulted in a net worsening of the net financial position totalling 109 million euro.

2 Consolidated results and report on operations

Summary of results, assets and liabilities and financial position

Significant events during the period

Significant events after June 30, 2019

Outlook for operations

<i>millions of euro</i>	06 30 2019	12 31 2018	Changes
CAPITAL EMPLOYED			
Net fixed assets	6,255	6,131	124
- Tangible assets	4,718	4,620	98
- Intangible assets	2,334	2,302	32
- Shareholdings and other non-current financial assets (*)	31	23	8
- Other non-current assets/liabilities (*)	(132)	(122)	(10)
- Deferred tax assets/liabilities	274	264	10
- Provisions for risks, charges and liabilities for landfills	(648)	(642)	(6)
- Employee benefits	(322)	(314)	(8)
<i>of which with counter-entry to equity</i>	<i>(111)</i>	<i>(101)</i>	
Net Working Capital and Other current assets/liabilities	241	302	(61)
Net Working Capital:	595	555	40
- Inventories	182	187	(5)
- Trade receivables	1,678	1,781	(103)
- Trade payables	(1,265)	(1,413)	148
Other current assets/liabilities:	(354)	(253)	(101)
- Other current assets/liabilities (*)	(280)	(268)	(12)
- Current tax assets/tax liabilities	(74)	15	(89)
<i>of which with counter-entry to equity</i>	<i>(34)</i>	<i>(25)</i>	
Non current assets held for sale (*)	70	112	(42)
<i>of which with counter-entry to equity</i>	<i>70</i>	<i>109</i>	
TOTAL CAPITAL EMPLOYED	6,566	6,545	21
SOURCES OF FUNDS			
Shareholders' equity	3,450	3,523	(73)
Total financial position beyond one year	2,926	2,968	(42)
Total financial position within one year	190	54	136
Total Net Financial Position	3,116	3,022	94
<i>of which with counter-entry to equity</i>	<i>27</i>	<i>19</i>	
TOTAL SOURCES	6,566	6,545	21

(*) Excluding balances included in the net financial position.

millions of euro

	01 01 2019 06 30 2019	01 01 2018 06 30 2018
NET FINANCIAL POSITION AT THE BEGINNING OF THE PERIOD	(3,022)	(3,226)
First-time consolidation effect	(1)	(40)
First-time application of IFRS 16	(109)	-
New contracts IFRS 16	(12)	-
Net result (**)	175	266
Depreciation/amortization	245	213
Write-downs/disposals of tangible and intangible assets	2	3
Affiliates	-	(4)
Net interest of the year	65	58
Net interest paid	(50)	(54)
Net taxes paid	-	-
Changes in assets and liabilities (*)	90	100
Cash flow from operating activities	527	582
Investments in tangible and intangible assets	(252)	(187)
Investments in shareholdings and securities	(6)	(1)
Disposals of fixed assets and shareholdings	-	13
Dividends received from shareholdings	-	2
Net cash flows from investment activities	(258)	(173)
Free cash flow	269	409
Dividends paid by the parent company	(218)	(180)
Dividends paid by the subsidiaries	-	-
Other non-monetary changes	(15)	(4)
Cash flow from dividend distribution and other changes	(233)	(184)
Changes in financial assets/liabilities with counter-entry to equity	(8)	11
NET FINANCIAL POSITION AT THE END OF THE PERIOD	(3,116)	(3,030)

(*) Excluding balances with counter-entry to equity.

(**) The net result is stated excluding gains on the disposal of shareholdings.

2 Consolidated results and report on operations

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Significant events during the period

A2A Group: 2018 preliminary consolidated results presented

On February 26, 2019, A2A S.p.A.'s Board of Directors met and examined the preliminary consolidated results for 2018.

Gross Operating Margin equalled 1.23 billion euro, an increase of 3% over the previous year. Before net non-recurring income of approximately 40 million euro in 2018 (+64 million euro in 2017), the Gross Operating Margin amounts to roughly 1.19 billion euro (1.14 billion euro in 2017), up 5%.

Capex amounts to 500 million euro, a 11% increase on the previous year. The growth is mainly due to the higher investments of the Networks & District Heating BU (+14%) and the consolidation of the ACSM-AGAM Group investments in the second half of the year.

The Net financial position amounted to 3.02 billion euro (3.23 billion euro at December 31, 2017). Net cash flows of over 200 million euro were generated in the year.

A2A Group: 2018 results approved

On April 3, 2019, the Board of Directors of A2A S.p.A. approved the drafts of the financial statements and of the Consolidated annual financial report at December 31, 2018.

Gross operating profit and net income increased to 344 million euro (+17%) and 1,231 million euro (+3%) respectively.

In 2018, cash generation was 204 million euro with a Net Financial Position/Ebitda ratio down to 2.45x.

In addition, investments of 500 million euro were made during the year.

The Board of Directors proposed to the Shareholders' Meeting a dividend of 0.07 euro per share up 21% compared to the previous year.

The Board of Directors of A2A S.p.A. has examined and approved the A2A Group's 2019-2023 Strategic Plan

The Board of Directors of A2A S.p.A. informed that the objectives of the first year of the 2018 - 2022 Strategic Plan "TEC", based on circular economy, energy transition and smart solutions, have been achieved.

The 2019-2023 Strategic Plan is an evolution of the 2018-2022 Plan approved in 2018 and confirms the three strategic guidelines:

- T: Transformation. Strengthening and evolution of our industrial model, leveraging the strengths of the A2A business lines.
- E: Excellence. Agile organization, operational excellence and efficiency in processes, reducing risk and enhancing business proximity.
- C: Community. Attraction and enhancement of our people, development of innovation by leveraging on the external ecosystem.

The three strategic guidelines are supported by the Sustainability framework, the guiding principle for the evolution and development of the A2A Group.

The main economic and financial objectives of the Group at 2023 are set out below:

- Ebitda at 1.5 billion euro and Net Profit at 0.46 billion euro;
- Net Financial Position/Ebitda ratio down to 2.2x;
- investment plan of about 4 billion euro, an increase of 22% compared to the previous plan;
- expected dividends rising to 7.75 cents per share in 2019 and 8 cents per share in 2020, with annual growth of 5% for the following years.

The 2019-2023 Sustainability Plan was also approved, with 670 million investments in the Circular Economy.

A2A S.p.A.: Governance

On May 7, 2019, the independent Director Alessandra Perrazzelli resigned from the positions of Director and Deputy Chair following further work assignments. Ms Perrazzelli consequently also resigned from the office of Chair of the Remuneration and Appointments Committee.

On May 15, 2019, the Board of Directors appointed Stefania Bariatti as non-executive Director and Deputy Chair of the Company to replace Alessandra Perrazzelli. At the same meeting, the following new composition for the Appointments and Remuneration Committee was also approved: Dina Ravera - Chair, Stefania Bariatti and Norberto Rosini.

Finally, it was resolved that the Internal Audit function should report functionally to the Board Director Enrico Corali, who will be paid, pro-rata, the supplementary compensation already approved for said appointment for a total of 40,000 euro.

A2A S.p.A.: Ordinary Shareholders' Meeting

On May 13, 2019, the ordinary Shareholders' Meeting of A2A S.p.A. approved the 2018 financial statements.

The Board of Directors' proposal to distribute a dividend per ordinary share of 0.07 euro was also approved.

The A2A S.p.A. Board of Directors has examined and approved the Quarterly Information at March 31, 2019

On May 15, 2019, the A2A S.p.A. Board of Directors approved the Quarterly Information at March 31, 2019.

EBITDA totaled 328 million euro, while Group interest in net profit totaled 104 million euro: both results were down compared with the first quarter of 2018 due to the absence of the contribution of green certificates and abnormal weather conditions.

During the period, Capex totalled 109 million euro, up 43% compared to the first quarter of 2018 Cash generation, after investments, was positive for 24 million euro.

On a like-for-like basis, the Net Financial Position decreased to 2,998 million euro; also considering the effects of the application of IFRS 16, net debt amounted to 3,110 million euro.

Linea Ambiente S.r.l. - Grottaglie Landfill

On January 28, 2019, Linea Ambiente S.r.l., a wholly-owned subsidiary of Linea Group Holding S.p.A. controlled by A2A S.p.A., was notified of TAR Lecce Ruling no. 143/2019, which upheld the appeal filed by the municipalities of Grottaglie, San Marzano di San Giuseppe and Carosino for the annulment of the AIA decree issued by the Province of Taranto, on the basis of which the transfers to the Grottaglie landfill site were suspended. For further information, reference should be made to the paragraph entitled "Other information - 3) Update of the main legal and tax disputes still pending".

Reorganisation of the urban hygiene service in the Municipality of Varese to modify the concession already granted to the former company ASPEM S.p.A. (now Acsm Agam Ambiente S.r.l.)

Information about the progress made in reorganizing the sanitation service in the Municipality of Varese is provided in the paragraph entitled "Other information - 3) Update of the main legal and tax disputes still pending".

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Significant events after June 30, 2019

Outlook for operations

Significant Events after June 30, 2019

A2A S.p.A. extraordinary success for the first green bond issue.

On July 8, 2019, A2A S.p.A. placed its first green bond within the Green Financing Framework recently published by A2A, intended exclusively for institutional investors under the Euro Medium Term Notes Programme.

The issue, which amounted to 400 million euro and duration 10 years, was preceded by a roadshow in Milan, London, Amsterdam, Paris, Munich and Frankfurt and collected orders for over 3.2 billion euro. The strong demand allowed a significant reduction of the spread, compared to the launch values of the bond, to record levels in Italy (-35 bps). The green bond was placed at an issue price of 98.693% and pays an annual coupon of 1%, with a spread of 105 basis points over the mid-swap reference rate.

The issue will finance and/or refinance environmental sustainability projects related to circular economy, decarbonisation and network smartness. Investments are also planned in water and waste treatment, development of renewable energy, energy efficiency, sustainable transport and modernisation of networks.

The electrical and electronic waste treatment plant at Bollate prison was presented

On July 5, 2019, the plant for the treatment of electrical and electronic waste built inside the prison of Bollate was presented. The plant occupies an area of about 3,000 m² and has the authorization to treat 3,000 tons per year of electronic waste, and is also equipped with a photovoltaic system for the self-production of green energy. Waste treatment is carried out on two dismantling lines, the first dedicated to TVs, monitors and large household appliances such as washing machines and dishwashers (WEEE types R2 and R3), the other for small household appliances (type R4) such as mobile phones, personal computers and peripherals, audio and video equipment, tools and electric toys.

The initiative responds to the need to promote the social and labour inclusion of people in difficulty and for the management of the plant, the company LaboRAEE was established in 2017, controlled by Amsa S.p.A., a company of the A2A Group.

Outlook for operations

Management’s expectations of economic and financial performance in 2019 remain good and in line with as already reported in the Press Release on the results for the first quarter of 2019: EBITDA is expected to be between 1,155 million euro and 1,185 million euro (including 25 million euro in non-recurring positive income items); net profitability is expected to be between 300 million euro and 330 million euro.

The strong generation of operating cash will be used to finance record investments (expected to amount to about 700 million euro) which, together with the higher dividends distributed in May 2019, will result in a net cash outflow of about 200 million euro.

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Consolidated
financial
statements

Consolidated balance sheet ⁽¹⁻²⁾

Assets

<i>millions of euro</i>	Note	06 30 2019	12 31 2018
NON-CURRENT ASSETS			
Tangible assets	1	4,718	4,620
Intangible assets	2	2,334	2,302
Shareholdings carried according to equity method	3	23	16
Other non-current financial assets	3	29	29
Deferred tax assets	4	274	264
Other non-current assets	5	11	20
Total non-current assets		7,389	7,251
CURRENT ASSETS			
Inventories	6	182	187
Trade receivables	7	1,678	1,781
Other current assets	8	510	313
Current financial assets	9	9	16
Current tax assets	10	51	49
Cash and cash equivalents	11	553	624
Total current assets		2,983	2,970
NON-CURRENT ASSETS HELD FOR SALE	12	70	112
TOTAL ASSETS		10,442	10,333

- (1) As required by Consob Resolution no. 17221 of March 12, 2010, the effects of related party transactions on the consolidated financial statements are provided in the statements and discussed in Note 39.
- (2) Significant non-recurring events and transactions in the consolidated financial statements are provided in Note 40 as required by Consob Communication DEM/6064293 of July 28, 2006.

Equity and liabilities

millions of euro	Note	06 30 2019	12 31 2018
EQUITY			
Share capital	13	1,629	1,629
(Treasury shares)	14	(54)	(54)
Reserves	15	1,316	1,216
Result of the year	16	-	344
Result of the period	16	166	-
Equity pertaining to the Group		3,057	3,135
Minority interests	17	393	388
Total equity		3,450	3,523
LIABILITIES			
Non-current liabilities			
Non-current financial liabilities	18	2,936	2,984
Employee benefits	19	322	314
Provisions for risks, charges and liabilities for landfills	20	648	642
Other non-current liabilities	21	154	148
Total non-current liabilities		4,060	4,088
Current liabilities			
Trade payables	22	1,265	1,413
Other current liabilities	22	790	581
Current financial liabilities	23	752	694
Tax liabilities	24	125	34
Total current liabilities		2,932	2,722
Total liabilities		6,992	6,810
LIABILITIES DIRECTLY ASSOCIATED WITH NON-CURRENT ASSETS HELD FOR SALE		-	-
TOTAL EQUITY AND LIABILITIES		10,442	10,333

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Consolidated
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Consolidated
balance sheet

Consolidated
income statement

Consolidated
statement of
comprehensive
income

Consolidated
cash-flow
statement

Statement of
changes in Group
equity

Detail of the
balance sheet
highlighting
the first-time
consolidation
effect of 2019
acquisitions

Consolidated
balance sheet
pursuant
to Consob
Resolution no.
17221 of March
12, 2010

Consolidated
income statement
pursuant
to Consob
Resolution no.
17221 of March
12, 2010

Consolidated income statement ⁽¹⁻²⁾

<i>millions of euro</i>	Note	01 01 2019 06 30 2019	01 01 2018 06 30 2018
Revenues			
Revenues from the sale of goods and services		3,610	2,969
Other operating income		101	112
Total revenues	26	3,711	3,081
Operating expenses			
Expenses for raw materials and services		2,660	1,972
Other operating expenses		115	118
Total operating expenses	27	2,775	2,090
Labour costs	28	354	334
Gross operating income - EBITDA	29	582	657
Depreciation, amortization, provisions and write-downs	30	255	221
Net operating income - EBIT	31	327	436
Result from non-recurring transactions	32	-	6
Financial balance			
Financial income		5	11
Financial expenses		70	69
Affiliates		-	4
Result from disposal of other shareholdings (AFS)		-	-
Total financial balance	33	(65)	(54)
Result before taxes		262	388
Income taxes	34	87	120
Result after taxes from operating activities		175	268
Net result from discontinued operations	35	-	4
Net result		175	272
Minorities	36	(9)	(5)
Group result of the period	37	166	267
Result per share (in euro):			
- basic		0.0534	0.0859
- basic from continuing operations		0.0533	0.0845
- basic from assets held for sale		0.0002	0.0014
- diluted		0.0534	0.0859
- diluted from continuing operations		0.0533	0.0845
- diluted from assets held for sale		0.0002	0.0014

- (1) As required by Consob Resolution no. 17221 of March 12, 2010, the effects of related party transactions on the consolidated financial statements are provided in the statements and discussed in Note 39.
- (2) Significant non-recurring events and transactions in the consolidated financial statements are provided in Note 40 as required by Consob Communication DEM/6064293 of July 28, 2006.

Consolidated statement of comprehensive income

millions of euro	06 30 2019	06 30 2018
Net result of the period (A)	175	272
Actuarial gains/(losses) on employee's benefits booked in the Net equity	(13)	3
Tax effect of other actuarial gains/(losses)	4	(1)
Total actuarial gains/(losses) net of the tax effect (B)	(9)	2
Effective part of gains/(losses) on cash flow hedges	(7)	14
Tax effect of other gains/(losses)	2	(4)
Total other gains/(losses) net of the tax effect of companies consolidated on a line-by-line basis (C)	(5)	10
Other gains/(losses) of companies valued at equity net of the tax effect (D)	-	-
Total comprehensive result (A) + (B) + (C) + (D)	161	284
Total comprehensive result attributable to:		
Shareholders of the parent company	152	279
Minority interests	(9)	(5)

With the exception of the actuarial effects on employee benefits recognized in equity, the other effects stated above will be reclassified to the income statement in subsequent years.

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Consolidated cash-flow statement

<i>millions of euro</i>	06 30 2019	12 31 2018
CASH AND CASH EQUIVALENTS AT THE BEGINNING OF THE YEAR	624	691
Contribution of first consolidation of acquisitions of 2019/2018	2	26
CASH AND CASH EQUIVALENTS	626	717
Operating activities		
Net Result (**)	175	348
Tangible assets depreciation	186	372
Intangible assets amortization	59	91
Fixed assets write-downs/disposals	2	167
Result from affiliates	-	(4)
Net financial interests	65	116
Net financial interests paid	(50)	(114)
<i>Net taxes paid (a)</i>	-	(102)
<i>Gross change in assets and liabilities (b)</i>	<u>90</u>	<u>149</u>
Total change of assets and liabilities (a+b) (*)	90	47
Cash flow from operating activities	527	1.023
Investment activities		
Investments in tangible assets	(151)	(305)
Investments in intangible assets and goodwill	(101)	(195)
Investments in shareholdings and securities (*)	(6)	(25)
Disposal of fixed assets and shareholdings	-	13
Dividends received	-	2
Cash flow from investment activities	(258)	(510)
FREE CASH FLOW	269	513

(*) Cleared of balances in return of shareholders' equity and other balance sheet items.

(**) Net Result is exposed net of gains on shareholdings', fixed assets' disposals and from discontinued operations.

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millions of euro	06 30 2019	12 31 2018
Financing activities		
Changes in financial assets		
Monetary changes:		
Issuance of loans	-	-
Proceeds from loans	7	5
Other monetary changes	-	11
Total monetary changes	7	16
Non-monetary changes:		
Other non-monetary changes	1	79
Total non-monetary changes	1	79
Total changes in financial assets (*)	8	95
Changes in financial liabilities		
Monetary changes:		
Borrowings/bonds issued	-	68
Repayment of borrowings/bond	(104)	(521)
Lease payments	(1)	(2)
Dividends paid by the parent company	(218)	(180)
Dividends paid by the subsidiaries	-	(5)
Other monetary changes	(12)	(2)
Total monetary changes	(335)	(642)
Non-monetary changes:		
Amortized cost valuations	-	4
Other non-monetary changes	(15)	(63)
Total non-monetary changes	(15)	(59)
Total changes in financial liabilities (*)	(350)	(701)
Cash flow from financing activities	(342)	(606)
CHANGE IN CASH AND CASH EQUIVALENTS	(73)	(93)
CASH AND CASH EQUIVALENTS AT THE END OF THE PERIOD/YEAR	553	624

Statement of changes in Group equity

Description <i>millions of euro</i>	Share capital	Treasury Shares	Cash Flow Hedge	
Net equity at 12.31.2017	1,629	(54)	(20)	
IFRS9 - first application				
Net equity at January 1, 2018	1,629	(54)	(20)	
Changes in the first half of 2018				
2017 result allocation				
Distribution of dividends				
IAS 19 reserve (*)				
Cash Flow Hedge reserves (*)			10	
Other changes				
Group and minorities result of the period				
Net equity at 06.30.2018	1,629	(54)	(10)	
Changes in the second half of 2018				
Distribution of dividends				
IAS 19 reserve (*)				
Cash Flow Hedge reserves (*)			3	
Other changes				
Group and minorities result of the period				
Net equity at 12.31.2018	1,629	(54)	(7)	
Changes in the first half of 2019				
2018 result allocation				
Distribution of dividends				
IAS 19 reserve (*)				
Cash Flow Hedge reserves (*)			(5)	
Other changes				
Group and minorities result of the period				
Net equity at 06.30.2019	1,629	(54)	(12)	

(*) These form part of the statement of comprehensive income.

	Other Reserves and retained earnings	Result of the period/year pertaining to the Group	Total Equity pertaining to the Group	Minority interests	Total Net shareholders' equity
	1,030	293	2,878	135	3,013
	(4)		(4)		(4)
	1,026	293	2,874	135	3,009
	293	(293)	-		-
	(180)		(180)		(180)
	2		2		2
			10		10
	(6)		(6)	(3)	(9)
		267	267	5	272
	1,135	267	2,967	137	3,104
			-	(5)	(5)
	(1)		(1)		(1)
			3		3
	89		89	251	340
		77	77	5	82
	1,223	344	3,135	388	3,523
	344	(344)			
	(218)		(218)	(8)	(226)
	(9)		(9)		(9)
			(5)		(5)
	(12)		(12)	4	(8)
		166	166	9	175
	1,328	166	3,057	393	3,450

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<i>millions of euro</i>	Note	Consolidated at 12 31 2018	
ASSETS			
NON-CURRENT ASSETS			
Tangible assets	1	4,620	
Intangible assets	2	2,302	
Shareholdings carried according to equity method	3	16	
Other non-current financial assets	3	29	
Deferred tax assets	4	264	
Other non-current assets	5	20	
TOTAL NON-CURRENT ASSETS		7,251	
CURRENT ASSETS			
Inventories	6	187	
Trade receivables	7	1,781	
Other current assets	8	313	
Current financial assets	9	16	
Current tax assets	10	49	
Cash and cash equivalents	11	624	
TOTAL CURRENT ASSETS		2,970	
NON-CURRENT ASSETS HELD FOR SALE	12	112	
TOTAL ASSETS		10,333	
LIABILITIES			
NON-CURRENT LIABILITIES			
Non-current financial liabilities	18	2,984	
Employee benefits	19	314	
Provisions for risks, charges and liabilities for landfills	20	642	
Other non-current liabilities	21	148	
TOTAL NON-CURRENT LIABILITIES		4,088	
CURRENT LIABILITIES			
Trade payables	22	1,413	
Other current liabilities	22	581	
Current financial liabilities	23	694	
Tax liabilities	24	34	
TOTAL CURRENT LIABILITIES		2,722	
TOTAL LIABILITIES		6,810	
LIABILITIES DIRECTLY ASSOCIATED WITH NON-CURRENT ASSETS HELD FOR SALE	25	-	
TOTAL LIABILITIES		6,810	

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	Effect first consolidation A2A Rinnovabili Group	SUNCITY Energy	Total effect first consolidation acquisitions 2019	Changes during the period	Consolidated at 06 30 2019
	2	-	2	96	4,718
	-	-	-	32	2,334
	-	-	-	7	23
	-	-	-	-	29
	-	-	-	10	274
	-	-	-	(9)	11
	2	-	2	136	7,389
	-	-	-	(5)	182
	-	2	2	(105)	1,678
	-	-	-	197	510
	-	-	-	(7)	9
	-	-	-	2	51
	1	1	2	(73)	553
	1	3	4	9	2,983
	-	-	-	(42)	70
	3	3	6	103	10,442
	3	-	3	(51)	2,936
	-	-	-	8	322
	-	1	1	5	648
	-	-	-	6	154
	3	1	4	(32)	4,060
	-	2	2	(150)	1,265
	-	-	-	209	790
	-	-	-	58	752
	-	-	-	91	125
	-	2	2	208	2,932
	3	3	6	176	6,992
	-	-	-	-	-
	3	3	6	176	6,992

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Assets

<i>millions of euro</i>	06 30 2019	of which Related Parties (note 39)	12 31 2018	of which Related Parties (note 39)
NON-CURRENT ASSETS				
Tangible assets	4,718		4,620	
Intangible assets	2,334		2,302	
Shareholdings carried according to equity method	23	23	16	16
Other non-current financial assets	29	5	29	6
Deferred tax assets	274		264	
Other non-current assets	11		20	
Total non-current assets	7,389		7,251	
CURRENT ASSETS				
Inventories	182		187	
Trade receivables	1,678	103	1,781	113
Other current assets	510		313	
Current financial assets	9	1	16	1
Current tax assets	51		49	
Cash and cash equivalents	553		624	
Total current assets	2,983		2,970	
NON-CURRENT ASSETS HELD FOR SALE	70	70	112	109
TOTAL ASSETS	10,442		10,333	

Equity and liabilities

millions of euro	06 30 2019	of which Related Parties (note 39)	12 31 2018	of which Related Parties (note 39)
EQUITY				
Share capital	1,629		1,629	
(Treasury shares)	(54)		(54)	
Reserves	1,316		1,216	
Result of the year	-		344	
Result of the period	166		-	
Equity pertaining to the Group	3,057		3,135	
Minority interests	393		388	
Total equity	3,450		3,523	
LIABILITIES				
Non-current liabilities				
Non-current financial liabilities	2,936		2,984	
Employee benefits	322		314	
Provisions for risks, charges and liabilities for landfills	648	1	642	1
Other non-current liabilities	154		148	
Total non-current liabilities	4,060		4,088	
Current liabilities				
Trade payables	1,265	33	1,413	29
Other current liabilities	790	13	581	13
Current financial liabilities	752		694	2
Tax liabilities	125		34	
Total current liabilities	2,932		2,722	
Total liabilities	6,992		6,810	
LIABILITIES DIRECTLY ASSOCIATED WITH NON-CURRENT ASSETS HELD FOR SALE	-		-	
TOTAL EQUITY AND LIABILITIES	10,442		10,333	

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<i>millions of euro</i>	01 01 2019 06 30 2019	of which Related Parties (note 39)	01 01 2018 06 30 2018	of which Related Parties (note 39)
Revenues				
Revenues from the sale of goods and services	3,610	222	2,969	217
Other operating income	101		112	1
Total revenues	3,711		3,081	
Operating expenses				
Expenses for raw materials and services	2,660	3	1,972	4
Other operating expenses	115	16	118	17
Total operating expenses	2,775		2,090	
Labour costs	354	1	334	1
Gross operating income - EBITDA	582		657	
Depreciation, amortization, provisions and write-downs	255		221	
Net operating income - EBIT	327		436	
Result from non-recurring transactions	-		6	6
Financial balance				
Financial income	5	3	11	3
Financial expenses	70		69	
Affiliates	-		4	4
Result from disposal of other shareholdings (AFS)	-		-	
Total financial balance	(65)		(54)	
Result before taxes	262		388	
Income taxes	87		120	
Result after taxes from operating activities	175		268	
Net result from discontinued operations	-		4	4
Net result	175		272	
Minorities	(9)		(5)	
Group result of the period	166		267	



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Notes to
the Half-yearly
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General information

A2A S.p.A. is a company with legal personality organized under the laws of the Italian Republic which operates, also through its subsidiaries ("Group"), both in Italy and abroad.

The A2A Group mainly operates in the following sectors:

- the production, sale and distribution of electricity;
- the sale and distribution of gas;
- the production, distribution and sale of heat through district heating networks;
- waste management (from collection and sweeping to disposal) and the construction and management of integrated waste disposal plants and systems, also making these available for other operators;
- integrated water cycle management.

This Half-year financial report has been prepared in abbreviated form pursuant to IAS 34 and contains the obligatory information required by the same.

Half-yearly financial report

The Half-year financial report (hereinafter the “**Half-year report**”) of the A2A Group at June 30, 2019 is presented in millions of euro; the euro is also the functional currency of the economies in which the Group operates.

The Half-year report of the A2A Group at June 30, 2019 has been prepared:

- in compliance with Legislative Decree 58/1998 (art. 154-ter) as amended and with the Issuers’ Regulations published by Consob;
- in accordance with the International Financial Reporting Standards (IFRS) issued by the International Accounting Standard Board (IASB) and approved by the European Union in particular IAS 34. IFRS means all the revised international accounting standards (IAS) and all the interpretations of the International Financial Reporting Interpretations Committee (IFRIC), formerly known as the Standing Interpretations Committee (SIC).

In preparing the Half-year report, the same principles used in the preparation of the consolidated annual financial report at December 31, 2018 were applied, other than the principles and interpretations described in detail in the paragraph below “Changes in international accounting standards” adopted for the first time on January 1, 2019.

In this file, use has been made of some alternative indicators of performance (APM) that are different from the financial indicators expressly provided for by the IAS/IFRS international accounting standards adopted by the Group; for details of these indicators, please see the specific paragraph “Alternative Indicators of Performance (APM)”.

This Half-year report at June 30, 2019 was approved on August 2, 2019 by the Board of Directors, which authorized publication, and has been subjected to limited audit by EY S.p.A. in accordance with their appointment by the Shareholders’ Meeting of June 11, 2015 for the nine years from 2016 to 2024.

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Financial statements

The Group has adopted a format for the balance sheet which presents current and non-current assets and current and non-current liabilities as separate classifications, as required by paragraph 60 et seq. of IAS 1.

The income statement is presented by nature, a format which is considered more representative than a presentation by function. The selected format is in agreement with the presentation used by the Group's major competitors and in line with international practice.

The specific line items "Result from non-recurring transactions" and "Result from disposal of other shareholdings (AFS)" are in the format of the income statement in order to provide clear and immediate identification of the results arising from non-recurring transactions forming part of continuing operations, separating these from the results from discontinued operations. In particular, it is noted that the item "Result from non-recurring transactions" is intended to include gains/losses recognized as a result of fair value measurement net of sale costs and other non-operating expenses/income. This item is presented between net operating income and the financial balance. In this way net operating income is not affected by non-recurring operations, making it easier to measure the effective performance of the Group's ordinary operating activities.

The cash flow statement has been prepared using the indirect method as permitted by IAS 7.

The statement of changes in equity has been prepared in accordance with IAS 1.

The formats adopted for the financial statements are the same as those used to prepare the annual consolidated financial statements at December 31, 2018.

Basis of preparation

The Half-year report at June 30, 2019 has been prepared on a historical cost basis, with the exception of those items which under IFRS must or can be measured at fair value.

The consolidation principles, the accounting principles, the accounting policies and the methods of measurement used in the preparation of the Half-year report are consistent with those used to prepare the annual consolidated financial statements at December 31, 2018, except as specified below.

It is noted that on the occasion of the closing of the 2019 half-year report, the A2A Group decided to estimate the tax for the period for all Group companies by adopting the tax rate criterion based on the best estimate of the Group’s weighted average rate expected for the entire year.

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Changes in international accounting standards

Pursuant to IAS 8, the subsequent paragraph “Accounting standards, amendments and interpretations applicable by the Group as of the current year” indicates and briefly illustrates the amendments in force as of January 1, 2019.

Accounting standards, amendments and interpretations applicable by the Group as of the current year

As from January 1, 2019, applicable to the Group are the following standards or additions to specific paragraphs of the international accounting standards already adopted by the company in previous years.

- IFRS 16 “Leases”: the standard issued by the IASB on January 13, 2016 and approved by the European Union in November 2017, fully replaces all the previous IFRS accounting requirements for the accounting of leases (IAS 17 and IFRIC 4). The standard applies to all contracts concerning the right to use an asset for a certain period of time in exchange for a specific fee. IFRS 16 sets, for lessees, a single accounting model for all leases (with specific cases of exclusion and exemption), eliminating the distinction, in the accounts, between operating and financial leasing. The accounting forecasts for lessors remain substantially unchanged compared to the previous provisions. The initial recognition, for the lessee, involves the recording of assets equal to the right to use the asset and a financial liability corresponding to the present value of the future fees to be paid. The subsequent valuation involves the recognition of the amortization of the right of use on the basis of IAS 16 (or alternative valuation method), the related financial expenses and the discounting of the financial liability created during initial recognition using a discount rate corresponding to the Group’s average prospective financing rate. During 2018 and the first half of 2019, the A2A Group conducted an in-depth analysis of the contracts in place, which are the subject of the accounting standard. The analyses carried out have identified substantial impacts and changes in the economic and financial situation, as summarized in the section “Other information” of this Half-year report.
- IFRS 9 “Financial instruments”: approved on March 26, 2018 and applicable starting January 1, 2019, the addition allows valuing at amortized cost the expenses related early repayment of financial instruments that were previously measured at fair value through profit and loss. No impact on the economic and financial situation of the Group.
- IAS 28 “Investments in associates and joint ventures”: approved on February 11, 2019, the integration specifies that the requirements of IFRS 9 must be applied to investments in associates or joint ventures that are not permitted to be valued using the equity method. No impact on the economic and financial situation of the Group.
- IAS 19 “Employee Benefits”: the supplement approved on March 14, 2019 clarifies that in the event of an early amendment or termination of a defined benefit plan, the company must apply the updated actuarial assumptions when recalculating the liability. No impact on the economic and financial situation of the Group.

Scope of consolidation

The Half-year report of the A2A Group at June 30, 2019 includes the figures of the parent A2A S.p.A. and those of the subsidiaries over which A2A S.p.A. exercises either direct or indirect control. In addition, companies in which the parent exercises joint control with other entities (joint ventures) and those over which it has a significant influence are consolidated using the equity method.

The following changes to the scope of consolidation of the A2A Group are reported:

- acquisition and line-by-line consolidation of a project company that owns a photovoltaic plant through A2A Rinnovabili S.p.A., wholly owned by A2A S.p.A.;
- acquisition by A2A Energy Solutions S.r.l. (100% owned by A2A S.p.A.) of 100% of Suncity Energy S.r.l. (line-by-line consolidation) and 26% of Suncity Group S.r.l. (consolidated using the equity method), groups active in the field of energy efficiency and dispatching;
- incorporation by A2A S.p.A. and full consolidation of Yada Energia S.r.l., the smart services company of the A2A Group.

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Subsidiaries

Subsidiaries are those companies over which the parent company, A2A S.p.A., exercises control and has the power, as defined by IFRS 10, to determine financial and operating policy, either directly or indirectly, in order to obtain returns from their activities. Subsidiaries are consolidated from the date on which the Group effectively acquires control and cease to be consolidated on a line-by-line basis from the date on which control is transferred to a company outside the Group.

Associates, joint ventures and joint operations

Shareholdings in associates, namely those in which the A2A Group has, through its companies, a considerable interest and is able to exercise significant influence are accounted for using the equity method. Gains and losses attributable to the Group are recognized in the financial statements from the date on which significant influence or joint control commences.

In the event that the loss attributable to the Group exceeds the carrying amount of an investment, the carrying amount is reduced to zero and any excess loss is provided for to the extent that the Group has legal or constructive obligations to make good the associate's losses or in any case to make payments on its behalf.

With the adoption of IFRS 11, the Group must now classify investments in joint arrangements as either joint ventures (if the Group has rights to the net assets of the arrangement) or joint operations (if the Group has rights to the assets, and obligations for the liabilities, relating to the arrangement).

Group investments that are considered joint ventures pursuant to IFRS 11 are accounted for using the equity method.

The A2A Group is not a party to any joint operations and therefore, the adoption of the standard had no effect on the Half-year report at June 30, 2019.

Potential voting rights

If the A2A Group holds call options on shares or other equity instruments that represent capital (warrants) that are convertible into ordinary shares or similar instruments having the potential, if exercised or converted, to give the Group voting rights or reduce the voting rights of third parties ("potential voting rights"), such potential voting rights are taken into consideration when assessing whether or not the Group has the power to govern or influence another company's financial and operating policies.

Treatment of put options on the shares of subsidiaries

In general, paragraph 23 of IAS 32 states that a contract that contains an obligation for an entity to purchase shares for cash or another financial asset gives rise to a financial liability for the present value of the exercise price of the option.

As a result, therefore, if the Group does not have the unconditional right to avoid the delivery of cash or other financial instruments when a put option on the shares of subsidiaries is exercised, it must recognize a liability.

In the absence of specific instructions in the related accounting standards, the A2A Group: (i) considers the shares involving put options to have already been purchased, including in cases in which the risks and rewards connected with ownership of the shares remain with the minority shareholders and they remain exposed to equity risk; (ii) records a corresponding entry among equity reserves for the liability resulting from the obligation and any subsequent changes that are not related to the mere unwinding of the present value of the strike price; (iii) and recognises such changes through the Income Statement.

Effect on the consolidation procedures of certain agreements involving the shares or quotas of Group companies

a) Earn-out and earn-in clauses on the purchase price of the shares of LGH S.p.A.

In 2016, A2A S.p.A. finalized the acquisition of 51% of the share capital of LGH S.p.A.

The value of the transaction was 98.9 million euro, paid for 51.7 million euro in cash and in treasury shares of A2A S.p.A. for a value of 47.2 million euro, of which 37.2 million euro related to shares purchased in the first half of 2016 and 10 million euro relating to treasury shares already held in portfolio at December 31, 2015.

Included in the acquisition value, A2A S.p.A. paid an amount of 9.6 million euro to minority shareholders of LGH S.p.A. related to specific earn-in clauses set at transaction closing.

Based on the initial contractual agreements signed by A2A S.p.A. with the minority shareholders of LGH S.p.A., it was agreed that A2A S.p.A., within the third year from the transaction closing date, upon the fulfilment of certain conditions, would pay up to a maximum of 13.9 million euro included in the acquisition value of LGH S.p.A. of 112.8 million euro, regulated by specific and well-identified earn-out clauses.

Based on the Purchase Price Allocation concluded in June 2017, the percentage probabilities of achieving some earn-out clauses have been revised downwards, resulting in a maximum payout of 7 million euro to minority shareholders resulting in an acquisition value of 109.4 million euro.

In accordance with the provisions of paragraphs 65B, 65C and 65D of IFRS 3, the Group recorded the effects of the contractual earn-outs for 7 million euro under long-term payables, with the investment value as balancing entry, with respect to the disbursement it will pay to the minority shareholders of LGH S.p.A. upon the fulfilment of the conditions established in the contract, since said adjustments are still considered probable and reliably determined at the acquisition date.

b) Put options relating to the portions held by the minority shareholder of LA BI.CO DUE S.r.l.

In the first half of 2016, Aprica S.p.A. acquired 64% of the portions of LA BI.CO DUE S.r.l., a company engaged in urban sanitation services in various municipalities of the Province of Brescia.

As a result of the shareholders' agreement signed between Aprica S.p.A. and Ecoimmobiliare S.r.l., the latter shall have the right, but not the obligation, to sell (put option) to Aprica S.p.A. its shareholding in LA BI.CO DUE S.r.l., equal to 36%.

The exercise of this option by Ecoimmobiliare S.r.l. can be made with effect from April 1, 2021 and by and not beyond June 30, 2021. If Ecoimmobiliare S.r.l. does not exercise the put option, Aprica S.p.A. shall have the right, but not the obligation, to purchase the shareholding of Ecoimmobiliare S.r.l. in LA BI.CO DUE S.r.l. from the first day following the expiration of the put option period and within, and not beyond the subsequent 90 business days.

In accordance with paragraph 23 of IAS 32, the Group has recognized as a liability the present value of the estimated outlay which it will not be able to avoid if the option is exercised, with a counter-entry to equity.

It is specified that this option has been valued based on the contractual conditions envisaged.

c) Earn-out on the purchase of the portions of LA BI.CO DUE S.r.l.

The contract for acquisition of 64% of the share capital of LA BI.CO DUE S.r.l. by Aprica S.p.A. envisages, some earn-outs that Aprica S.p.A. will be required to pay in case of achievement of predetermined levels of profitability and the award and extension of some agreements in the municipalities of the Province of Brescia.

During 2017 and 2018, Aprica S.p.A. paid a total of 0.2 million euro under the contract for the award and extension of agreements with municipalities.

As a result of the agreements described, the consolidated half-year report at June 30, 2019 shows a payable to Ecoimmobiliare S.r.l., for the possible exercise of the put options on portions of LA BI.CO DUE S.r.l., less than one million euro.

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d) Earn-in/out on the purchase price of A2A Recycling S.r.l. (former RI.ECO-RESMAL Group)

The contractual agreements governing the acquisition of A2A Recycling S.r.l. (former RI.ECO-RESMAL Group) envisage, among other things, an earn-in clause in favour of A2A Ambiente S.p.A., linked both to an eventual non-renewal of the concession of the Cernusco plant for reasons not attributable to A2A Ambiente S.p.A., and to any disbursements and expenses incurred to obtain renewal of the concession. This clause will have an eventual effect from the third year and no later than the fifth year after the closing of the transaction.

In accordance with paragraphs 65B, 65C and 65D of IFRS 3, the Group considered the amount paid by way of earn-in as the investment value since said adjustments are not considered probable and reliably determined at the acquisition date.

It should also be noted that in 2019, A2A Ambiente S.p.A. paid 0.1 million euro as “earn out of past due receivables”.

e) Put options on the shares of Consul System S.p.A.

On October 20, 2016, the acquisition was finalized of 75% of the share capital of Consul System S.p.A., the main independent Italian ESCo (Energy Service Company). The transaction was finalized by ESCo certified by the A2A Group, A2A Calore & Servizi S.r.l., for a total value of 15.1 million euro. A part of this amount, equal to 11.8 million euro, was settled through cash at closing. Subsequently, an integration was made on the purchase price of 3.3 million euro, as a price adjustment based on both the net debt of Consul System S.p.A. and on other well-identified contractual clauses. The integration in question was recognized as an increase in the value of the shareholding.

In January 2017, a payment of 0.8 million euro was made as price adjustment on the net financial position.

It was also established that, by the deadline for approval of the financial statements of Consul System S.p.A. at December 31, 2020, upon the fulfilment of certain conditions, A2A Calore & Servizi S.r.l. may exercise the option to purchase the remaining 25% of the share capital of Consul System S.p.A.

Therefore, in accordance with paragraph 23 of IAS 32, the Group has recognized as a liability the present value of the estimated outlay of 2.5 million euro which it will not be able to avoid if the option is exercised, with a counter-entry to equity attributable to the minority shareholder.

It is specified that this option has been valued based on the contractual conditions envisaged.

In accordance with the provisions of IFRS 3, at December 31, 2017, the Group completed the Purchase price allocation process, allocating to other intangible assets the difference between the amount transferred, measured in accordance with IFRS 3, and the net fair value attributed to assets acquired and liabilities undertaken.

f) Earn-out on the purchase of “special purpose vehicles” from the Re Energy fund, Novapower S.p.A. and Impax limited.

By contract, there are price adjustments of non-significant amounts both in favour of the seller and in favour of the buyer upon the occurrence of certain conditions.

In accordance with the provisions of IFRS 3, the Group completed the Purchase Price Allocation processes, allocating to other intangible assets the difference between the amount transferred, measured in accordance with IFRS 3, and the net fair value attributed to assets acquired and liabilities undertaken.

g) Options on the shares of Suncity Group S.r.l.

On April 16, 2019, the incorporation of NewCo Suncity Group S.r.l., a holding company of energy efficiency companies, was completed, with a simultaneous capital increase of 26%. The transaction was completed by the subsidiary A2A Energy Solutions S.r.l., ESCo (Energy Service Company) of the A2A Group, for a value of 1.3 million euro, entirely settled in cash at closing.

It was also established that, within 30 days of the deadline for approval of the financial statements at December 31, 2022, A2A Energy Solutions S.r.l. will have the right to exercise the option to purchase the remaining 74% of the share capital of the incorporated NewCo. The right to exercise the 74% put option by Suncity Partner to A2A Energy Solutions S.r.l. under the same conditions is also provided for.

Therefore, in accordance with paragraph 23 of IAS 32, the Group has recognized as a liability the present value of the estimated outlay of 4.2 million euro which it will not be able to avoid if the option is exercised, with a counter-entry to equity attributable to the minority shareholder.

Consolidation procedures

General procedure

The financial statements of the subsidiaries, associates and joint ventures consolidated by the A2A Group are prepared at the end of each reporting period using the same accounting policies as the parent. All intra-group balances and transactions, including any unrealized profits arising from transactions between Group companies, are fully eliminated.

In preparing the Half-yearly Report the assets, liabilities, income and expenses of the companies being consolidated are included in their entirety on a line-by-line basis, with the portion of equity and net income for the period attributable to minority interests being stated separately in the balance sheet and income statement.

The carrying amount of the investment in each subsidiary is eliminated against the corresponding share of its net equity, including any adjustments to fair value at the acquisition date; any differences arising are accounted for in accordance with IFRS 3.

Adoption of international accounting standard IFRS 12 “Disclosure of Interests in Other Entities”

With effect from January 1, 2014, the A2A Group has among other things adopted international accounting standard IFRS 12 “Disclosure of Interests in Other Entities”, issued by the IASB in 2011 and adopted by the European Commission on December 11, 2012.

On the basis of the requirements of paragraphs 7 and following of the standard the Group discloses information below about the significant judgements and assumptions it has made in determining:

- i. that the parent company has control of another entity within the meaning of IFRS 10;
- ii. the type of joint arrangement (joint operation or joint venture) when the arrangement has been structured through a separate vehicle, in compliance with IFRS 11;
- iii. that the parent company has significant influence over another entity (shareholdings in associates).

Shareholdings in joint ventures (IFRS 11): Ergosud S.p.A.

IFRS 11 identifies two types of arrangement, joint operations and joint ventures, on the basis of the rights and obligations of the parties, and governs the resulting accounting treatment to be adopted for the recognition of these arrangements in the financial statements.

The most significant effect of the standard is the fact that a number of entities jointly controlled by A2A, which up until now have been recognized using the equity method, could fall under the definition of joint operations on the basis of the requirements of IFRS 11. The accounting treatment for this type of joint arrangement requires the assets/liabilities and revenue/expenses connected with the arrangement to be recognized on the basis of the rights/obligations due to/assumed by A2A, regardless of the interest held.

In the particular case of its shareholdings in Ergosud S.p.A. and PremiumGas S.p.A., the A2A Group considers that these fall under the category joint ventures as far as their legal form and the nature of the contractual agreements are concerned.

For the shareholding in Ergosud S.p.A., despite the existence of a tolling agreement the investee could dispatch energy autonomously, thereby ensuring business continuity also at the end of the agreement. In addition, the A2A Group does not appoint any of the company’s key management.

On the basis of the above considerations, the A2A Group has accounted for the shareholdings using the equity method, continuing the treatment used in previous years.

Procedure for the consolidation of assets and liabilities held for sale (IFRS 5)

In the case of particularly large amounts and in connection with non-current assets and liabilities held for sale, and only in this case, in accordance with IFRS 5 the relative intra-group financial receivables and payables are not eliminated in order to provide a clear presentation of the financial impact of a possible disposal.

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Latest available summarized figures for joint ventures (consolidated at equity)

Ergosud S.p.A. Summary Data <i>millions of euro</i>	12 31 2018	12 31 2017
INCOME STATEMENT		
Revenues	22	34
Gross operating income	15	14
<i>% of net revenues</i>	68%	41%
Depreciation, amortization and write-downs	9	8
Net operating income	6	6
Result for the period	3.5	3.6
BALANCE SHEET		
Total assets	154	163
Net equity	70	66
Net (debt)	(66)	(77)

The figures for the joint venture PremiumGas S.p.A. have not been indicated as they are not significant.

Seasonal nature of the business

Given the nature of the Group’s ordinary activities, the interim results can vary as the result of the meteorological conditions during the period.

In this respect reference should be made to the comments on performance by Business Unit presented below.

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Summary of results sector by sector

millions of euro	GENERATION AND TRADING		MARKET		WASTE		
	01 01 2019 06 30 2019	01 01 2018 06 30 2018	01 01 2019 06 30 2019	01 01 2018 06 30 2018	01 01 2019 06 30 2019	01 01 2018 06 30 2018	
Revenues	2,248	1,758	1,423	1,009	522	508	
- of which inter-sector	720	470	102	125	73	47	
Labour costs	45	46	28	22	159	155	
Gross operating income - EBITDA	117	225	116	111	135	136	
% of revenues	5.2%	12.8%	8.2%	11.0%	25.9%	26.8%	
Depreciation, amortization, provisions and write-downs	(81)	(85)	(23)	(11)	(56)	(37)	
Net operating income - EBIT	36	140	93	100	79	99	
% of revenues	1.6%	8.0%	6.5%	9.9%	15.1%	19.5%	
Result from non-recurring transactions							
Financial balance							
Result before taxes							
Income taxes							
Result after taxes from operating activities							
Net result from discontinued operations							
Minorities							
Group result of the period							
Gross investments (1)	31	22	11	5	46	38	

1 See the items "Investments" in the schedules on tangible and intangible assets presented in Notes 1 and 2 to the balance sheet.

	NETWORKS AND DISTRICT HEATING		A2A SMART CITY		CORPORATE		INTERNATIONAL		ELIMINATIONS		INCOME STATEMENT	
	01 01 2019 06 30 2019	01 01 2018 06 30 2018	01 01 2019 06 30 2019	01 01 2018 06 30 2018	01 01 2019 06 30 2019	01 01 2018 06 30 2018	01 01 2019 06 30 2019	01 01 2018 06 30 2018	01 01 2019 06 30 2019	01 01 2018 06 30 2018	01 01 2019 06 30 2019	01 01 2018 06 30 2018
	568	590	30	22	119	105	2	3	(1,201)	(914)	3,711	3,081
	176	158	17	14	113	100	-	-	(1,201)	(914)		
	54	51	4	4	63	55	1	1			354	334
	223	192	4	4	(12)	(11)	(1)	-			582	657
	39.3%	32.5%	13.3%	18.2%	(10.1%)	(10.5%)	(50.0%)	-			15.7%	21.3%
	(80)	(77)	(3)	(2)	(12)	(9)	-	-			(255)	(221)
	143	115	1	2	(24)	(20)	(1)	-			327	436
	25.2%	19.5%	3.3%	9.1%	(20.2%)	(19.0%)	(50.0%)	-			8.8%	14.2%
											-	6
											(65)	(54)
											262	388
											(87)	(120)
											175	268
											-	4
											(9)	(5)
											166	267
	142	108	7	6	15	8	-	-			252	187

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<i>millions of euro</i>	GENERATION AND TRADING		MARKET		WASTE		
	06 30 2019	12 31 2018	06 30 2019	12 31 2018	06 30 2019	12 31 2018	
Tangible assets	1,967	1,976	50	36	761	703	
Intangible assets	75	81	207	244	40	42	
Trade receivables and current financial assets	654	778	702	772	351	333	
Trade payables and current financial liabilities	644	851	395	438	330	311	

	NETWORKS AND DISTRICT HEATING		INTERNATIONAL		A2A SMART CITY		CORPORATE		ELIMINATIONS		TOTAL GROUP	
	06 30 2019	12 31 2018	06 30 2019	12 31 2018	06 30 2019	12 31 2018	06 30 2019	12 31 2018	06 30 2019	12 31 2018	06 30 2019	12 31 2018
	1,797	1,761	-	-	66	39	199	184	(122)	(79)	4,718	4,620
	1,951	1,903	-	-	3	3	137	135	(79)	(106)	2,334	2,302
	317	381	4	5	35	27	164	168	(540)	(667)	1,687	1,797
	346	369	1	3	31	21	813	782	(543)	(668)	2,017	2,107

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It is noted that the consolidation scope at June 30, 2019 changed compared to December 31, 2018 for to the following operations:

- acquisition by A2A Rinnovabili S.p.A. (100% owned by A2A S.p.A.) and line-by-line consolidation of Bellariva Enertel 07 S.r.l., a project company that owns a photovoltaic plant;
- acquisition by A2A Energy Solutions S.r.l. (100% owned by A2A S.p.A.) of 100% of Suncity Energy S.r.l. (line-by-line consolidation) and 26% of Suncity Group S.r.l. (consolidated using the equity method), groups active in the field of energy efficiency and dispatching;
- incorporation by A2A S.p.A. and line-by-line consolidation of YADA ENERGIA S.r.l., the smart services company of the A2A Group.

ASSETS

NON-CURRENT ASSETS

1) Tangible assets

millions of euro	Balance at 12 31 2018	First-time consolid. effect acquisitions 2019	Changes during the period					Balance at 06 30 2019
			Invest.	Other changes	Disposals and sales	Amort.	Total changes	
Land	116							116
Buildings	590		3	5		(16)	(8)	582
Plant and machinery	3,460	2	62	14	(1)	(130)	(55)	3,407
Industrial and commercial equipment	38		5			(4)	1	39
Other assets	120		7	8		(14)	1	121
Landfills	66			5		(2)	3	69
Construction in progress and advances	85		65	(21)			44	129
Leasehold improvements	91		9			(7)	2	93
Right-of-use assets	54			121		(13)	108	162
Total	4,620	2	151	132	(1)	(186)	96	4,718
of which:								
Historical cost	10,520	4	151	136	(12)		275	10,799
Accumulated depreciation	(5,045)	(2)		(4)	11	(186)	(179)	(5,226)
Write-downs	(855)							(855)

“Tangible assets” amounted to 4,718 million euro at June 30, 2019 (4,620 million euro at December 31, 2018) and include non-recurring transactions during the period of 2 million euro.

The changes for the period, net of the above effect, recorded an increase of 96 million euro as follows:

- increase of 151 million euro for Capex made in the period as further described below;
- net increase of 132 million euro for other changes, due mainly to an increase of 121 million euro following the application of IFRS 16 accounting standard, 109 million euro of which related to first-time application, and an increase of 12 million euro in assets related to decommissioning provisions and provisions for landfill closure and post-closure expenses, following an update of the discount rates used to estimate future decommissioning and recovery costs;
- decrease of 1 million euro for disposals made during the period net of accumulated depreciation;
- decrease of 186 million euro for the depreciation charge for the period.

Capex may be analysed as follows:

- capex in the Networks and District Heating Business Unit totalled 62 million euro and concerned: 37 million euro for the development and maintenance of electricity distribution plants, the extension and reconstruction of the medium and low-voltage network and the installation of new electronic meters; 16 million euro for the development of district heating networks in the areas of Milan, Brescia and Bergamo; 1 million euro interventions on the gas transport network and 4 million euro for capex of the LGH Group; 4 million euro for capex of the ACSM-AGAM Group;
- for the Waste Business Unit, capex of 45 million euro referred to: 22 million euro mainly for work on the plants of Brescia, Muggiano, Acerra, Silla 2, Corteolona and Giussago; 8 million euro for the acquisition of mobile means for waste collection; 4 million euro for the acquisition of collection facilities; 7 million euro for capex of the LGH Group and 4 million euro for capex of the ACSM-AGAM Group;

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- for the Generation and Trading Business Unit, the increase was 30 million euro and concerned: 4 million euro for capex made on hydroelectric plants and 24 million euro on thermoelectric plants, 2 million euro for capex of the LGH Group;
- for the Market Business Unit, the increase amounted to 2 million euro and concerned for 1 million euro, the lighting efficiency plan with led mainly in the municipalities of Lainate, Garbagnate, Stradella and for 1 million euro, mainly contracts for heat management and energy efficiency at customers;
- for A2A Smart City S.p.A., capex of 7 million euro mainly concerned work on the fibre optic networks;
- for the Corporate Business Unit, capex, amounting to 5 million euro regarded 4 million euro mainly works on buildings in the areas of Brescia and Milan and 1 million euro capex of the LGH Group.

Tangible assets include “Right-of-use assets” totalling 162 million euro, recognized in accordance with IFRS 16 and for which the outstanding payable to lessors at June 30, 2019 amounted to 160 million euro. At December 31, 2018, the item amounted to 54 million euro, which related to finance leases outstanding at that date.

With regard to large-scale diversion hydroelectric concessions, it is noted that when they are converted into law (Law no. 12/2019) with amendments to Decree Law December 14, 2018, no. 135 (Simplification Decree Law), the Legislator intervened in article 11-quater with overall review of the regulations governing large-scale diversion hydroelectric concessions (> 3 MW), as explained in greater detail in paragraph 6 “Regulatory Changes and Impacts on the Business Units of the A2A Group - Generating and Trading Business Unit”. While waiting for the Regions to regulate with their own laws the methods, procedures and criteria for awarding concessions, the Group is analysing the possible impacts of the new regulations and confirms, to date, that the values recorded in the financial statements of dry and wet works linked to hydroelectric concessions are prudent and recoverable even if they are applied.

2) Intangible assets

millions of euro	Balance at 12 31 2018	First-time consolid. effect acquisitions 2019	Changes during the period						Balance at 06 30 2019
			Invest.	Recl./Other changes	Disposals/ Sales	Write- downs	Amort.	Total changes	
Industrial patents and industrial property rights	24		3	1			(7)	(3)	21
Concessions, licences, trademarks and similar rights	1,502		68	6	(1)		(41)	32	1,534
Goodwill	444			2				2	446
Assets in progress	44		30	(6)				24	68
Other intangible assets	288			(12)			(11)	(23)	265
Total	2,302	-	101	(9)	(1)	-	(59)	32	2,334

“Intangible assets” amounted to 2,334 million euro at June 30, 2019 (2,302 million euro at December 31, 2018).

Through the application of IFRIC 12, from financial year 2010 intangible assets also include assets in concession, which relate to gas distribution and the integrated water cycle.

The changes in the period recorded an increase totalling 32 million euro as follows:

- increase of 101 million euro for capex made in the period as further described below;
- net decrease of 9 million euro mainly due to the decrease in environmental certificates of the industrial portfolio;
- decrease of 1 million euro for disposals made during the period net of accumulated depreciation;
- decrease of 59 million euro for the depreciation charge for the period.

More specifically, capex of intangible assets relate to the following:

- for the Networks and District Heating Business Unit, investments of 80 million euro are related to: development and maintenance work on the plants of the gas distribution segment and the replacement of low and medium pressure underground piping for 33 million euro; work on the water transport and distribution network, on the sewage networks and on the purification plants for 27 million euro; the implementation of information systems for 4 million euro; capex of the LGH Group for 6 million euro and capex of the ACSM-AGAM Group for 10 million euro;
- for the Market Business Unit, the increase amounted to 9 million euro mainly due to the implementation of information systems, of which 1 million euro related to the ACSM-AGAM Group;
- for the Corporate Business Unit, the increase amounted to 10 million euro, involving 7 million euro for the implementation of information systems, as well as 3 million euro for capex of the ACSM-AGAM Group;
- for the Generation and Trading Business Unit, the increase was 1 million euro and concerned the implementation of information systems;
- for the Waste Business Unit, the increase was 1 million euro and mainly relates to the implementation of information systems.

“Other intangible assets” include Customer lists arising on the acquisition of customer portfolios by Group companies. These balances are amortized on the basis of the estimated benefits expected to be obtained in future years. In particular, the amount shown in the financial statements, amounting to 185 million euro, is attributable for 117 million euro to the Customer list of the ACSM-AGAM Group and for 47 million euro to the Customer list included in A2A Energia S.p.A. following the merger of Linea Più S.p.A. (LGH Group) and the acquisition of the “Gas & Power Business” customer portfolio, for 19 million euro to the Customer lists of A2A Recycling S.r.l. and LA BI.CO DUE S.r.l, and for 2 million euro to the Customer List of LumEnergia S.p.A.

Goodwill

At June 30, 2019, goodwill amounted to 446 million euro:

CGU millions of euro	Balance at 12 31 2018	First-time consolid. effect acquisitions 2019	Changes during the period			Balance at 06 30 2019
			PPA Effect	Write-downs	Total changes	
A2A Reti Elettriche	85				-	85
A2A Ambiente	262				-	262
A2A Reti Gas	38					38
A2A Gas	7					7
A2A Calore	21					21
Total	413	-	-	-	-	413
First-time Consolidation effects						
Suncity Energy S.r.l.	-		2		2	2
ACSM - AGAM Group	31					31
Total	31	-	2	-	2	33
Total Goodwill	444	-	2	-	2	446

In the first half of 2019, the A2A Group completed the following operation, which generated 2 million euro in goodwill:

- the acquisition by the subsidiary A2A Energy Solutions S.r.l. of Suncity Energy S.r.l., a company operating in the energy efficiency and dispatching sector, contributed 2 million euro in goodwill.

This acquisition is part of the provisions of IFRS 3 and at June 30, 2019, the Purchase Price Allocation has not yet been completed, which will be completed in the timing envisaged by the standard.

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The A2A Group conducts the impairment test at least once a year.

In the first half of 2019, management conducted a careful analysis of the results achieved compared with the 2019-2023 plan, also considering the assumptions and results of the impairment process carried out for the 2018 financial statements. Said analysis did not reveal any elements such to consider likely and/or material permanent losses in the value of assets, in addition to as reported in the 2018 financial statements; consequently, the Group did not consider it necessary to conduct a specific impairment test at June 30, 2019.

3) Shareholdings and other non-current financial assets

millions of euro	Balance at 12 31 2018	First-time consolid. effect acquisitions 2019	Changes during the period	Balance at 06 30 2019	of which included in the NFP	
					12 31 2018	06 30 2019
Shareholdings carried according to equity method	16		7	23	-	-
Other non-current financial assets	29			29	22	21
Total shareholdings and other non-current financial assets	45	-	7	52	22	21

The following table provides details of the changes in the value of “Shareholdings carried according to equity method”:

Shareholdings carried according to equity method millions of euro	TOTAL
Balance at December 31, 2018	16
First-time consolidation effect acquisitions 2019	-
Changes during the period:	
- acquisitions and capital increases	2
- measurements at Equity	
- write-downs	
- dividends received from shareholdings in companies carried at equity	
- sales	
- other changes	5
- reclassifications	
Total changes for the period	7
Balance at June 30, 2019	23

The increase of 7 million euro in “Shareholdings in companies valued by the equity method” mainly refers to the subscription by the subsidiary A2A Energy Solutions S.r.l. of the capital increase in the NewCo Suncity Group, in which it held 26%, and to the recognition in other changes of the call option on 74% of its share capital.

The details of the shareholdings are provided in annex no. 4 “List of shareholdings in companies carried at equity”.

“Other non-current financial assets” had a balance of 29 million euro at June 30, 2019, unchanged compared to the figure at December 31, 2018.

At June 30, 2019, “Other non-current financial assets” refer for 21 million euro to medium/long-term financial receivables of which 2 million euro related to the LGH Group, 4 million euro related to the subsidiary A2A Illuminazione Pubblica with respect to the Municipality of Brescia, concerning the management of public lighting in application of IFRIC 12, and 7 million euro million related to the subsidiary Bioase, as well as 8 million euro of shareholdings in other companies; for details, reference is made to annex no. 5 “List of shareholdings in other companies”.

4) Deferred tax assets

millions of euro	Balance at 12 31 2018	First-time consolid. effect acquisitions 2019	Changes during the period	Balance at 06 30 2019
Deferred tax assets	264		10	274

“Deferred tax assets” amounted to 274 million euro (264 million euro at December 31, 2018) and showed an increase of 10 million euro.

This item consists of the net balance of IRES and IRAP deferred tax assets and liabilities arising from changes and accruals made solely for fiscal purposes. The recoverability of “Deferred tax assets” recorded in the financial statements is considered likely, as the future plans envisage taxable income sufficient to use the deferred tax assets.

At June 30, 2019, the amounts relative to deferred tax assets/deferred tax liabilities have been expressed as net (“offsetting”) as per IAS 12 standards.

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The following tables sets out the main deferred tax assets and liabilities.

	Consoli- dated financial statements 12 31 2018	First consolid. effects	Accruals (A)	Utiliza- tions (B)	Adjust. Rates (C)	Total (A+B+C)	IFRS 9 at Equity Net	IAS 19 Revised at Equity Net	Other changes/ Reclass.	Consoli- dated financial statements 06 30 2019
Detail of deferred tax assets/liabilities										
Deferred tax liabilities										
Measurement differences for tangible assets	550	-	-	-	-	-	-	-	(11)	539
Application of financial lease standard (IFRS 16)	6	-	-	-	-	-	-	-	-	6
Application of the financial instrument standard (IFRS 9)	2	-	2	-	-	2	-	-	-	4
Measurement differences of intangible assets	76	-	11	(4)	-	7	-	-	-	83
Capital gains instalments	-	-	-	-	-	-	-	-	-	-
Employee leaving entitlement (TFR)	4	-	-	-	-	-	-	-	-	4
Goodwill	29	-	-	-	-	-	-	-	-	29
Other deferred tax liabilities	3	-	-	-	-	-	-	-	-	3
Total deferred tax liabilities (A)	670	-	13	(4)	-	9	-	-	(11)	668
Deferred tax assets										
Taxed risk provisions	98	-	1	-	-	1	-	-	(2)	97
Measurement differences for tangible assets	629	-	-	-	-	-	-	-	-	629
Application of the standard of financial instruments (IFRS 9)	3	-	-	-	-	-	2	-	-	5
Bad debts provision	17	-	-	-	-	-	-	-	(5)	12
Measurement differences of intangible assets	5	-	-	-	-	-	-	-	-	5
Contributions	21	-	-	-	-	-	-	-	-	21
Goodwill	161	-	-	-	-	-	-	-	-	161
Other deferred tax assets	-	-	1	-	-	1	-	2	9	12
Total deferred tax assets (B)	934	-	2	-	-	2	2	2	2	942
NET EFFECT DEFERRED TAX ASSETS/ LIABILITIES (B-A)	264	-	(11)	4	-	(7)	2	2	13	274

5) Other non-current assets

millions of euro	Balance at 12 31 2018	First-time consolid. effect acquisitions 2019	Changes during the period	Balance at 06 30 2019	of which included in the NFP	
					12 31 2018	06 30 2019
Non-current derivatives instruments	8		(6)	2	8	2
Other non-current assets	12		(3)	9	-	-
Total other non-current assets	20	-	(9)	11	8	2

At June 30, 2019, this item decreased by 9 million euro compared to the end of the previous year.

“Non-current derivative instruments” amounted to 2 million euro, which refer to the valuation of a financial instrument.

“Other non-current assets” amounted to 9 million euro. The item essentially consists of security deposits and costs already incurred, but pertaining to future years.

CURRENT ASSETS

6) Inventories

millions of euro	Balance at 12 31 2018	First-time consolid. effect acquisitions 2019	Changes during the period	Balance at 06 30 2019
- Materials	69		3	72
- Material obsolescence provision	(17)		-	(17)
Total materials	52	-	3	55
- Fuel	129		(19)	110
- Others	2		1	3
Raw and ancillary materials and consumables	183	-	(15)	168
Third-party fuel	4	-	10	14
Total inventories	187	-	(5)	182

“Inventories” amounted to 182 million euro (187 million euro at December 31, 2018), net of the relative obsolescence provision for 17 million euro, unchanged compared to the previous year.

The decrease is due mainly to the combined effect of the decrease of 19 million euro in fuel stocks (gas and diesel) due to seasonality and the increase in coal stocks held by third parties for 10 million euro and the increase in material stocks for 3 million euro.

7) Trade receivables

millions of euro	Balance at 12 31 2018	First-time consolid. effect acquisitions 2019	Changes during the period	Balance at 06 30 2019
Trade receivables invoices issued	1,030	2	(118)	914
Trade receivables invoices to be issued	914		-	914
(Bad debts provision)	(163)		13	(150)
Total trade receivables	1,781	2	(105)	1,678

At June 30, 2019, “Trade receivables” amounted to 1,678 million euro (1,781 million euro at December 31, 2018), with a decrease of 105 million euro, net of the first-time consolidation effect for 2 million euro. In detail, the changes were as follows:

- for 100 million euro, the decrease in receivables from customers, which at June 30, 2019 showed a balance of 1,602 million euro;
- for 5 million euro, the decrease in receivables from the Municipalities of Milan and Brescia; this item had an overall balance of 72 million euro (77 million euro in the previous year);
- work in progress amounted to 4 million euro, unchanged compared to December 31, 2018.

Note that the Group occasionally performs non-recourse credit assignments. At June 30, 2019, there were no receivables transferred by the Group. The Group has no rotating factoring programs.

The “Bad debts provision”, calculated in compliance with IFRS 9, amounted to 150 million euro and showed a net decrease of 13 million euro compared to December 31, 2018. This provision is considered adequate to cover the risks to which it relates.

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The changes in the Bad debts provision are outlined in the following table:

<i>millions of euro</i>	Balance at 12 31 2018	First-time consolid. effect acquisitions 2019	Accruals	Utilizations	Other changes	Balance at 06 30 2019
Bad debts provision	163		3	(16)		150

The following is the aging of trade receivables:

<i>millions of euro</i>	12 31 2018	06 30 2019
Trade receivables of which:	1,781	1,678
Current	728	603
Past due of which:	302	311
- Past due up to 30 days	75	69
- Past due from 31 to 180 days	57	82
- Past due from 181 to 365 days	29	24
- Past due over 365 days	141	136
Invoices to be issued	914	914
Bad debts provision	(163)	(150)

8) Other current assets

<i>millions of euro</i>	Balance at 12 31 2018	First-time consolid. effect acquisitions 2019	Changes during the period	Balance at 06 30 2019	<i>of which included in the NFP</i>	
					12 31 2018	06 30 2019
Current derivatives (commodity derivatives)	163		91	254	-	-
Other current assets of which:	150	-	106	256		
- receivables from Cassa per i Servizi Energetici e Ambientali	46		28	74		
- advances to suppliers	35		(14)	21		
- receivables from personnel	1		-	1		
- tax receivables	10		4	14		
- receivables related to future years/ periods	22		37	59		
- receivables from Ergosud	2		-	2		
- receivables from social security entities	3		(1)	2		
- Stamp office	1		-	1		
- receivables for damage compensation	1		-	1		
- receivables for COSAP advances	0		1	1		
- receivables for security deposits	2		32	34		
- receivables for RAI fee	2		5	7		
- other receivables for hedging	-		-	-		
- other receivables	25		14	39		
Total other current assets	313	-	197	510	-	-

“Other current assets” showed a balance of 510 million euro compared to 313 million euro at December 31, 2018, highlighting an increase of 197 million euro.

“Current derivatives” show an increase of 91 million euro related to the increase in commodity derivatives due to both the change in the fair value measurement at the end of the reporting period and the change in quantities covered. “Other current liabilities” include 226 million euro in “Current derivatives”.

Receivables from Cassa per i Servizi Energetici e Ambientali, amounting to 74 million euro (46 million euro at December 31, 2018), mainly refer to receivables for equalizations pertaining to both 2019 and to outstanding receivables for equalizations pertaining to previous years, net of collections made in the current year.

Tax receivables, amounting to 14 million euro, mainly relate to tax receivables from the tax authorities for excise and withholding taxes.

Receivables from Ergosud, amounting to 2 million euro, unchanged over the previous year, refer to the receivable due for new entry plants (Scandale Plant), regarding portions of emission allowances as provided by ARERA Resolutions no. ARG/elt 194/10 and no. 117/10.

9) Current financial assets

millions of euro	Balance at 12 31 2018	First-time consolid. effect acquisitions 2019	Changes during the period	Balance at 06 30 2019	of which included in the NFP	
					12 31 2018	06 30 2019
Other financial assets	15		(7)	8	15	8
Other financial assets from related parties	1		-	1	1	1
Financial assets from assets held for sale			-		-	-
Total current financial assets	16	-	(7)	9	16	9

“Current financial assets” amounted to 9 million euro (16 million euro at December 31, 2018). This item mainly refers to financial receivables of the LGH Group from minority shareholders and third parties.

10) Current tax assets

millions of euro	Balance at 12 31 2018	First-time consolid. effect acquisitions 2019	Changes during the period	Balance at 06 30 2019
Current tax assets	49	-	2	51

At June 30, 2019, this item amounted to 51 million euro (49 million euro at December 31, 2018) and refers to IRES and IRAP receivables for amounts requested for reimbursement on payments of previous years, and the remaining credit for Robin Tax paid in previous years and that will be recovered in subsequent years.

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11) Cash and cash equivalents

millions of euro	Balance at 12 31 2018	First-time consolid. effect acquisitions 2019	Changes during the period	Balance at 06 30 2019	of which included in the NFP	
					12 31 2018	06 30 2019
Cash and cash equivalents	624	2	(73)	553	624	553

“Cash and cash equivalents” at June 30, 2019 represent the sum of the Group’s active bank and postal balances; the positive change related to the first-time consolidation effect of 2019 acquisitions was equal to 2 million euro.

Bank deposits include interest accrued even if it was not credited by the end of the financial year under review.

12) Non-current assets held for sale

millions of euro	Balance at 12 31 2018	First-time consolid. effect acquisitions 2019	Changes during the period	Balance at 06 30 2019	of which included in the NFP	
					12 31 2018	06 30 2019
Non-current assets held for sale	112	-	(42)	70	-	-

At June 30, 2019, “Non-current assets held for sale” amounted to 70 million euro and refer entirely to the fair value of the shareholding in EPCG (109 million euro at December 31, 2018), held 11.9% by A2A S.p.A., which had been reclassified as a discontinued operation in compliance with the provisions of IFRS 5, following the decision of July 3, 2017 of the management to exercise the sale put option on the entire shareholding package. The decrease compared to December 31, 2018 is due to the collection made during the period under review under a new agreement negotiated with the Government of Montenegro, and approved by the same on April 27, 2018. On July 31, 2019, the payment dates of the last tranche, previously scheduled for July 31, 2019, were renegotiated, postponing them to September 30, 2019 (53 million euro) and December 31, 2019 (17 million euro). At December 31, 2018, this item also included 3 million euro relating to the shareholding in Commerciale Gas & Luce S.r.l. of the ACSM-AGAM Group, which was sold during the half-year, while the shareholding in Energy Trade S.p.A. was recorded at a value of less than 1 million euro.

EQUITY AND LIABILITIES

EQUITY

Equity, which amounted to 3,450 million euro at June 30, 2019 (3,523 million euro at December 31, 2018), is set out in the following table:

millions of euro	Balance at 12 31 2018	Changes during the period	Balance at 06 30 2019
Equity pertaining to the Group:			
Share capital	1,629	-	1,629
(Treasury shares)	(54)	-	(54)
Reserves	1,216	100	1,316
Group result of the period	344	(178)	166
Total equity pertaining to the Group	3,135	(78)	3,057
Minority interests	388	5	393
Total equity	3,523	(73)	3,450

The change of the Shareholders’ equity was overall negative for 73 million euro. The net profit for the period generated a positive effect of 166 million euro, offset by the distribution of 218 million euro in dividends. Furthermore, the net fair value loss on the measurement of cash flow hedges (5 million euro) and the net increase in minority interests (5 million euro) also affected shareholders’ equity.

13) Share capital

“Share capital” amounted to 1,629 million euro and consists of 3,132,905,277 ordinary shares each of nominal value 0.52 euro.

14) Treasury shares

“Treasury shares”, which amounted to 54 million euro, unchanged over December 31, 2018, consist of 23,721,421 own shares held by the parent company A2A S.p.A.

15) Reserves

millions of euro	Balance at 12 31 2018	Changes during the period	Balance at 06 30 2019
Reserves	1,216	100	1,316
of which:			
Change in the fair value of cash flow hedge derivatives and fair value Bond	(9)	(7)	(16)
Tax effect	2	2	4
Cash flow hedge reserves	(7)	(5)	(12)
Change in the IAS 19 Revised reserve - Employee Benefits	(70)	(13)	(83)
Tax effect	18	4	22
IAS 19 Revised reserve - Employee Benefits	(52)	(9)	(61)

“Reserves”, which amounted to 1,316 million euro (1,216 million euro at December 31, 2018), consist of the legal reserve, extraordinary reserves, and the retained earnings of subsidiaries.

This item also includes the cash flow hedge reserve, negative for 12 million euro, which refers to the period-end measurement of derivatives qualifying for hedge accounting, and the fair value measurement of the Bonds in foreign currency net of the tax effect.

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The balance also includes negative reserves of 61 million euro arising from the adoption of IAS 19 Revised “Employee Benefits” which requires actuarial profits and losses to be recognized directly in an equity reserve.

16) Result of the period

This item consists of the profit for the period of 166 million euro.

17) Minority interests

<i>millions of euro</i>	Balance at 12 31 2018	Changes during the period	Balance at 06 30 2019
Minority interests	388	5	393

“Minority interests” amounted to 393 million euro (388 million euro at December 31, 2018) and mainly represent the portion of capital, reserves and result pertaining to minority shareholders related to minority shareholders of the LGH Group and of the ACSM-AGAM Group.

The net increase for the period amounted to 5 million euro.

LIABILITIES

NON-CURRENT LIABILITIES

18) Non-current financial liabilities

millions of euro	Balance at 12 31 2018	First-time consolid. effect acquisitions 2019	Changes during the period	Balance at 06 30 2019	of which included in the NFP	
					12 31 2018	06 30 2019
Non-convertible bonds	2,180		(26)	2,154	2,180	2,154
Payables to banks	755	2	(112)	645	755	645
Non-current financial payables for rights of use	46		88	134	46	134
Payables to other lenders	3	1	(1)	3	3	3
Total non-current financial liabilities	2,984	3	(51)	2,936	2,984	2,936

“Non-current financial liabilities” amounted to 2,936 million euro (2,984 million euro at December 31, 2018), a decrease of 51 million euro, net of the first-time consolidation effects of acquisitions in 2019.

“Non-convertible bonds” regard the following bonds, accounted for at amortized cost:

- 351 million euro, maturing in January 2021 and coupon of 4.375%, the nominal value of which is equal to 351 million euro;
- 498 million euro, maturing in January 2022 and coupon of 3.625%, the nominal value of which is equal to 500 million euro;
- 299 million euro, Private Placement maturing in December 2023 and coupon of 4.00%, the nominal value of which is equal to 300 million euro;
- 299 million euro, Private Placement maturing in December 2024 and coupon of 1.25%, the nominal value of which is equal to 300 million euro;
- 298 million euro, maturing in February 2025 and coupon of 1.75%, the nominal value of which is equal to 300 million euro;
- 295 million euro, maturing in December 2027 and coupon of 1.625%, the nominal value of which is equal to 300 million euro;
- 114 million euro, Private Placement in yen maturing in August 2036 and fixed rate of 5.405%, the nominal value of which is equal to 14 billion yen.

The net decrease in the non-current component of “Non-convertible bonds”, amounting to 26 million euro compared to December 31, 2018, is mainly due to the early repayment of the bond issued by TS Energy Italy S.p.A. with maturity June 2032 and nominal value of 32 million euro, net of the increase in the ECB exchange rate applied to the bond in yen.

Non-current “Payables to banks” amounted to 645 million euro, a decrease of 112 million euro compared to the previous year-end, excluding the first-time consolidation effect of acquisitions in 2019 equal to 2 million euro due to the reclassification under current liabilities of the portions of capital maturing within the following year.

“Non-current financial payables for rights of use” amounted to 134 million euro, an increase of 88 million euro following the application of IFRS 16 for leases previously classified as operating leases.

Lastly, “Payables to other lenders” amounted to 3 million euro and referred mainly to the LGH Group.

The following table shows the comparison, for each long-term debt category, between the book value and the fair value, including the portion falling due in the next 12 months. For listed debt instruments, the fair value is determined using stock prices, while for unlisted securities the fair value is determined

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using valuation models for each category of financial instrument and using market data relating to the closing date of the financial year, including the credit spreads of the A2A Group.

<i>millions of euro</i>	Nominal value	Book value	Current portion	Non-current portion	Fair value
Bonds	2,660	2,709	555	2,154	2,871
Loans from banks and other lenders (excluding financial payables for rights of use)	819	819	171	648	814
Total	3,479	3,528	726	2,802	3,685

19) Employee benefits

The balance on this item amounted to 322 million euro (314 million euro at December 31, 2018) with changes as follows during the period:

<i>millions of euro</i>	Balance at 12 31 2018	First-time consolid. effect acquisitions 2019	Accruals	Utilizations	Other changes	Balance at 06 30 2019
Employee leaving entitlement (TFR)	165		16	(5)	(8)	168
Employee benefits	149			(4)	9	154
Total employee benefits	314	-	16	(9)	1	322

The change in the period is attributable to the decrease of 9 million euro due to net disbursements for the half-year offset by the net increase of 17 million euro relating mainly to actuarial valuations of Employee benefits, which refer to: 12 million euro for the increase in actuarial gains/losses, 3 million euro for the increase in interest cost and 1 million euro for the increase in service cost.

Technical valuations were carried out on the basis of the following assumptions:

	2019	2018
Discount rate	from -0.08% to 0.94%	from 0.1% to 1.6%
Annual inflation rate	1.5%	1.5%
Annual seniority bonus increase rate	2.0%	2.0%
Annual additional months increase rate	0.0%	0.0%
Annual cost of electricity increase rate	2.0%	2.0%
Annual cost of gas increase rate	0.0%	0.0%
Annual salary increase rate	1.0%	1.0%
Annual TFR increase rate	2.6%	2.6%
Average annual increase rate of supplementary pensions	1.1%	1.1%
Annual turnover frequencies	from 4.0% to 5.0%	from 4.0% to 5.0%
Annual TFR advance frequencies	from 2.0% to 2.5%	from 2.0% to 2.5%

It is noted that:

- the discount rate used by the Group varies from company to company on the basis of the average financial term of the bond. The discount rate used is that corresponding to Iboxx Corporate AA;
- the annual rate of salary increase applied exclusively to companies with fewer than 50 employees on average in 2006 was determined on the basis of the reference data communicated by Group companies;
- the annual rate of TFR increase, according to art. 2120 of the Civil Code, is equal to 75% of inflation plus 1.5 percentage points;

- the annual advance and turnover frequencies are derived from historical experiences of the Group and the frequencies arising from the experience of the Actuary on a significant number of similar companies;
- for the demographic technical bases, it is noted that:
 - for “death”, the tables AS62 (Electricity and gas discount), RG48 (TFR and other plans) and TG62 (Premungas) were used;
 - for “inability”, the INPS tables divided by age and gender were used;
 - for “retirement”, the 100% parameter was used upon reaching the requirements of AGO (Obligatory General Insurance).
 - for the “probability of leaving the family”, the table in the INPS model was used for projections to 2010;
 - for the “frequency of the various structures of surviving nuclei and average age of members”, the table in the INPS model was used for projections to 2010.

20) Provisions for risks, charges and liabilities for landfills

millions of euro	Balance at 12 31 2018	First-time consolid. effect acquisitions 2019	Accruals	Releases	Utilizations	Other changes	Balance at 06 30 2019
Decommissioning provisions	238		1		(3)	11	247
Provisions closure and post-closure landfills	196		6		(7)	5	200
Tax provisions	34						34
Personnel lawsuits and disputes provisions	56	1		(5)	(5)	(1)	46
Other risk provisions	118		5		(2)		121
Provisions for risks, charges and liabilities for landfills	642	1	12	(5)	(17)	15	648

“Decommissioning provisions”, which amounted to 247 million euro, include charges for costs of dismantling and recovery of production sites mainly related to thermoelectric plants and waste-to-energy plants. The changes for the period concerned provisions for 1 million euro, utilizations for 3 million euro, to cover the expenses incurred during the reporting period and other increases for 11 million euro, which refer mainly to the effects of the update of the discount rates used to estimate the future costs of dismantling and restoration of the sites having “Tangible assets” as counter-entry.

The “Landfill closing and post-closing expense provisions”, which amounted to 200 million euro, refer to all the costs that will have to be incurred in the future for the sealing of the landfills in cultivation at the reporting date and for the subsequent post-operative management, thirty-year and fifty-year, provided by the AIA (Integrated Environmental Authorization). The changes for the period concerned provisions of 6 million euro related to the effects of the updates of the discount rates in relation to assets fully depreciated, the effect of which was recognized in the Income Statement, utilizations for 7 million euro, which represent the actual outlays in the period, and other changes, positive for 5 million euro, mainly relating to the effects of the updates of the discount rates of assets not fully depreciated and that have “Tangible assets” as counter-entry.

“Tax Provisions”, which amounted to 34 million euro, refer to provisions for pending or potential litigation with the tax authorities or territorial entities for direct and indirect taxes, levies and excises.

The “Personnel lawsuits and disputes provisions” amounted to 46 million euro and mainly refer to lawsuits pending with Social Security Institutions, for 5 million euro, related to social security contributions that the Group believes it is not required to pay and for which specific disputes are pending, to lawsuits with third parties, for 40 million euro, and with employees, for 1 million euro, for the liabilities that could arise from litigations in progress. Utilizations in the period for 5 million euro refer to litigation with third parties, while releases for 5 million euro mainly refer to current litigation with Social Security Institutions and with third parties.

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“Other provisions”, which amounted to 121 million euro, refer to provisions relating to public water derivation fees for 48 million euro, to the mobility provision for the costs arising from the corporate restructuring plan, for 1 million euro, to the provision for extraordinary maintenance of the waste-to-energy plant in Acerra, for 6 million euro, as well as other provisions for 66 million euro. Allocations for the period amounted to 5 million euro and mainly refer to provisions for public water derivation fees.

21) Other non-current liabilities

millions of euro	Balance at 12 31 2018	First-time consolid. effect acquisitions 2019	Changes during the period	Balance at 06 30 2019	of which included in the NFP	
					12 31 2018	06 30 2019
Other non-current liabilities	134		7	141	-	-
Non-current derivatives instruments	14		(1)	13	14	13
Total other non-current liabilities	148	-	6	154	14	13

At June 30, 2019, this item increased by 6 million euro compared to the balance at the end of the previous year.

“Other non-current liabilities”, which showed a balance of 141 million euro, refer to security deposits from customers, for 62 million euro, to liabilities pertaining to future years for 9 million euro, to medium/long-term payables to suppliers for 3 million euro, as well as other non-current liabilities for 67 million euro, which mainly include long-term payables, contracts for acquisitions completed in the photovoltaic sector by the subsidiary A2A Rinnovabili in the last three-year period.

“Non-current derivatives” amounted to 13 million euro and showed a negative change of 1 million euro deriving from the fair value valuation of financial instruments at period-end.

CURRENT LIABILITIES

22) Trade payables and other current liabilities

millions of euro	Balance at 12 31 2018	First-time consolid. effect acquisitions 2019	Changes during the period	Balance at 06 30 2019	of which included in the NFP	
					12 31 2018	06 30 2019
Advances	3		(1)	2		
Payables to suppliers	1,410	2	(149)	1,263		
Total trade payables	1,413	2	(150)	1,265	-	-
Payables to social security institutions	43		-	43		
Current derivatives (commodity derivatives)	156		70	226		
Other current liabilities of which:	382	-	139	521		
- Payables to personnel	77		1	78		
- Payables to Cassa per i Servizi Energetici e Ambientali	80		57	137		
- Tax payables	42		85	127		
- Payables for tax transparency	7		-	7		
- Payables for energy tariff components	75		(5)	70		
- Payables for A.T.O.	7		1	8		
- Payables to customers for work to be performed	14		1	15		
- Payables to customers for interest on security deposits	3		-	3		
- Payables to third-party shareholders	4		-	4		
- Payables for the purchase of equity investments	8		-	8		
- Payables for auxiliary services	12		2	14		
- Payables for collections to be allocated	7		2	9		
- Payables to insurance companies	5		(1)	4		
- Payables for excise compensation	6		-	6		
- Payables for environmental compensation	3		-	3		
- Payables for RAI fee	5		8	13		
- Sundry payables	27		(12)	15		
Total other current liabilities	581	-	209	790	-	-
Total trade payables and other current liabilities	1,994	2	59	2,055	-	-

“Trade receivables and other current liabilities” amounted to 2,055 million euro (1,994 million euro at December 31, 2018), representing an increase of 59 million euro, excluding the first-time consolidation effect of acquisitions in 2019 for 2 million euro.

“Trade receivables” amounted to 1,265 million euro and compared to the closing of the previous year, represent a decrease of 150 million euro, excluding the first-time consolidation effect of acquisitions in 2019 for 2 million euro.

“Payables to social security institutions” amounted to 43 million euro, unchanged compared to December 31, 2018, and relate to the Group’s debt position with Social Security and Pension Institutions, related to contributions of the month of June 2019 not yet paid.

“Current derivative instruments” amounted to 226 million euro (156 million euro at December 31, 2018) and refer to the fair value valuation of commodity derivatives. The increase is due both to the increase in the fair value valuation of the period and to the change in the amounts covered. “Other current assets” include 254 million euro in “Current derivatives”.

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“Other current liabilities” mainly refer to:

- payables to employees for 78 million euro (77 million euro at December 31, 2018), relating to payables to employees for the productivity bonus accrued during the period, as well as the expense for holidays accrued but not taken at June 30, 2019;
- payables to the CSEA - Cassa per i Servizi Energetici e Ambientali for 137 million euro (80 million euro at December 31, 2018) regarding the payable for the tariff components, invoiced and not yet paid, as well as the payable for equalization liabilities related both to prior years and the year under review;
- tax liabilities for 127 million euro (42 million euro at December 31, 2018) and mainly refer to payables to the tax authorities for excise, withholding taxes and VAT;
- payables for fiscal transparency for 7 million euro to the associate Ergosud S.p.A., unchanged compared to December 31, 2018;
- payables for electricity tariff components for 70 million euro (75 million euro at December 31, 2018);
- payables for the purchase of equity investments amounting to 8 million euro (unchanged compared to December 31, 2018), contracts for the acquisition of companies in the photovoltaic sector;
- payables for ATO for 8 million euro (7 million euro at December 31, 2018) relating to the payment of the fee for concessions regarding the management of the water service;
- payables to customers for work to be performed for 15 million euro (14 million euro at December 31, 2018) related to estimates already collected from customers for work that has not been completed yet;
- payables to customers for interest on security deposits accrued but not yet paid for 3 million euro, unchanged over the previous year.

23) Current financial liabilities

millions of euro	Balance at 12 31 2018	First-time consolid. effect acquisitions 2019	Changes during the period	Balance at 06 30 2019	of which included in the NFP	
					12 31 2018	06 30 2019
Non-convertible bonds	558		(3)	555	558	555
Payables to banks	128		42	170	128	170
Current financial payables for rights of use	5		21	26	5	26
Financial payables to related parties	2		(2)	-	2	-
Payables to other lenders	1		-	1	1	1
Total current financial liabilities	694	-	58	752	692	752

“Current financial liabilities” amounted to 752 million euro compared to 694 million euro recorded at December 31, 2018 and showed an increase of 58 million euro.

“Non-convertible bonds” decreased by 3 million euro. The net decrease is mainly due to the early repayment of the bond issued by TS Energy Italy S.p.A. with maturity June 2032.

Current “Payables to banks” amounted to 170 million euro, an increase of 42 million euro, mainly due to the reclassification from medium/long-term to short-term of the debt due to UBI Banca, net of the repayments of credit lines and portions of loans made during the period.

“Current financial payables for rights of use” amounted to 26 million euro, an increase of 21 million euro following the application of IFRS 16 for leases previously classified as operating leases.

Lastly, “Payables to other lenders” amounted to 1 million euro showed no change compared to December 31, 2018.

24) Tax liabilities

<i>millions of euro</i>	Balance at 12 31 2018	First-time consolid. effect acquisitions 2019	Changes during the period	Balance at 06 30 2019
Tax liabilities	34		91	125

“Tax payables” amounted to 125 million euro (34 million euro at December 31, 2018) representing an increase of 91 million euro over the previous year-end.

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Net debt

25) Net debt (pursuant to CONSOB Communication no. DEM/6064293 of July 28, 2006 and ESMA/2013/319)

The following table provides details of net debt.

<i>millions of euro</i>	Note	06 30 2019	First-time consolid. effect acquisitions 2019	12 31 2018
Bonds - non-current portion	18	2,154		2,180
Bank loans - non-current portion	18	645	2	755
Non-current financial payables for rights of use	18	134		46
Non-current payables to other lenders	18	3	1	3
Other non-current liabilities	21	13		14
Total medium/long-term debt		2,949	3	2,998
Non-current financial assets - related parties	3	(5)		(6)
Non-current financial assets	3	(16)		(16)
Other non-current assets	5	(2)		(8)
Total medium/long-term financial receivables		(23)	-	(30)
Total non-current net debt		2,926	3	2,968
Bonds - current portion	23	555		558
Bank loans - current portion	23	170		128
Current financial payables for rights of use	23	26		5
Current payables to other lenders	23	1		1
Current financial liabilities - related parties	23	-		2
Total short-term debt		752	-	694
Other current financial assets	9	(8)		(15)
Current financial assets - related parties	9	(1)		(1)
Total short-term financial receivables		(9)	-	(16)
Cash and cash equivalents	11	(553)	(2)	(624)
Total current net debt		190	(2)	54
Net debt		3,116	1	3,022

The Group's net financial position amounted to 3,116 million euro and includes both the effect of the first-time application of IFRS 16 for 109 million euro and the effect of the first-time consolidation of 2019 acquisitions for 1 million euro.

Pursuant to IAS 7 “Cash Flow Statement”, the following are the changes in financial assets and liabilities:

millions of euro	12 31 2018	Cash flow	Non-cash flow			06 30 2019
			First-time consolid. effect acquisitions 2019	Change in fair value	Other changes	
Bonds	2,738	(32)		3		2,709
Financial payables	940	(85)	3		121	979
Other liabilities	14			(1)		13
Financial assets	(38)	7			1	(30)
Other assets	(8)			6		(2)
Net liabilities deriving from financing activities	3,646	(110)	3	8	122	3,669
Cash and cash equivalents	(624)	73	(2)			(553)
Net debt	3,022	(37)	1	8	122	3,116

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Notes to the income statement

The consolidation scope at June 30, 2019 changed compared to the corresponding period of the previous year due to the following operations:

- line-by-line consolidation of the ACSM-AGAM Group as of July 1, 2018;
- acquisition and line-by-line consolidation, from December 2018 and March 2019 respectively, by the subsidiary A2A Rinnovabili S.p.A. of TS energy Italy S.r.l., the holding company of nine project companies owning photovoltaic plants, and Bellariva Enertel 07 S.r.l., the owner of a photovoltaic plant;
- acquisition by A2A Energy Solutions S.r.l. (100% owned by A2A S.p.A.) of 100% of Suncity Energy S.r.l. (line-by-line consolidation) and 26% of Suncity Group S.r.l. (consolidated using the equity method), groups active in the field of energy efficiency and dispatching;
- incorporation and line-by-line consolidation of A2A Integrambiente S.r.l., 74% owned by A2A Ambiente S.p.A., 25% by Amsa S.p.A. and 1% by Aprica S.p.A., in order to provide environmental sanitation services;
- incorporation and line-by-line consolidation of the company Fair Renew S.r.l. held (60%), incorporated in July 2018;
- line-by-line consolidation of the company A2Abroad S.p.A., incorporated in December 2018;
- line-by-line consolidation of the company YADA ENERGIA S.r.l., incorporated in June 2019.

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26) Revenues

Revenues for the period amounted to 3,711 million euro (3,081 million euro at June 30, 2018) and therefore increased by 630 million euro (+20.4%), of which 234 million euro related to the consolidation of the ACSM-AGAM Group.

Details of the more significant items are as follows:

Revenues <i>millions of euro</i>	06 30 2019	06 30 2018	CHANGE	% JUNE 2019/2018
Revenues from the sale of goods	3,075	2,481	594	23.9%
Revenues from services	534	487	47	9.7%
Revenues from long-term contracts	1	1	-	0.0%
Total revenues from the sale of goods and services	3,610	2,969	641	21.6%
Other operating revenues	101	112	(11)	(9.8%)
Total revenues	3,711	3,081	630	20.4%

Net of the contribution of the ACSM-AGAM Group, the increase in revenues is mainly due to revenues from the sale of electricity, following higher sales on the free market, in particular large customers, revenues from gas sales thanks to higher volumes sold on the deregulated market and intermediated on the wholesale market, higher unit prices for electricity, partially offset by lower revenues from environmental markets.

Further details of the main items are as follows:

<i>millions of euro</i>	06 30 2019	06 30 2018	CHANGE	% JUNE 2019/2018
Sale and distribution of electricity	1,621	1,424	197	13.8%
Sale and distribution of gas	1,204	728	476	65.4%
Sale of heat	109	100	9	9.0%
Sale of materials	20	20	-	0.0%
Sale of water	36	30	6	20.0%
Sales of environmental certificates	71	165	(94)	(57.0%)
Connection contributions	14	14	-	0.0%
Total revenues from the sale of goods	3,075	2,481	594	23.9%
Services to customers	534	487	47	9.7%
Total revenues from services	534	487	47	9.7%
Revenues from long-term contracts	1	1	-	0.0%
Total revenues from the sale of goods and services	3,610	2,969	641	21.6%
Reintegration of costs plant S. Filippo del Mela (plant essential Unit)	38	43	(5)	(11.6%)
Damage compensation	4	5	(1)	(20.0%)
Rents receivable	2	1	1	100.0%
Contingent assets	11	11	-	0.0%
Incentives for production from renewable sources (feed-in tariff)	35	43	(8)	(18.6%)
Other revenues	11	9	2	22.2%
Other operating revenues	101	112	(11)	(9.8%)
Total revenues	3,711	3,081	630	20.4%

The reduction of 94 million euro in revenues from the sale of environmental certificates is mainly due to the sale of the long position of green certificates in the A2A Group portfolio (generated until December 31, 2015) and the retroactive recognition from 2013, by the GSE, of the incentive for some plants of the Friuli hydroelectric plant, as well as to lower revenues from the sale of white certificates resulting from a lower number of securities cancelled by the distributors of the A2A Group compared to the first half of 2018 and the decrease in the value of the tariff contribution recognized.

“Revenues for services” amounted to 534 million euro, representing an increase of 47 million euro compared to June 30, 2018.

The item “Other operating revenues” showed a decrease of 11 million euro mainly due to lower revenues for the reinstatement of generation costs incurred for the San Filippo del Mela plant (essential plant) pursuant to Resolution 803/2016 for 5 million euro, lower revenues linked to incentives on net production from renewable sources for 8 million euro and higher other revenues for 2 million euro.

Further details on the reasons for the performance of revenues relating to the various Business Units can be found in the paragraph “Result by sector”.

27) Operating expenses

“Operating expenses” amounted to 2,775 million euro (2,090 million euro at June 30, 2018), thus recording an increase of 685 million euro, of which 175 million euro relating to the consolidation of the ACSM-AGAM Group.

The main components of this item are as follows:

Operating expenses millions of euro	06 30 2019	06 30 2018	CHANGE	% JUNE 2019/2018
Costs for raw materials and consumables	2,082	1,499	583	38.9%
Costs for services	578	473	105	22.2%
Total costs for raw materials and services	2,660	1,972	688	34.9%
Other operating expenses	115	118	(3)	(2.5%)
Total operating expenses	2,775	2,090	685	32.8%

“Costs for raw materials and services” amounted to 2,660 million euro (1,972 million euro at June 30, 2018), an increase of 688 million euro, of which 160 million euro attributable to the consolidation of the ACSM-AGAM Group.

This increase was due to the combined effect of the following factors:

- the increase of 518 million euro in the purchase of raw materials and consumables, mainly due to the increase of 462 million euro in costs for the purchase of power and fuel, the increase of 7 million euro for the purchase of materials and the increase of 49 million euro in costs relating to the purchase of environmental certificates;
- an increase of 105 million euro in costs for delivery, subcontracted work and services;
- the decrease in inventories of fuel and materials for 65 million euro.

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For further information, the following table sets out details of the more significant components:

<i>millions of euro</i>	06 30 2019	06 30 2018	CHANGE	% JUNE 2019/2018
Purchases of power and fuel	1,886	1,424	462	32.4%
Purchases of materials	54	47	7	14.9%
Purchases of water	1	1	-	0.0%
Hedging losses on operating derivatives	9	9	-	0.0%
Hedging gains on operating derivatives	(13)	(13)	-	0.0%
Purchases of emission certificates and allowances	128	79	49	62.0%
Total expenses for raw materials and consumables	2,065	1,547	518	33.5%
Delivery and transmission costs	279	220	59	26.8%
Maintenance and repairs	97	79	18	22.8%
Other services	202	174	28	16.1%
Total costs for services	578	473	105	22.2%
Change in inventories of fuel and materials	17	(48)	65	n.s.
Total expenses for raw materials and services	2,660	1,972	688	34.9%
Leasehold improvements	38	43	(5)	(11.6%)
Concession fees distribution networks Municipality of Milan and Brescia	5	5	-	0.0%
Water derivation concession fees	35	34	1	2.9%
Contributions to territorial entities, consortia and ARERA	5	5	-	0.0%
Taxes and duties	18	17	1	5.9%
Damages and penalties	2	2	-	0.0%
Contingent liabilities	5	6	(1)	(16.7%)
Other costs	7	6	1	16.7%
Other operating expenses	115	118	(3)	(2.5%)
Total operating expenses	2,775	2,090	685	32.8%

Trading margin attività di trading

The following table sets out the results arising from the trading portfolio; these figures relate to trading in electricity, gas and environmental certificates.

Trading margin <i>millions of euro</i>	NOTES	06 30 2019	06 30 2018	CHANGE
Revenues	26	974	459	515
Operating expenses	27	(968)	(457)	(511)
Total trading margin		6	2	4

The “Trading margin” was up by 4 million euro compared to June 30, 2018. It should be noted that the first half of the year was characterized by high volatility in the prices of natural gas, electricity and CO2 emissions. In this context, trading activity in the period benefited from an increase in results that is consistent with the growth in operations set during the previous year regarding intra-day optimization of the execution of industrial hedges, systematic trading and management of volatility and maintained the objective of maximising the ratio between return and risk deriving from the management of positions.

28) Labour costs

Excluding capitalized costs, labour costs at June 30, 2019 amounted to 354 million euro (334 million euro at June 30, 2018), of which 23 million euro related to the consolidation of the ACSM-AGAM Group. “Labour costs” may be analysed as follows:

Labour costs millions of euro	06 30 2019	06 30 2018	CHANGE	% JUNE 2019/2018
Wages and salaries	270	249	21	8.4%
Social security charges	92	85	7	8.2%
Employee severance indemnities	16	15	1	6.7%
Other costs	13	15	(2)	(13.3%)
Total labour costs before capitalizations	391	364	27	7.4%
Capitalized labour costs	(37)	(30)	(7)	23.3%
Total labour costs	354	334	20	6.0%

The table below shows the average number of employees by category:

	06 30 2019	06 30 2018	CHANGE
Managers	206	180	26
Supervisors	690	614	76
White-collar workers	5,196	4,721	475
Blue-collar workers	6,097	5,817	280
Total	12,189	11,332	857

At June 30, 2019, the average labour cost per capita, not considering the effects of the consolidation of the ACSM-AGAM Group, amounted to 29.29 thousand euro (29.47 thousand euro at June 30, 2018). At June 30, 2019, the Group had 12,228 employees, of whom 885 related to the consolidation of the ACSM-AGAM Group. At June 30, 2018, the Group had 11,406 employees. The item “Other labour costs” includes early retirement incentives for a value less than 1 million euro (value less than 1 million euro at June 30, 2018).

29) Gross operating income

As a result of the above movements, consolidated “Gross operating income” at June 30, 2019 amounted to 582 million euro (657 million euro at June 30, 2018), of which 36 million euro arising from the consolidation of the ACSM-AGAM Group. Further details may be found in the section “Results sector by sector”.

30) Depreciation, amortization, provisions and write-downs

“Depreciation, amortization provisions and write-downs” totaled 255 million (221 million euro at June 30, 2018), of which 20 million euro from the consolidation of the ACSM-AGAM Group, representing an increase of 34 million euro.

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The following table provides details of the individual items:

Depreciation, amortization, provisions and write-downs <i>millions of euro</i>	06 30 2019	06 30 2018	CHANGE	% JUNE 2019/2018
Amortization of intangible assets	59	38	21	55.3%
Depreciation of tangible assets	186	175	11	6.3%
Total depreciation, amortization and write-downs of assets	245	213	32	15.0%
Provisions for risks	7	(5)	12	n.s.
Bad debts provision on receivables recognized as current assets	3	13	(10)	(76.9%)
Total depreciation, amortization, provisions and write-downs	255	221	34	15.4%

“Depreciation, amortization and write-downs” totalled 245 million euro (213 million euro at June 30, 2018), representing an overall increase of 32 million euro of which 19 million euro deriving from the consolidation of the ACSM-AGAM Group.

Amortization of intangible assets amounted to 59 million euro (38 million euro at June 30, 2018). The item includes higher amortization for 21 million euro, of which 12 million euro relating to the consolidation of the ACSM-AGAM Group (of which 3 million euro relating to the effects of Purchase Price Allocations), 1 million euro relating to the effects of Purchase Price Allocations of companies operating in the photovoltaic sector acquired in 2019, 3 million euro relating to the plan to replace gas meters, 1 million euro relating to the water distribution network and 4 million euro relating to the implementation of information systems.

“Depreciation of tangible assets” show an increase of 11 million euro compared to June 30, 2018 and mainly includes:

- higher depreciation of 10 million euro following the application of IFRS 16, including 1 million euro for ACSM-AGAM;
- higher depreciation resulting from the consolidation of the companies operating in the photovoltaic sector acquired starting from the second half of 2018 for 2 million euro;
- higher depreciation of 3 million euro, mainly relating to the investments which went into production after December 31, 2018;
- higher depreciation of 6 million euro, relating to the consolidation of the ACSM-AGAM Group;
- lower depreciation of 8 million euro for the Monfalcone power plant as a result of the write-down made in 2018;
- lower depreciation of 2 million euro for the San Filippo del Mela power plant.

With regard to large-scale diversion hydroelectric concessions, reference should be made to note 1) Tangible assets for further information about the regulatory developments in the sector.

“Provisions for risks” had a net effect of 7 million euro (positive for 5 million euro at June 30, 2018), of which 5 million euro in provisions for public water derivation fees, 6 million euro in provisions for landfill closure and post-closure expenses and 1 million euro in provisions for the effects of the updated appraisal report for the Brindisi power plant, partially adjusted by 5 million euro in surplus of provisions for legal disputes.

For further information, reference is made to Note 20 “Provisions for risks, charges and liabilities for landfills”.

The “Bad debts provision” shows a balance of 3 million euro (13 million euro at June 30, 2018), of which 1 million euro deriving from the consolidation of the ACSM-AGAM Group, determined by the provision for the period.

31) Net operating income

“Net operating income” amounted to 327 million euro (436 million euro at June 30, 2018).

32) Result from non-recurring transactions

The “Result from non-recurring transactions” had a zero balance at June 30, 2019, while it amounted to 6 million euro at June 30, 2018 and referred to the gain deriving from the sale of the shareholding in the company Rudnik Uglja ad Pljevlja.

33) Financial balance

The “Financial balance” closed with net expense of 65 million euro (net expense of 54 million euro at June 30, 2018).

Details of the more significant items are as follows:

Financial balance millions of euro	06 30 2019	06 30 2018	CHANGE	% JUNE 2019/2018
Financial income	5	11	(6)	(54.5%)
Financial expense	(70)	(69)	(1)	1.4%
Affiliates	-	4	(4)	(100.0%)
Total financial balance	(65)	(54)	(11)	20.4%

“Financial income” amounted to 5 million euro (11 million euro at June 30, 2018) and may be analyzed as follows:

Proventi finanziari millions of euro	06 30 2019	06 30 2018	CHANGE	% JUNE 2019/2018
Income from dividends in other companies	-	1	(1)	(100.0%)
Gains on disposals of financial assets	-	-	-	0.0%
Other financial income of which:	5	10	(5)	(50.0%)
- Financial income from the Municipality of Brescia (IFRIC 12)	3	3	-	0.0%
- Foreign exchange gains	-	2	(2)	(100.0%)
- Other income	2	5	(3)	(60.0%)
Total financial income	5	11	(6)	(54.5%)

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“Financial expenses” amounted to 70 million euro (69 million euro at June 30, 2018) and may be analysed as follows:

Financial expenses <i>millions of euro</i>	06 30 2019	06 30 2018	CHANGE	% JUNE 2019/2018
Interest on bond loans	48	51	(3)	(5.9%)
Interest charged by banks	2	3	(1)	(33.3%)
Fair value of financial derivatives	-	-	-	0.0%
Realized on financial derivatives	3	6	(3)	(50.0%)
Decommissioning costs	1	1	-	0.0%
Other financial expenses of which:	16	8	8	100.0%
- <i>Discounting charges</i>	6	3	3	100.0%
- <i>Financial expenses (IFRIC 12)</i>	1	1	-	0.0%
- <i>Foreign exchange losses</i>	-	2	(2)	(100.0%)
- <i>Other expenses</i>	9	2	7	<i>n.s.</i>
Total financial expenses before capitalizations	70	69	1	1.4%
Capitalized financial expenses	-	-	-	0.0%
Total financial expenses	70	69	1	1.4%

This item includes the total costs incurred for the early settlement of the existing bond at the Talesun Group, amounting to 9 million euro.

The equity method valuation of shareholdings had a zero balance at June 30, 2019, while it was positive for 4 million euro at June 30, 2018 and was mainly attributable to the positive valuations of the shareholding in ACSM-AGAM S.p.A and other minor shareholdings.

34) Income taxes

“Income taxes” in the period in question equalled 87 million euro (120 million euro at June 30, 2018).

It is noted that on the occasion of the closing of the 2019 half-year report, the A2A Group decided to estimate the tax for the period for all Group companies by adopting the tax rate criterion based on the best estimate of the Group’s weighted average rate expected for the entire year.

35) Net result from discontinued operations

The “Net result from discontinued operations” had a zero balance at June 30, 2019, while it amounted to 4 million euro at June 30, 2018 and included the discounting proceeds to adjust the value of the shareholding of EPCG at fair value following the renegotiation of the agreement with the Government of Montenegro, and approved by the same on April 27, 2018, which provides for the execution of the put option exercised by A2A S.p.A. on July 3, 2017 in four tranches in the period between May 1, 2018 and July 31, 2019, with an acceleration compared to the terms set by the Shareholders’ Agreement of August 29, 2016 (i.e. 7 tranches from May 1, 2018 to May 1, 2024).

36) Result of minorities

The “Result of minorities” is negative for the Group for 9 million euro and mainly includes the portion attributable to minority interests of the LGH Group and the ACSM-AGAM Group. At June 30, 2018, the item showed a negative balance for the Group for 5 million euro.

37) Group result of the period

The “Group result of the period” was positive for 166 million euro (positive for 267 million euro at June 30, 2018).

Earnings per share

38) Earnings per share

	01 01 2019 06 30 2019	01 01 2018 06 30 2018
Earnings (loss) per share (in euro)		
- basic	0.0534	0.0859
- basic from continuing operations	0.0533	0.0845
- basic from assets held for sale	0.0002	0.0014
- diluted	0.0534	0.0859
- diluted from continuing operations	0.0533	0.0845
- diluted from assets held for sale	0.0002	0.0014
Weighted average number of outstanding shares for the calculation of earnings (loss) per share		
- basic	3,109,183,856	3,109,183,856
- diluted	3,109,183,856	3,109,183,856

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39) Note on related party transactions

“Related parties” are those indicated by the international accounting standard that concerns Related Party Disclosures (IAS 24 revised).

Relationships with parent companies and their subsidiaries

On October 5, 2007, the Municipalities of Milan and Brescia signed a Shareholders’ Agreement to regulate the ownership structure of A2A S.p.A.; this gave the Municipalities joint control over the company.

Specifically, the merger effective January 1, 2008, regardless of the legal structure established, was considered a joint venture, whose joint control was exercised by the Municipalities of Milan and Brescia, each of which owned a share equal to 27.5%.

On June 13, 2014, the Shareholders’ Meeting modified the company’s governance system, passing from the original two-tier system, adopted in 2007, to a “traditional” system of management and control through the appointment of the Board of Directors.

In December 2014, the Municipalities of Milan and Brescia sold a total shareholding of 0.51% of A2A S.p.A., while in the first two months of 2015, the Municipalities of Milan and Brescia sold an additional shareholding of 4.5% of A2A S.p.A.

On October 4, 2016, the Municipalities of Milan and Brescia renewed for another three years, with effect from January 1, 2017, the Shareholders’ Agreement signed on December 30, 2013, concerning 1,566,452,642 ordinary shares representing 50% plus two shares of the share capital of A2A S.p.A. On May 20, 2016, the two Municipalities had proceeded to sign an appendix to the Agreement, which envisaged reducing from six months to three months the term of the agreement, during which it is possible to terminate the same.

On October 26, 2016, the Municipality of Milan received from the Municipality of Brescia the proposal, approved by the Council of said Municipality on October 25, 2016, to partially amend the shareholders’ agreement relating to A2A S.p.A. existing between the two Municipalities. In particular, said proposal requires the commitment of the two Municipalities to maintain syndicated and bound, in the new agreement, a number of shares held by them in equal measure, equal to 42% of the share capital of A2A S.p.A. On November 4, 2016, the Council of the Municipality of Milan, after having favourably examined the proposal of the Municipality of Brescia of a partial amendment to the shareholders’ agreement, submitted to the Municipal Council the proposal of the new shareholders’ agreement for the final determinations of competence.

On January 23, 2017, the Milan City Council approved the new Shareholders’ Agreement between the Municipality of Milan and the Municipality of Brescia regarding the shareholding in A2A S.p.A. and has undertaken the commitment not to proceed with the disposal of any shares owned by the Municipality of Milan.

At the date of approval of this Half-Year Report at June 30, 2019, the two shareholders hold a shareholding of 50% plus two shares that enables the two municipalities to maintain control over the company.

The A2A Group companies and the Municipalities of Milan and Brescia routinely entertain commercial relationships related to the supply of electricity, gas, heat, and potable water, management of public lighting systems and street lights, management of water purification and sewers, garbage collection and street sweeping and video surveillance.

Similarly, the A2A Group companies entertain commercial relationships with the companies controlled by the Municipalities of Milan and Brescia, for example, Metropolitana Milanese S.p.A., ATM S.p.A., Brescia Mobilità S.p.A., Brescia Trasporti S.p.A. and Centrale del Latte di Brescia S.p.A., supplying them with electrical energy, gas, heat, water purification and sewer service at market rates appropriate to the supply conditions and providing the services required. Note that these companies are considered related parties in the preparation of the financial statement schedules pursuant to Consob Resolution 17221 of March 12, 2010.

The relationships between the Municipalities of Milan and Brescia and the A2A Group, in relation to granting the services associated with public lighting, street lights, management and supply of electricity, gas, heat, and water purification and sewer service are regulated by special conventions and specific contracts.

The relationships between the companies controlled by the Municipalities of Milan and Brescia, which refer to the supply of electricity, are at arm's length conditions.

On April 12, 2017, Amsa S.p.A., a subsidiary of A2A S.p.A., signed a contract with the Municipality of Milan for the management of environmental protection services for the period January 1, 2017 - February 8, 2021.

Relationships with subsidiaries and affiliates

The parent company A2A S.p.A., operates like a centralized treasury for the majority of the subsidiaries.

Relations between the companies are regulated through current accounts between the parent company and the subsidiaries, on which rates are applied, at market conditions, based on variable Euribor, with specific spreads for companies. For the financial year 2018, A2A S.p.A. and its subsidiaries have adopted the VAT procedure of the Group.

Note that for IRES purposes, A2A S.p.A. files for tax on a consolidated basis, together with its main subsidiaries, in accordance with arts. 117-129 of DPR 917/86. To this end, with each of the subsidiaries joining, a special contract was drawn up to regulate the tax advantages/disadvantages transferred, with specific reference to the current entries. These contracts also govern the transfer of any excess of ROL as set forth by prevailing legislation.

The parent company provides the subsidiaries and affiliates with administrative, fiscal, legal, management and technical services in order to optimize the resources available in the company and to use the existing expertise in terms of economic convenience. These services are governed by specific service contracts stipulated annually. A2A S.p.A. also makes office space and operating areas at its own premises available to subsidiaries and associates, as well as associated services. These are provided at market conditions.

The companies A2A gencogas S.p.A. and A2A Energiefuture S.p.A., for a monthly fee related to the actual availability of the thermoelectric plants, provide to the Parent Company the power generation service.

Telecommunication services are provided by the subsidiary A2A Smart City S.p.A.

As of July 1, 2018, the ACSM-AGAM Group's related-party transactions with related parties of the A2A Group are shown as related parties.

Finally, note that pursuant to the Consob communication issued on September 24, 2010, bearing the provisions regarding related party transactions in accordance with Consob Resolution no. 17221 of March 12, 2010, as amended, on November 11, 2010, the Group had approved the procedure for related party transactions which took effect on January 1, 2011, and which aims to ensure the transparency and substantial fairness of the related party transactions executed by A2A S.p.A. directly, or through subsidiaries, identified in accordance with the IAS 24 revised accounting standard. The Board of Directors of June 20, 2016 resolved, with the approval of the Risk Control Committee, the review of the procedure "Regulation of transactions with Related Parties". The review of the procedure particularly involves the reduction, introduced optionally, of the threshold for transactions with subsidiaries of the Municipalities of Milan and Brescia, regarding which to provide for the application of the Procedure. Finally, the procedure was updated on June 22, 2017, following Consob Resolution no. 19925 of March 22, 2017.

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Below are the tables with detail of the related party transactions, in accordance with the Consob Resolution no. 17221 of March 12, 2010:

Balance sheet	Total 06 30 2019	Of which with related parties								% effect on the balance sheet item
		Associa- ted compa- nies	Related compa- nies	Municipa- lity of Milan	Subsidi- aries Muni- cipality of Milan	Municipi- pality of Brescia	Subsidi- aries Muni- cipality of Brescia	Related parties individu- als	Total related parties	
millions of euro										
TOTAL ASSETS OF WHICH:	10,442	83	32	61	11	15	-	-	202	1.9%
Non-current assets	7,389	5	19	-	-	4	-	-	28	0.4%
Shareholdings	23	5	18	-	-	-	-	-	23	100.0%
Other non-current financial assets	29	-	1	-	-	4	-	-	5	17.2%
Current assets	2,983	8	13	61	11	11	-	-	104	3.5%
Trade receivables	1,678	8	13	61	11	10	-	-	103	6.1%
Current financial assets	9	-	-	-	-	1	-	-	1	11.1%
Non-current assets held for sale	70	70	-	-	-	-	-	-	70	100.0%
TOTAL LIABILITIES OF WHICH:	6,992	23	9	5	1	9	-	-	47	0.7%
Non-current liabilities	4,060	1	-	-	-	-	-	-	1	0.0%
Provisions for risks and charges	648	1	-	-	-	-	-	-	1	0.2%
Current liabilities	2,932	22	9	5	1	9	-	-	46	1.6%
Trade payables	1,265	15	3	5	1	9	-	-	33	2.6%
Other current liabilities	790	7	6	-	-	-	-	-	13	1.6%

Income statement	Total 06 30 2019	Of which with related parties								% effect on the balance sheet item
		Associa- ted compa- nies	Related compa- nies	Municipa- lity of Milan	Subsidi- aries Muni- cipality of Milan	Municipi- pality of Brescia	Subsidi- aries Muni- cipality of Brescia	Related parties individu- als	Total related parties	
millions of euro										
REVENUES	3,711	4	16	162	18	21	1	-	222	6.0%
Revenues from the sale of goods and services	3,610	4	16	162	18	21	1	-	222	6.1%
OPERATING EXPENSES	2,775	11	2	1	1	4	-	-	19	0.7%
Expenses for raw materials and services	2,660	-	2	-	1	-	-	-	3	0.1%
Other operating expenses	115	11	-	1	-	4	-	-	16	13.9%
LABOUR COSTS	354	-	-	-	-	-	-	1	1	0.3%
FINANCIAL BALANCE	(65)	-	-	-	-	3	-	-	3	(4.6%)
Financial income	5	-	-	-	-	3	-	-	3	60.0%

The complete financial statements are included in the section “Consolidated financial statements” of this report pursuant to Consob Resolution no. 17221 of March 12, 2010.

With regard to the compensation paid to the corporate governance bodies, reference shall be made to the document “Remuneration Report – 2019” available on the website www.a2a.eu.

Significant non-recurring events and transactions

40) Consob Communication no. DEM/6064293 of July 28, 2006

There were no atypical and/or unusual transactions during the period in question.

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Guarantees and commitments with third parties

<i>millions of euro</i>	06 30 2019	12 31 2018
Guarantees received	748	706
Guarantees provided	1,322	1,182

Guarantees received

Guarantees received amounted to 748 million euro (706 million euro at December 31, 2018) and included 313 million euro for sureties and security deposits issued by subcontractors to guarantee the proper execution of the work assigned and 424 million euro for sureties and security deposits received from customers to guarantee the regularity of payments and guarantees received by the ACSM-AGAM Group for 11 million euro.

Guarantees provided and commitments with third parties

Guarantees provided amounted to 1,322 million euro (1,182 million euro at December 31, 2018), of which for obligations undertaken in the loan agreements of 88 million euro. These guarantees have been issued by banks for 770 million euro, insurance companies for 91 million euro and the parent company A2A S.p.A., as parent company guarantee, for 417 million euro and guarantees provided by the ACSM-AGAM Group for 44 million euro.

Group companies hold third party assets under concession, relating mainly to the integrated water cycle, amounting to 66 million euro.

Other information

1) IFRS 16 Leases:

As already specified in the paragraph “Changes in international accounting standards”, the Group decided to apply the new IFRS 16 standard retroactively without restating the comparative data and accounting for the cumulative effect of the initial application of the standard from January 1, 2019, recognising, within the Statement of Financial Position, the assets consisting of the right to use leased assets and the lease liabilities at the present value of the remaining payments due.

It should be noted that the discount rate used to determine the present values of assets and liabilities deriving from operating lease contracts is that corresponding to the Group’s average prospective financing rate.

It should be noted that, as a practical expedient, the Group has made use of the option provided for in paragraph 6 of the standard not to apply the provisions of paragraphs 22 to 49 of the standard to the following categories:

- a) short-term leases;
- b) leases whose underlying assets are of low value.

From the analysis carried out, the Group identified operating leases, the underlying assets of which had not previously been recorded in the financial statements as Assets for rights of use and Financial payables for rights of use, relating to the rental of land, buildings, plant and machinery and the rental of vehicles and other assets.

The application of IFRS 16 from January 1, 2019 with the modified retrospective method resulted in the recognition of new Assets for rights of use and Financial payables for rights of use for an amount of 109 million euro. There were no significant impacts on Group shareholders’ equity. With regard to finance leases, there were no impacts on the Statement of financial position at June 30, 2019 compared to the situation at December 31, 2018.

The table below provides a breakdown of the impact on the Group’s Statement of financial position at June 30, 2019 with reference to assets for rights of use relating to leasing operating and financial:

Assets consisting of rights of use millions of euro	Balance at 12 31 2018	Changes during the period			Balance at 06 30 2019
		Other changes	Amortization	Total changes	
Land	-	25	(2)	23	23
Buildings	3	43	(3)	40	43
Plant and machinery	50	3	(3)	-	50
Other assets	-	24	(1)	23	23
Vehicles	1	26	(4)	22	23
Total	54	121	(13)	108	162

The table below provides a breakdown of the impact on the Group’s Statement of financial position at June 30, 2019 with reference to financial payables for rights of use financial and operating:

millions of euro	Balance at 12 31 2018	Changes during the period				Balance at 06 30 2019
		Interest of the year	Cash outflows	Other changes	Total changes	
Financial payables for rights of use (current and non-current)	51	2	(15)	122	109	160
Total	51	2	(15)	122	109	160

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2) Financial risk management

The A2A Group operates in the electricity, natural gas and district heating industry and is exposed to various financial risks in performing its activity:

- a) commodity risk;
- b) interest rate risk;
- c) exchange rate risk not related to commodities;
- d) liquidity risk;
- e) credit risk;
- f) equity risk;
- g) default and covenant non-compliance risk.

The commodity price risk, related to the volatility of energy commodity prices (gas, electricity, fuel oil, coal, etc.) and prices of environmental securities (EUA/ETS emission rights, white certificates, etc.), consists of the possible negative effects that a change in the market price of one or more commodities may have on the cash flows and income prospects of the company, including the exchange rate risk related to the same commodities.

Interest rate risk is the risk of additional financial costs as the result of an unfavourable change in interest rates.

Currency risk not related to commodities is the risk of higher costs or lower revenues because of an unfavourable change in exchange rates between currencies.

Liquidity risk is the risk that financial resources will not be sufficient to meet established financial and business obligations in a timely manner.

Credit risk is the exposure to potential losses deriving from non-performance of commitments by commercial, trading and financial counterparties.

Equity risk is the possibility of incurring losses due to an unfavourable change in the price of shares.

Default and covenant non-compliance risk represent the possibility that loan agreements or bond regulations to which one or more Group companies are party contain provisions allowing the counterparties, banks or bondholders, to ask the debtor for immediate reimbursement of the amounts lent if certain events take place.

Details on the risks to which the A2A Group is exposed are provided below.

a. Commodity risk

a.1) Commodity price risk and exchange rate risk involved in commodity activities

The Group is exposed to price risk, including the related currency risk, on all of the energy commodities that it handles, namely electricity, natural gas, heat, coal, fuel oil and environmental certificates; the results of production, purchases and sales are similarly affected by fluctuations in the prices of such energy commodities. These fluctuations act both directly and indirectly, through formulas and indexing in the pricing structure.

To stabilize cash flows and to assure the Group's economic and financial stability, A2A S.p.A. has an Energy Risk Policy that sets out clear guidelines to manage and control the above risks, based on guidance by the Committee of Chief Risk Officers Organizational Independence and Governance Working Group ("CCRO") and the Group on Risk Management of Euroelectric. Reference was also made to the Accords of the Basel Committee on bank supervision and the requirements laid down in international accounting standards on how to recognize the volatility of commodity price and financial derivatives in the income statement and balance sheet.

In the A2A Group, assessment of this kind of risk is centralized at the holding company, which has established a Group Risk Management Organizational Unit as part of the Planning, Finance and Control Organizational Unit. This unit has the task to manage and monitor market and commodity risks, to create and evaluate structured products, to propose financial energy risk hedging strategies, and to support senior management in defining the Group's energy risk management policies.

Each year, the Board of Directors of A2A S.p.A. sets the Group's commodity risk limits approving the PaR and VaR proposed (prepared in the Risk Committee) in conjunction with approval of the Budget/ Business Plan; Group Risk Management supervises the situation to ensure compliance with these limits and proposes to senior management the hedging strategies designed to bring risk within the set limits, if exceeded.

The activities that are subject to risk management include all of the positions on the physical market for energy products, both purchasing/production and sales, and all of the positions in the energy derivatives market taken by Group companies.

For the purpose of monitoring risks, industrial and trading portfolios have been separated and are managed in different ways. The industrial portfolio consists of the physical and financial contracts directly relating to the Group's industrial operations, namely where the objective is to enhance production capacity also through the wholesaling and retailing of gas, electricity and heat.

The trading portfolio comprises all contracts, both physical and financial, entered into to supplement the profits made from the industrial activities, i.e. all contracts that are ancillary though not strictly necessary to the industrial activity.

In order to identify trading activity, the A2A Group follows the Capital Adequacy Directive and the definition of assets held for trading provided by International Accounting Standard (IFRS) 9: namely assets held for the purpose of short-term profit taking on market prices or margins, without being for hedging purposes, and designed to create a high-turnover portfolio.

Given that they exist for different purposes, the two portfolios have been segregated and are monitored separately with specific tools and limits. More specifically, the trading portfolio is subject to particular risk control and management procedures as laid down in Deal Life Cycle documents.

Senior management is systematically updated on changes in the Group's commodity risk by the Group Risk Management Unit, which controls the Group's net exposure. This is calculated centrally on the entire asset and contract portfolio and monitors the overall level of economic risk assumed by the industrial and trading portfolios (Profit at Risk - PaR, Value at Risk - VaR, Stop Loss).

a.2) Commodity derivatives, analysis of transactions

Derivatives of the industrial portfolio considered hedges

The hedging of price risk by means of derivatives focuses on protecting against the volatility of energy prices on the power exchange (IPEX-EEX), stabilizing electricity price margins on the wholesale market with particular attention being paid to fixed price energy sales and purchases and stabilizing price differences deriving from various indexing mechanisms for the pricing of gas and electricity. To that end, hedging contracts were executed during the year on electricity purchase and sale agreements and on contracts to hedge the fee for the use of electricity transport capacity between the areas of the IPEX market (CCC contracts); hedging contracts were concluded with leading banks on contracts for the purchase of coal so as to protect sales margins and at the same time keep the risk profile to within the limits set by the Group's energy risk policy.

As part of the optimization of the portfolio of greenhouse gas emission allowances (see Directive 2003/87/EC), the A2A Group has stipulated Future contracts on the ICE ECX (European Climate Exchange) price. These are considered hedging transactions from an accounting point of view in the event of demonstrable surplus/deficit quotas.

The fair value at June 30, 2019 was 10.7 million euro (10.2 million euro at December 31, 2018).

Derivatives of the industrial portfolio not considered hedges

Again with a view to optimizing the Industrial Portfolio, Future contracts have been entered into on the ICE ECX (European Climate Exchange) stock exchange price. These do not qualify as hedging transactions from an accounting point of view as they fail to meet the requirement set out in the accounting standards.

The fair value at June 30, 2019 was -0.9 million euro (0.0 million euro at December 31, 2018).

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Derivatives of the Trading Portfolio

As part of its trading activity, the A2A Group has taken out Future contracts on major European energy stock exchanges (EEX, ICE, Powernext) and forward contracts on the price of electricity with delivery in Italy and neighboring countries such as France, Germany and Switzerland. The Group has also stipulated Future, Forward and Option contracts on the ICE ECX (European Climate Exchange) stock exchange price. Also as part of trading activities, both Future and Forward contracts were also stipulated for the market price of gas (ICE-Endex, CEGH).

The fair value at June 30, 2019 was 18.1 million euro (-2.7 million euro at December 31, 2018).

a.3) Energy Derivatives, risk assessment of Industrial Portfolio derivatives

PaR⁽¹⁾ or Profit at Risk, is used to assess the impact that fluctuations in the market price of the underlying have on the financial derivatives taken out by the A2A Group that are attributable to the industrial portfolio. It is the change in the value of a financial instruments portfolio within set probability assumptions as the result of a shift in the market indices. The PaR is calculated using the Montecarlo Method (at least 10,000 trials) and a 99% confidence level. It simulates scenarios for each relevant price driver depending on the volatility and correlations associated with each one, using as the central level the forward market curves at the balance sheet date, if available. By means of this method, after having obtained a distribution of probability associated with changes in the result of outstanding financial contracts, it is possible to extrapolate the maximum change expected over a time horizon given by the accounting period at a set level of probability. Based on this methodology, over the time horizon of the accounting period and in the event of extreme market movements and at a 99% confidence level, the expected maximum negative change in financial derivatives outstanding at June 30, 2019 was 73.924 million euro (75.530 million euro at December 31, 2018).

The following are the results of the simulation with the related maximum variances:

millions of euro	06 30 2019		31 12 2018	
	Worst case	Best case	Worst case	Best case
Profit at Risk (PaR)				
Confidence level 99%	(73.924)	90.257	(75.530)	89.251

The A2A Group therefore expects, with a 99% probability, not to have changes compared to the fair value at June 30, 2019 exceeding 73.924 million euro of its entire portfolio of financial instruments due to commodity price fluctuations.

If there are any negative changes in the fair value of derivatives, these would be compensated by changes in the underlying as the result of changes in market prices.

a.4) Energy Derivatives, risk assessment of Trading Portfolio derivatives

VaR (Value at Risk)⁽²⁾ is used to assess the impact that fluctuations in the market price of the underlying have on the financial derivatives taken out by the A2A Group that are attributable to the trading portfolio. It is the negative change in the value of a financial instruments portfolio within set probability assumptions as the result of an unfavourable shift in the market indices. VaR is calculated using the RiskMetrics method with a holding period of 3 days and a confidence level of 99%. Alternative methods are used for contracts where it is not possible to perform a daily estimate of VaR such as stress test analysis

Under this method, in the case of extreme market movements, with a confidence level of 99% and a holding period of 3 days, the maximum estimated loss on the derivatives in question was 0.160 million euro at June 30, 2019 (0.251 million at December 31, 2018). In order to ensure closer monitoring of activities, VaR and Stop Loss limits are also set, understood as the sum of VaR, P&L Realized and P&L Unrealized.

1 Profit at Risk: statistical measurement of the maximum potential negative deviation of the margin of an asset portfolio in case of unfavourable market changes over a given time horizon and with a defined confidence interval.
2 Value at Risk: statistical measurement of the maximum potential drop in the fair value of an asset portfolio in the event of unfavourable movements in the market with a given time horizon and confidence level.

The following are the results of the assessments:

millions of euro	06 30 2019		12 31 2018	
	VaR	Stop Loss	VaR	Stop Loss
Value at Risk (VaR)				
Confidence level 99%, holding period 3 days	(0.160)	(0.160)	(0.251)	(0.251)

b. Interest rate risk

The volatility of financial expenses associated to the performance of interest rates is monitored and mitigated through a policy of interest rate risk management aimed at identifying a balanced mix of fixed-rate and floating rate loans and the use of derivatives that limit the effects of fluctuations in interest rates.

At June 30, 2019, the structure of gross debt is as follows:

millions of euro	06 30 2019			12 31 2018		
	Before hedging	After hedging	% after hedging	Before hedging	After hedging	% after hedging
Fixed rate	2,668	2,939	82%	2,706	2,993	81%
Floating rate	909	638	18%	972	685	19%
Total (*)	3,577	3,577	100%	3,678	3,678	100%

(*) excluding financial payables from operating leases.

At June 30, 2019, the following are the hedging instruments for interest rate risk:

HEDGING INSTRUMENT	HEDGED ASSET	06 30 2019		12 31 2018	
		Fair value	Notional	Fair value	Notional
IRS	Floating rate loans subsidiaries	(0.5)	30.0	(0.6)	36.4
IRS	Floating rate leases subsidiaries	(5.5)	30.1	(5.1)	31.4
Collar	Floating rate loans A2A	(7.2)	85.7	(8.0)	95.2
Total		(13.2)	145.8	(13.7)	163.0

With reference to the accounting treatment, hedging derivatives for interest rate risk can be classified as follows:

ACCOUNTING TREATMENT	DERIVATIVES	NOTIONAL		FAIR VALUE ASSETS		NOTIONAL		FAIR VALUE LIABILITIES	
		at	at	at	at	at	at	at	at
		06/30/2019	12/31/2018	06/30/2019	12/31/2018	06/30/2019	12/31/2018	06/30/2019	12/31/2018
Cash flow hedge	Collar	0.0	0.0	0.0	0.0	85.7	95.2	(7.2)	(8.0)
Cash flow hedge	IRS	0.0	0.0	0.0	0.0	60.1	67.8	(6.0)	(5.7)
Total		0.0	0.0	0.0	0.0	145.8	163.0	(13.2)	(13.7)

Derivatives on interest rates at June 30, 2019 in cash flow hedge refer to the following loans:

Loan	Derivative	Accounting
A2A S.p.A. loan with BEI: expiring in November 2023, residual balance at June 3, 2019 amounting to 85.7 million euro, at floating rate.	Collar to fully cover the loan and the same maturity, with a floor on Euribor rate 2.99% and 4.65% cap. At June 30, 2019, the fair value was negative for 7.2 million euro.	The loan is measured at amortized cost. The collar is a cash flow hedge, with 100% recognized in a specific equity reserve.
Linea Green loan with Unicredit: maturity May 2021, residual balance at June 30, 2019 amounting to 10.5 million euro, at floating rate.	IRS on 100% of the amount of the loan until maturity thereof. At June 30, 2019, the fair value was negative for 0.3 million euro.	The loan is measured at amortized cost. The IRS is a cash flow hedge, with 100% recognized in a specific equity reserve.
ACSM-AGAM loan with Intesa Sanpaolo: maturity June 2021, residual debt at June 30, 2019 amounting to 11.5 million euro, at floating rate.	IRS on 100% of the amount of the loan until maturity thereof. At June 30, 2019, the fair value was negative for 0.1 million euro.	The loan is measured at amortized cost. The IRS is a cash flow hedge, with 100% recognized in a specific equity reserve.
ACSM-AGAM loan with Unicredit: maturity June 2023, residual balance at June 30, 2019 amounting to 8.0 million euro, at floating rate.	IRS on 100% of the amount of the loan until maturity thereof. At June 30, 2019, the fair value was negative for 0.1 million euro.	The loan is measured at amortized cost. The IRS is a cash flow hedge, with 100% recognized in a specific equity reserve.
12 Leases of A2A Rinnovabili with various credit institutions and maturities, total debt at June 30, 2019 of 46.0 million euro, at floating rate.	IRS on 85% of the lease amount. At June 30, 2019, the fair value was negative for 5.5 million euro.	The IRS are in cash flow hedge, with 100% recognized in a specific equity reserve.

To provide a better understanding of the risks of interest rate fluctuations to which the Group is subjected every six month at December 31 and June 30, a sensitivity analysis was conducted of net financial expenses and valuation items of derivative financial contracts as a result of interest rate fluctuations.

A sensitivity analysis is provided relating to possible changes in the fair value of derivatives (excluding cross currency swaps) on shifting the forward rate curve by +50 bps and -50 bps:

millions of euro	06 30 2019 (base case: -13.2)		12 31 2018 (base case: -13.7)	
	-50 bps	+50 bps	-50 bps	+50 bps
Change in fair value of derivatives	(2.0)	2.0	(2.1)	2.0

This sensitivity analysis is calculated to determine the effect of the retrospective change of the forward interest rate curve of the fair value of derivatives ignoring any impact of the adjustment due to counterparty risk – “Bilateral Credit Value Adjustment” (bCVA) – introduced in the calculation of fair value in accordance with international accounting standard IFRS13.

c. Exchange rate risk not related to commodities

In relation to exchange rate risk other than that included in the price of commodities, the hedging instrument at June 30, 2019 is as follows:

HEDGING INSTRUMENT	HEDGED ASSET	06 30 2019		12 31 2018	
		Fair value	Notional (*)	Fair value	Notional (*)
Cross Currency IRS	Fixed rate loan in foreign currency	2.5	114.2	7.7	111.2
Total		2.5	114.2	7.7	111.2

(*) the notional of the CCS is valued at the period-end ECB exchange rate.

With regard to the accounting treatment, it is specified that the hedging derivative above is in cash flow hedge with full recognition in the equity reserve.

In particular, the underlying of the Cross Currency IRS derivative refers to the bond at fixed rate of 14 billion yen with maturity 2036 bullet issued in 2006.

A cross currency swap contract was stipulated for the entire duration of this loan, which converts the principal and interest payments from yen into euro.

At June 30, 2019, the fair value of the hedge was positive for 2.5 million euro. It should be noted that the fair value would improve by 21.2 million euro in the event of a negative translation of 10% of the forward curve of the euro/yen exchange rate (appreciation of the yen) and would worsen by 16.5 million euro in the event of a positive translation of 10% of the forward curve of the euro/yen exchange rate (depreciation of the yen). This sensitivity is calculated in order to determine the effect of the variation of the forward curve of the euro/yen exchange rate on the fair value regardless of any impact on the adjustment attributable to the bCVA.

d. Liquidity risk

Liquidity risk is the risk that the Group is unable to meet its obligations in a timely manner or that it is able to do so under unfavourable economic conditions.

The profile of the Group’s gross debt maturities is as follows:

millions of euro	Accounting balance 06 30 2019	Portions maturing within 12 months	Portions maturing after 12 months	Portions maturing by				
				06 30 2021	06 30 2022	06 30 2023	06 30 2024	After
Bonds	2,709	555	2,154	350	498	-	599	707
Financial payables for use rights	160	26	134	22	15	13	14	70
Financial payables to related companies	-	-	-	-	-	-	-	-
Bank borrowings and other financing	819	171	648	101	86	85	70	306
TOTAL	3,688	752	2,936	473	599	98	683	1,083

The risk management policy is realized through (i) a debt management strategy diversified by funding sources and maturities, and (ii) maintenance of financial resources sufficient to meet scheduled and unexpected commitments over a given time horizon.

At June 30, 2019, the Group had a total of 1,284 million euro, as follows:

- (i) committed revolving credit lines of 740 million euro, of which 200 million euro maturing in 2019, 140 million euro maturing in 2021 and 400 million euro maturing in 2023, unused;
- (ii) unused long-term loans totalling 40 million euro;
- (iii) cash and cash equivalents totaling 553 million euro, including 432 million euro at the Parent Company level.

The Group also maintains a Bond Issue Program (Euro Medium Term Note Programme) of 4 billion euro, of which nominal 1,438 million euro still available.

The following table analyses the worst case for financial liabilities (including trade payables) in which all of the flows shown are undiscounted future nominal cash flows determined on the basis of residual contractual maturities for both principal and interest; they also include the undiscounted nominal flows of derivative contracts on interest rates.

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06 30 2019 <i>millions of euro</i>	1-3 MONTHS	4-12 MONTHS	AFTER 12 MONTHS
Bonds	2	595	2,406
Payables and other financial liabilities (*)	30	151	719
Total financial flows	32	746	3,125
Payables to suppliers	410	31	2
Total trade payables	410	31	2

(*) excluding financial payables from operating leases.

12 31 2018 <i>millions of euro</i>	1-3 MONTHS	4-12 MONTHS	AFTER 12 MONTHS
Bonds	45	557	2,516
Payables and other financial liabilities	40	102	856
Total financial flows	85	659	3,372
Payables to suppliers	464	9	1
Total trade payables	464	9	1

e. Credit risk

Credit risk relates to the possibility that a counterparty, commercial or trading, may be in default, or fail to respect its commitment in the manner and timing provided by contract. This type of risk is managed by the Group through specific procedures (Credit Policy, Energy Risk Management procedure) and appropriate mitigation actions.

This risk is overseen by both the Credit Management function allocated centrally (and the corresponding functions of the operating companies) and the Group Risk Management Organizational Unit responsible for supporting the Group companies with reference to both commercial and trading activities. Risk mitigation is through the prior assessment of the creditworthiness of the counterparty and the constant verification of compliance with exposure limit as well as through the request for adequate guarantees.

The credit terms granted to customers as a whole have a variety of deadlines, in accordance with applicable law and market practice. In cases of delayed payment, default interest is charged as explicitly prescribed by the underlying supply contracts or by current law (application of the default rate as per Legislative Decree 231/2002).

Trade receivables are stated in the balance sheet net of any write-downs; the amount shown is considered to be a correct reflection of the realizable value of the receivables portfolio. For the aging of trade receivables, reference is made to note 7 "Trade receivables".

f. Equity risk

The A2A Group is exposed to equity risk limited to the holding of treasury shares held by A2A S.p.A., which at June 30, 2019 amounted to 23,721,421 shares corresponding to 0.757% of the share capital, which is made up of 3,132,905,277 shares.

From an accounting standpoint, as provided by IAS/IFRS, the purchase cost of treasury shares is recorded as decrease in shareholders' equity and not even if transferred will the eventual positive or negative difference, with respect to the purchase cost, have effects on the income statement. The purchase of treasury shares has been made to pursue development objectives such as transactions related to business projects consistent with the strategies that the company intends to pursue, in relation to which there is the opportunity of stock exchanges.

g. Covenants compliance risk

Bonds, loans, leases and committed revolving bank lines present Terms and Conditions in line with the market for each type of instrument. In particular, they envisage: (i) negative pledge clauses under which the parent company undertakes not to pledge, with exceptions, guarantees on its assets or those of its directly held subsidiaries over and above a specific threshold; (ii) cross- default/acceleration clauses which entail immediate reimbursement of the loans in the event of serious non-performance; and (iii) clauses that provide for immediate repayment in the event of declared insolvency on the part of certain Group companies.

Bonds include (i) 2,562 million euro (book value) issued as part of the EMTN Programme, which provide to investors a Change of Control Put in the event of a change of control of the company resulting in a rating downgrade at sub-investment grade level in the following 180 days (if within said 180 days, the company's rating should return to investment grade, the option may not be exercised); (ii) 114 million euro (book value) relating to the private bond in yen with maturity 2036 with a Put right clause in favour of the investor in the event that the rating is lower than BBB- or equivalent level (sub-investment grade).

The loans stipulated with the European Investment Bank, with book value of 654 million euro, of which 307 million with maturity beyond 5 years, contain a Credit Rating clause (if rating below BBB- or equivalent level to sub-investment grade), and include a change of control clause of the parent company, with the right for the bank to invoke, upon notice to the company containing indication of the reasons, the early repayment of the loan.

With regard to loans of the subsidiaries, the loan of A2A gencogas S.p.A. for a book value of 15 million euro is backed by a secured guarantee (mortgage) for a maximum of 120 million euro and contains two financial covenants, as shown in the table below.

The loan between Linea Green and Unicredit of 10 million euro is secured by real guarantees on the Company's properties and plants and includes a financial covenant, as shown in the table below.

Some finance lease of A2A Rinnovabili and some bank loans of ACSM-AGAM envisage financial covenants, as shown in the table below.

With reference to the bank lines revolving committed available, the line for 400 million euro with maturity August 2023 and bilateral lines from 200 to 100 million euro with maturity October 2019 and February 2021, include a Change of Control clause which in the event of a change of control of the company causing a Material Adverse Effect allows the banks to request the facility to be extinguished and early repayment of any amounts drawn.

At June 30, 2019, there was no situation of non-compliance with the covenants of the A2A Group companies.

A2A Group - Main financial covenants at June 30, 2019

COMPANY	LENDER	LEVEL OF REFERENCE	LEVEL RECOGNIZED	DATE OF RECOGNITION (*)
A2A gencogas	Intesa San Paolo	NFP/Equity <=2 NFP/EBITDA<=6	0.0 0.3	12/31/2018 12/31/2018
Linea Green	Unicredit	Residual debt/Equity <= 0.9	0.1	06/30/2019
A2A Rinnovabili	ICCREA	ADSCR (Operating Cash Flow/Lease Fees) =>1.10	2.34	12/31/2018
A2A Rinnovabili	UBI	ADSCR (Operating Cash Flow/Lease Fees) =>1.25	2.79	12/31/2018
A2A Rinnovabili	Leasint	ADSCR (Operating Cash Flow/Lease Fees) =>1.20	1.49	12/31/2018
ACSM-AGAM	UBI	Debt Service Coverage Ratio <=4.50 Gearing <=1.50	1.41 0.15	12/31/2018 12/31/2018
ACSM-AGAM	Intesa San Paolo	Debt Service Coverage Ratio <=4.35 Gearing <=1.10	1.41 0.15	12/31/2018 12/31/2018
AcsM-AgAm Reti	Unicredit	Debt Service Coverage Ratio <=4.50 Gearing <=1.10	1.41 0.15	12/31/2018 12/31/2018
AcsM-AgAm Reti	Cassa DDPP	Debt Service Coverage Ratio <=4.50 Gearing <=1.20	1.41 0.15	12/31/2018 12/31/2018

(*) the recognition is scheduled only annually.

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Analysis of forward transactions and derivatives

Tests were performed to determine whether these transactions qualify for hedge accounting in accordance with International Accounting Standard IFRS 9.

In particular:

- 1) transactions qualifying for hedge accounting under IFRS 9: can be analyzed between transactions to hedge cash flows (cash flow hedges) and transactions to hedge fair value of assets and liabilities (fair value hedges). For the cash flow hedges, the accrued result is included in gross operating margin when realized on commodity derivatives and in the financial balance for interest rate and currency derivatives, whereas the future value is shown in equity. For fair value hedge transactions, the impacts in the Income Statement are recorded within the same line of the financial statements.
- 2) transactions not considered as hedges for the purposes of IFRS 9, can be:
 - a. margin hedges: for all hedging transactions of cash flows or the market value in line with internal risk policies, the accrued result and future value are included in gross operating margin for commodity derivatives and in the financial balance for interest rate and currency derivatives;
 - b. trading transactions: the accrued result and future value are recognized above gross operating margin for commodities transactions and in financial income and expense for interest rate and currency transactions.

The use of derivatives in the A2A Group is governed by a coordinated set of procedures (Energy Risk Policy, Deal Life Cycle) which are based on industry best practices and designed to limit the risk of the Group being exposed to commodity price fluctuations, based on a cash flow hedging strategy.

The derivatives are measured at fair value based on the forward market curve at the balance sheet date, if the asset underlying the derivative is traded on markets with a forward pricing structure. In the absence of a forward market curve, fair value is measured on the basis of internal estimates using models that refer to industry best practices.

The A2A Group uses “continuous-time” discounting to measure fair value. As a discount factor, it uses the interest rate for risk-free assets, identified in the Euro Overnight Index Average (EONIA) rate and represented in its forward structure by the Overnight Index Swap (OIS) curve. The fair value of the cash flow hedges has been classified on the basis of the underlying derivative contracts in accordance with IFRS 9.

In compliance with the provisions of IFRS 13, the fair value of an over-the-counter (OTC) financial instrument is determined taking into account the non-performance risk. To quantify the fair value adjustment attributable to this risk, A2A has, in line with best market practices, developed a proprietary model called the “bilateral Credit Value Adjustment” (bCVA), which takes into account changes in the creditworthiness of the counterpart as well as the changes in its own creditworthiness.

The bCVA has two addends, calculated by considering the possibility that both counterparties go bankrupt, known as the Credit Value Adjustment (CVA) and the Debit Value Adjustment (DVA):

- the CVA is a negative component and contemplates the probability that the counterparty will default and at the same time that A2A has a receivable due from the counterparty;
- the DVA is a positive component and contemplates the probability that A2A will default and at the same time that the counterparty has a receivable due from A2A.

The bCVA is therefore calculated with reference to the exposure, measured on the basis of the market value of the derivative at the time of the default, the probability of default (PD) and the loss given default (LGD). This latter item, which represents the non-recoverable portion of the receivable in the case of default, is measured on the basis of the IRB Foundation Methodology as stated in the Basel 2 accords, whereas the PD is measured on the basis of the rating of the counterparties (internal rating based where not available) and the historic probability of default associated with this and published annually by Standard & Poor's.

Applying the above method did not result in significant changes in fair value measurements.

Instruments outstanding at June 30, 2019

A) On interest and exchange rates

millions of euro	Notional value (a) expiring within 1 year		Notional value (a) expiring within 1 and 5 years		Notional value (a) expiring over 5 years	Balance sheet value (b)	Progressive effect to income statement at 06 30 2019 (c)
	to be received	to be paid	to be received	to be paid			
Interest rate risk management							
- cash flow hedges as per IFRS 9		34		95	17	(13)	
- not considered hedges as per IFRS 9		-		-	-	-	
Total derivatives on interest rates	-	34	-	95	17	(13)	-
Exchange rate risk management							
- considered hedges as per IFRS 9 on commercial transactions on financial transactions					114	2	
- not considered hedges as per IFRS 9 on commercial transactions on financial transactions							
Total exchange rate derivatives	-	-	-	-	114	2	-

- (a) Represents the sum of the notional value of the elementary contracts that derive from any dismantling of complex contracts.
- (b) Represents the net receivable (+) or payable (-) recognized in the balance sheet following the measurement of derivatives at fair value.
- (c) Represents the adjustment of derivatives to fair value recognized progressively over time in the income statement from the stipulation of the contract to the present day.

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B) On commodities

The following is an analysis of the commodity derivative contracts outstanding at the balance sheet date set up for the purpose of managing the risk of the fluctuations in the market prices of commodities.

	Notional value millions of euro	Unit of measurement of the notional value	Notional value expiring within 1 year	Notional value expiring within 2 years	Notional value expiring within 5 years	Balance sheet value (*) millions of euro	Progressive effect to income statement (**) millions of euro
Energy product price risk management							
A. Cash flow hedges as per IFRS 9, including:						10.7	-
- Electricity	306.6	TWh	8.8	0.5		0.4	
- Oil	0.0	Bbl					
- Coal	32.9	Tons	241,620			(3.7)	
- Natural Gas	10.4	TWh					
- Natural Gas		Millions of cubic metres	5.7				
- Exchange rate		Millions of dollars					
- CO ₂ Emission rights	48.6	Tons	3,220,000	1,097,000		14.0	
B. considered fair value hedges as per IFRS 9						-	-
C. not considered hedges as per IFRS 9, including:						17.2	19.8
C.1 hedge margin						(0.9)	(0.9)
- Electricity		TWh					
- Oil		Bbl					
- Natural Gas		MWh					
- Natural Gas		Millions of cubic metres					
- CO ₂ Emission rights	1.3	Tons	415,000			(0.9)	(0.9)
- Exchange rate		Millions of dollars					
C.2 trading transactions						18.1	20.7
- Electricity	1,318.5	TWh	30.3	5.9	0.3	8.6	14.0
- Natural Gas	1,666.4	TWh	83.6	25.7	2.1	9.4	6.3
- CO ₂ Emission rights	22.0	Tons	1,865,000	364,000		0.1	0.4
- Environmental Certificates		MWh					
- Environmental Certificates		Tep					
Total						27.9	19.8

(*) Represents the net receivable (+) or payable (-) recognized in the balance sheet following the measurement of derivatives at fair value.

(**) Represents the adjustment of derivatives to fair value recognized progressively over time in the Income statement from stipulation of the contract until the current date.

Financial and operating results for derivative transactions at June 30, 2019

Effects on the balance sheet

The following table shows the balance sheet figures at June 30, 2019, for derivative transactions.

millions of euro	NOTES	TOTAL
ASSETS		
NON-CURRENT ASSETS		2
Other non-current assets - Derivatives	5	2
CURRENT ASSETS		254
Other current assets - Derivatives	8	254
TOTAL ASSETS		256
LIABILITIES		
NON-CURRENT LIABILITIES		13
Other non-current liabilities - Derivatives	21	13
CURRENT LIABILITIES		226
Trade payables and other current liabilities - Derivatives	22	226
TOTAL LIABILITIES		239

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Effect on the income statement

The following table sets out the income statement figures at June 30, 2019 arising from the management of derivatives.

millions of euro	Notes	Realised during the period	Change in fair value during the period	Amounts recognized in the income statement
REVENUES	26			
Revenues from the sale of goods				
<i>Energy product price risk management and exchange rate risk management on commodities</i>				
- considered hedges as per IFRS 9		2	-	2
- not considered hedges as per IFRS 9		12	194	206
Total revenues from the sale of goods		14	194	208
OPERATING EXPENSES	27			
Expenses for raw materials and services				
<i>Energy product price risk management and exchange rate risk management on commodities</i>				
- considered hedges as per IFRS 9		4	-	4
- not considered hedges as per IFRS 9		(73)	(174)	(247)
Total costs for raw materials and services		(69)	(174)	(243)
Total recognized in gross operating income (*)		(55)	20	(35)
FINANCIAL BALANCE	33			
Financial income				
<i>Interest rate risk management and equity risk management</i>				
Income on derivatives				
- considered hedges as per IFRS 9		-	-	-
- not considered hedges as per IFRS 9		-	-	-
Total		-	-	-
Total financial income		-	-	-
Financial expenses				
<i>Interest rate risk management and equity risk management</i>				
Expenses on derivatives				
- considered hedges as per IFRS 9		(3)	-	(3)
- not considered hedges as per IFRS 9		-	-	-
Total		(3)	-	(3)
Total financial expenses		(3)	-	(3)
TOTAL RECOGNIZED IN FINANCIAL BALANCE		(3)	-	(3)

(*) The figures do not include the effect of the net presentation of the negotiation margin of trading activities.

Classes of financial instruments

To complete the analyses required by IFRS 7 and IFRS 13, the following table sets out the various types of financial instrument that are to be found in the various balance sheet items, with an indication of the accounting policies used and, in the case of financial instruments measured at fair value, an indication of where changes are recognized (income statement or equity).

The last column of the table shows the fair value of the instrument at June 30, 2019, where applicable.

millions of euro	Criteria to measure the reported amount of financial instruments						
	Notes	Financial instruments measured at fair value with changes recognized in:			Financial instruments measured at amortized cost	Amount as stated in the consolidated balance sheet at 06 30 2019	Fair value at 06 30 2019 (*)
		Income statement	Equity				
			(1)	(2)			
ASSETS							
Other non-current financial assets							
Financial assets measured at fair value of which:							
- unlisted		8				8	n,d,
- listed						-	-
Financial assets held to maturity						-	-
Other non-current financial assets					21	21	21
Total other non-current financial assets	3					29	
Other non-current assets	5		2		9	11	11
Trade receivables	7				1,678	1,678	1,678
Other current assets	8	237	17		256	510	510
Current financial assets	9				9	9	9
Cash and cash equivalents	11				553	553	553
Assets held for sale	12	70				70	70
LIABILITIES							
Financial liabilities							
Non-current and current bonds	18 and 23		114		2,595	2,709	2,709
Other non-current and current financial liabilities	18 and 23				979	979	979
Other non-current liabilities	21		13		141	154	154
Trade payables	22				1,265	1,265	1,265
Other current liabilities	22	220	6		564	790	790

(*) The fair value has not been calculated for receivables and payables not related to derivative contracts and loans as the corresponding carrying amount is a good approximation to this.

(1) Financial assets and liabilities measured at fair value with the changes in fair value recognized in the income statement.

(2) Cash flow hedges.

(3) Financial assets available for sale measured at fair value with profit/loss recognized in equity.

(4) Loans and receivables and financial liabilities measured at amortized cost.

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Fair value hierarchy

IFRS 7 and IFRS 13 require that fair value classification of financial instruments to be based on the quality of the input source used to calculate the fair value.

In particular, IFRS 7 and IFRS 13 set out three levels of fair value:

- level 1: this level consists of financial assets and liabilities for which fair value is based on (unadjusted) prices for identical assets or liabilities quoted on active official or over-the-counter markets;
- level 2: this level consists of financial assets and liabilities for which fair value is based on inputs other than quoted prices included within level 1 that are observable for the asset or liability either directly or indirectly;
- level 3: this level consists of financial assets and liabilities for which fair value is based on unobservable market data. This level includes instruments measured on the basis of internal estimates made using proprietary methods based on best sector practice.

An analysis of the assets and liabilities included in the three fair value levels is set out in the following fair value hierarchy table.

<i>millions of euro</i>	NOTE	LEVEL 1	LEVEL 2	LEVEL 3	TOTAL
Available-for-sale assets measured at fair value	3		8		8
Other non-current assets	5		2		2
Other current assets	8	251		3	254
TOTAL ASSETS		251	10	3	264
Non-current financial liabilities	18	114			114
Other non-current liabilities	21		13		13
Other current liabilities	22	221	4	1	226
TOTAL LIABILITIES		335	17	1	353

Sensitivity analysis for financial instruments included in level 3

As required by IFRS 13, the following table sets out the effects arising from changes in the unobservable parameters used in calculating fair value for financial instruments included in level 3 of the hierarchy.

FINANCIAL INSTRUMENT	PARAMETER	PARAMETER CHANGE	SENSITIVITY (MILLIONS OF EURO)
Commodity Derivatives	Probability of Default (PD)	1%	0.00
Commodity Derivatives	Loss Given Default (LGD)	25%	0.00
Commodity Derivatives	Underlying interconnection capacity zonal Italy	1%	0.00

3) Update of the main legal and tax disputes still pending

Adequate provisions are provided where necessary for the disputes and litigation described below.

It is noted that if there is no explicit reference to the presence of a provision, the Group assessed the corresponding risk as possible without appropriating provisions in the financial statements.

Information is provided on the updated status of the disputes that the company had highlighted at December 31, 2018 in the section “Significant events after December 31, 2018”.

Civil litigation

Consorzio Eurosviluppo S.c.a.r.l./Ergosud S.p.A. + A2A S.p.A. - Civil Court of Rome

On May 27, 2011, Consorzio Eurosviluppo Industriale S.c.a.r.l. served a writ on Ergosud S.p.A. and A2A S.p.A. with the following claims: (i) compensation for damages, of both a contractual and extra-contractual nature, jointly, or alternatively exclusively and separately, in the amount of 35,411,997 euro (of which 1,065,529 euro as the residual portion of their share of the expenses); (ii) compensation for damages for the stoppage at the worksite and the failure to return the areas of pertinence to the Consortium.

In the filing of appearance Ergosud S.p.A. and A2A S.p.A. called for the request to be rejected in full because it is unfounded in its merit and in its substance, and pointed out: (i) the lack of the right of the Consortium to institute proceedings as it is in a state of bankruptcy, (ii) the lack of the right of the Consortium to institute proceedings for the damages allegedly suffered by Fin Podella at the item “anticipation of program contract” for 6,153,437 euro and the damages allegedly suffered by Conservificio Laratta S.r.l. for 359,000 euro.

S.F.C. S.A. filed a notice of joinder on November 08, 2011 pursuant to article 105 of the Civil Procedure Code (which allows a third party to make a new, different request to the original judge, extending the argument) and called that Ergosud S.p.A. alone should be ordered to pay damages, in part similar to those claimed by the Consortium, quantified in 27,467,031 euro.

The judge found the bankruptcy of S.F.C. S. A. was legitimate and therefore set the end of the proceedings and the hearing for December 19, 2012, declaring the need to execute an expert opinion, setting May 23, 2013 as the date for the hearing to appoint the court’s expert witness. At that hearing the judge, changed in the meantime, confirmed the questions already formulated on December 19, 2012 and appointed the court experts Messrs. Pompili and Caroli, setting a term for the parties to appoint their own consultants. A2A S.p.A. and Ergosud S.p.A. appointed as their experts Mr. Massardo and Mr. Giofrè, persons who over the years have already drawn up reports on the matters to which the questions refer. After adjournments requested by the experts, on July 31, 2014, the CTU was filed with the Court. The hearing for the expert’s examination was held after adjournment on April 01, 2015 and the hearing for clarification of conclusions has been scheduled for November 30, 2016. At this hearing, filing of the award issued by the Arbitration Court of Milan was admitted in March 2016, and the terms were set for the final statements and replication before arriving to the sentence. The hearing to clarify conclusions was then fixed again and postponed several times and was finally held October 31, 2018. The parties have lodged their pleadings within the time allowed and the judgment is therefore pending. The Group has not allocated any provisions as it does not deem as probable the risk related to this lawsuit.

ASM Novara S.p.A. dispute

In March 2013, Pessina Costruzioni initiated arbitration proceedings against A2A to declare the failure to comply with the shareholder agreements of Asm Novara and to sue A2A for damages. On June 30, 2015, the Arbitration Board, with the dissenting opinion of the arbitrator appointed by A2A filed its award that deems A2A responsible for violation of the shareholders’ agreement signed on August 04, 2007 and, consequently, the order to pay damages of 37,968,938.95 euro plus legal fees and arbitration expenses. The company challenged the Award pursuant to art. 829 CPC before the Milan Court of Appeal.

On November 23, 2016, the Court of Appeals of Milan filed the Sentence 4337/16 declaring the grounds for appeal of the award filed inadmissible and unfounded, with the consequent absorption of incidental claims.

Within the terms, A2A appealed to the Supreme Court appealing against the chapter of the sentence that rejected the first plea for invalidity of the award and the chapter that individually rejected chapters 5, 6 and 7 relating to the liquidation of the damage equitably. Pessina Costruzioni appeared in court rejecting all the grounds and requesting confirmation of the sentence.

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Effectiveness and execution of the award

On May 11, 2016, following invalidity of the effectiveness suspension of the award ordered by the Court of Appeal and the outcome of enforcement actions, A2A paid to Pessina Costruzioni 38,524,290.56 euro.

Carlo Tassara: lawsuit for damages against EDF and A2A S.p.A. on the reorganization of Edison

On March 24, 2015, Carlo Tassara S.p.A. notified A2A, Electricité de France (EDF) and Edison a summons requesting the Court of Milan to condemn A2A and EDF to compensation for damages allegedly suffered by Carlo Tassara, in its capacity as minority shareholder of Edison, in relation to the mandatory tender offer launched by EDF on Edison shares consequently to the transaction by which, in 2012, A2A sold its indirect shareholding in Edison to EDF and simultaneously acquired 70% of the capital of Edipower from Edison and Alpiq.

Until 2012, in fact, A2A and EDF held joint control of Edison S.p.A. Edison, in turn, held 50% of Edipower S.p.A. (the remaining capital of Edipower was held 20% by Alpiq, 20% by A2A and the remaining 10% by Iren).

In the 2012 transaction, A2A sold its indirect shareholding in Edison to EDF and simultaneously acquired 70% of the capital of Edipower from Edison and Alpiq.

In the summons notified, Carlo Tassara complained that, in the transaction, EDF and A2A agreed on a mutual "discount" on the price paid by EDF for the purchase of Edison shares, on the one hand, and on the price paid by A2A for the purchase of 70% of Edipower, on the other. This discount was expected to be the result of abusive conduct by EDF and A2A as shareholders of Edison and the violation, among other things, of the regulations on transactions with related parties. This - according to Carlo Tassara - was expected to allow maintaining artificially low the price of the Edison shares paid to A2A and consequently the tender offer price paid to minorities of Edison (which by law was expected to be equal to that paid to A2A).

However, in 2012, A2A and EDF had voluntarily subjected the Transaction to the prior examination of Consob precisely in order to confirm the correctness of the tender offer price. Following extensive examinations, Consob had deemed that a compensatory mechanism could be detected in the transaction as a whole (i.e. between the sale of Edipower on the one hand and the sale of Edison shares on the other) and that therefore the tender offer price was to be increased from 0.84 euro to 0.89 euro per share.

In light of said decision, the parties had increased the sale price of the shareholding in Edison based on the price of 0.89 euro per share, for a total increase of around 84 million euro. EDF launched the tender offer at 0.89 euro per share.

Carlo Tassara resorted to Consob in order to further increase the price of the tender offer, but Consob rejected the request.

In addition, pending the tender offer, Carlo Tassara challenged before the Regional Administrative Court the tender offer document and the related resolution of approval by Consob requesting suspensions thereof for reasons of urgency. However, the Regional Administrative Court postponed the decision on the suspension to a date following the closing of the tender offer and, as a result of this, Carlo Tassara adhered to the tender offer and waived the cautionary request.

The writ of summons did not quantify the damage allegedly suffered by Carlo Tassara as a result of such transactions. However, with brief on February 20, 2017, Carlo Tassara requested that the court have an expert witness to calculate them (specifying that it be quantified in the alleged difference between the tender offer price and the market value that the Edison shares had previously). Carlo Tassara also filed an appraisal in which such damages were quantified in a total amount between 197 and 232 million euro, amount to calculate the compensation due from each of the companies that will be considered responsible by the judge.

After several postponements justified also by modifications of the judge, on October 17, 2018, the judge rejected the requests for investigation of the plaintiffs, setting March 19, 2019 as the hearing for clarification of conclusions. The Company has filed its pleadings within the time limits and the ruling is pending. The Group, having fulfilled the requirements of the regulations in force, does not consider likely the risk for which it has not allocated any provisions.

Criminal litigation

Investigation Monfalcone Plant (RGNR 578/11-RG Court of Gorizia 131/2015)

This investigation was initiated with a report filed in March 2011 by the management of the A2A Group against A2A employees and third party businessmen suspected of being responsible for fraud carried out to the harm of the company itself, who - for the payment of conspicuous sums of money - were responsible for illegal trafficking, the falsification of forms identifying the waste and certificates of analysis, in relation to the supply of biomasses and the certification of their calorific value. More specifically, biomass quantities were recorded on entry at figures higher than the real ones, with the relative calorific values also being increased.

This implies damage to the A2A Group and in particular to A2A Trading S.r.l. (now A2A S.p.A.). The current risk considered possible is for the higher costs incurred for undelivered biomass and higher costs incurred for counterfeiting (others) of the calorific capacity of the biomass delivered and not delivered. This is in addition to the increased use of coal instead of biomasses could have as a consequence an increase in the environmental costs relating to the second half of 2009 and the whole of 2010, as well the need to reimburse the additional income or Green Certificates recognized with respect to the real income. The company could have submitted, without fault and with reference to the years 2009 and 2010, generating statements of environmental rights greater than those actually produced.

To date, the GSE, as it blocked the issuing of licenses for subsequent years, did not address return requests for previous annuities of competence of the A2A Group (second half of 2009 – full-year 2010). If the GSE were to take action against the A2A Group, it will evaluate the appropriate actions, including damages, considering also the amount withheld from third-party suppliers. A2A Trading S.r.l. (now A2A S.p.A.) filed a request with the GSE, in accordance with the procedures and modalities required, to obtain Green Certificates relating to 2011 in which the calculation has been made on the basis of the real quantities of biomasses delivered to the power station and, in agreement with the Public Prosecutor, by taking into account a possible false (not of A2A) increase of 20% in the calorific values of such. Despite the fact that the GSE has acknowledged to A2A Trading S.r.l. (now A2A S.p.A.) the correctness of the calculations made for 2011, as of today the above-mentioned 2011 Green Certificates have not yet been issued.

In criminal proceedings, some sentencing measures have been adopted in the context of alternative rites to some of the defendants, with recognition of minimum compensation and recasts of expenses in favour of A2A.

The proceeding passed, for local jurisdiction, before the Court of Gorizia.

On April 5, 2019, the Court, after withdrawing from the Chamber of Council, read out the ruling at the hearing: it acquitted all the defendants on grounds of merit or for prescription, with the exception of the legal representative of Friul Pellet S.r.l., who was sentenced, for failure to supply and for supplies of biomass with a calorific value lower than that contractually envisaged, to 2 years and 8 months' imprisonment and to pay compensation for the damage caused to A2A (to be paid separately). The reasons for the decision were filed in July.

It should be noted that A2A was found to be an injured and damaged party. The Court, on the other hand, ruled that it had not been established that the conditions for the recognition of the damage to the GSE and the Ministry of the Environment had been met, as this could not be considered as automatically proven as the effect of the fraud ordered against A2A. In this latter regard, it is recalled that the Group had not allocated any provision as it had considered being the aggrieved party in the proceedings and that the economic effects at the end of the proceedings would be neutral.

Inspection Monfalcone Plant (RNR 195/17 Public Prosecutor of Gorizia Republic)

On March 8 and 9, 2017, following orders of the Public Prosecutor of Gorizia Republic, the Monfalcone Plant of A2A Energiefuture S.p.A. was inspected during which surveys and samplings were performed (on coal in stock, on the ashes, on fume treatment residues, emissions from the chimney) and documentary acquisitions (on the servers of the emissions monitoring system, on fuel analysis forms, etc.). On the same date, three employees received notification of a notice for the investigation into the offences referred to in article 452-bis of the Italian Criminal Code. Environmental pollution due to behaviour allegedly carried out until October 2016. The suspect employees appointed trusted defenders.

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Subsequently, between December 2017 and January 2018, the Public Prosecutor of Gorizia proceeded with the acquisition of additional documentation at the plant. In December 2018, the Public Prosecutor's Office also acquired further samples.

The proceeding is still in the stage of the preliminary investigations and it shall be necessary to wait for the results of the investigations ordered by the Public Prosecutor of Gorizia that requested an extension of the terms for the investigations.

Prosecutor of Brescia – GIP of Brescia. Criminal proceedings no. 25597/14 RGNR on the alleged “abusive management of special non-hazardous waste” by A2A Ambiente S.p.A.

On July 11, 2017, as part of an investigation involving 33 individuals and 14 different legal entities, an employee of A2A Ambiente S.p.A. was served with a notice of for the investigation of the offence referred to in articles 110, 81 of the Criminal Code and 260 of Legislative Decree 152/2006 (joint illegal trafficking of waste) for conduct allegedly committed in the years 2014 and 2015.

Subsequently, on September 23, 2017, A2A Ambiente was notified of a hearing setting decree pursuant to Legislative Decree 231/01 to decide on the request, formulated by the Public Prosecutor, for the application of precautionary measures consisting in the seizure of assets for a total amount of about 583,000 euro (considered as “profit of the crime”) and in temporary interdiction from the exercise of activity. A2A Ambiente in fact had to be liable for administrative liability under Legislative Decree 231/01.

After the hearings of October 9, 2017 and November 13, 2017, with a ruling dated December 27, 2017, filed with the court on December 28, 2017, the GIP of Brescia did not consider that as present the conditions justifying the adoption of precautionary measures against A2A Ambiente and therefore rejected the request of the Public Prosecutor.

In particular, the GIP noted that A2A Ambiente has long had an articulated organizational model “on the adequacy of which the Public Prosecutor did not formulate specific remarks, limiting to establishing that the employee operated circumventing the controls provided, a circumstance that however is not valid in itself to prove the administrative responsibility of the entity”.

The GIP also underlined that the same Public Prosecutor found that A2A Ambiente reformulated, in a period following the facts, its own MOG in order to better prevent the commission of environmental offenses and considered this circumstance to be evaluated positively for the purpose of judging, as underlined that no concrete advantage emerged from the investigations for A2A Ambiente.

No other measure was subsequently addressed to the company. The employee under investigation was notified that the investigations had been completed. On this occasion, the company was informed that the position of some of the legal entities, including A2A Ambiente, had been removed. The Preliminary Investigation Judge is expected to take action.

The same procedure involved one employee and two former employees of Linea Ambiente/LGH and Linea Ambiente S.r.l. itself. Also in this case, one employee was served notice of completion of the investigation and the company awaits the Preliminary Investigation Judge's action in response to the request to remove the position of the other former employees and the company.

Court of Taranto - Criminal proceedings RGNR 2785/18

On March 14, 2019, an employee of A2A Ambiente S.p.A., seconded to Linea Ambiente S.r.l. as Operating Director of the company, was placed under pre-trial detention in prison as part of investigations into the offences referred to in articles 319 and 321 of the Criminal Code with reference to a case of corruption connected with the issue of executive decision no. 45 of April 5, 2018 by the Province of Taranto for the orographic optimization of the landfill of Grottaglie of Linea Ambiente S.r.l.

At present, no measure has been notified to the company in relation to a possible liability under Legislative Decree 231/01.

By order of August 1, 2019 the Court of Taranto - Office of the Judge of Preliminary Investigations - at the request of the Public Prosecutor's Office, ordered the immediate judgment, that is, without the preliminary hearing, against the defendants subject to pre-trial detention, among which the A2A Ambiente employee, against whom the measure of pre-trial detention with house arrest was substituted, setting the hearing for February 3, 2020.

Milan Public Prosecutor's Office - Criminal Proceedings no. 33490/16 RGNR

On May 7, 2019, the police (Carabinieri) of the Monza investigative unit presented themselves at the AMSA headquarters to notify an order for the presentation of deeds and documents issued by the

Milan Public Prosecutor’s Office, relating to the documentation concerning three tenders launched by Amsa S.p.A. in 2017-2018, as well as the supplies made to it by a specific supplier. The police also enforced a decree to search the offices, access mobile phones, tablets and computers in use by the company’s Operations Manager, a manager and an employee under investigation for corruption, bid rigging and, in the case of the latter, also for criminal association.

It was then learned that these employees were subject to precautionary measures, insofar as they were ordered to do so during the preliminary investigation phase.

In addition, three members of a tender selection committee called by Amsa S.p.A. were investigated in the same proceedings for bid rigging (article 353 of the Criminal Code).

No dispute on the basis of the regulations on the administrative liability of legal persons has been raised against Amsa S.p.A., which considers itself to be an “injured party” and which, in fact, has proceeded to file a constitution of an injured party with the Public Prosecutor’s Office by means of a trusted lawyer.

The proceeding is still in the stage of preliminary investigations and it shall be necessary to wait for the results of the investigations ordered by the Public Prosecutor of Milan.

Investigation related to EPCG service contracts

A2A S.p.A. acquired the shareholding in EPCG by means of the international tender held in 2009, and under the so-called “EPCG Agreement” dated September 3, 2009, it acquired the right to manage the company, appointing - until June 30, 2017 - the Executive Director (CEO) and Executive Manager.

As part of the management of EPCG by A2A S.p.A., also in order to meet the specific indicators provided by the EPCG Agreement, with effect from 2010, A2A S.p.A. and, as of 2011, Unareti S.p.A. (formerly A2A Reti Elettriche S.p.A.), have provided in favour of EPCG services designed to improve the organization and performance of EPCG. Within the broader set of services provided, consulting services were also included provided for the benefit of EPCG by specialized companies outside the A2A Group, the costs of which were first invoiced to A2A S.p.A. as part of more complex and organic consulting services provided in favour of the entire A2A Group and subsequently by A2A S.p.A. charged to EPCG for the activities carried out in favour of the same.

In view of the synergistic importance of intra-group services requested by EPCG to A2A, EPCG applied for and obtained, by the State Commission for the Control of Public Procurement Procedures, a formal exemption - dated September 6, 2010 - by which the non-necessity is enshrined for EPCG to apply the procedures provided by law on Public Procurement in order to purchase services from A2A S.p.A., A2A Reti Elettriche and certain other (identified by name) companies controlled by A2A S.p.A.

From a different perspective, service contracts between EPCG and A2A S.p.A. - which, while benefiting from the aforementioned exemption, would have needed the approval of the EPCG Board of Directors - were not explicitly approved by the Board, which nonetheless approved the budget of each annuity that includes the aforementioned costs. Therefore, the service contracts related to the years 2010, 2011 and 2012 were signed by the CEO pro tempore of EPCG. Pursuant to said contracts, A2A S.p.A. invoiced with regard to the aforementioned annuities a total of 7.75 million euro to EPCG, which has only paid a portion of 4.34 million euro.

For the years 2013, 2014, 2015, 2016 and for the first half of 2017, in the absence of a specific agreement between the shareholders regarding the formalization of a specific service contract, A2A did not proceed with invoicing, although a broad set of services was indeed provided to EPCG also in said years, and A2A incurred the related charges.

Also, certain consulting services are disputed, related to the period 2011 and 2012 and amounting to about 2 million euro, acquired by EPCG directly from external consulting firms of the A2A Group.

At the beginning of 2014, the local “Party of People with Disabilities and Pensioners” proposed a parliamentary interpellation and filed a complaint to the Special Attorney in relation to service contracts entered into by EPCG with A2A and external consulting firms of the A2A Group. Subsequently, in November 2014, the Montenegrin police sent EPCG a request for documents and data that was fully acknowledged by the management of EPCG in the following month. Two further requests for additional information and documentation were then subjected to EPCG directly by the Special Attorney in August 2015 and February 2016, and in both cases the management of EPCG responded comprehensively to the requests of the investigators.

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Until said moment, therefore, EPCG had registered only requests for documentation to which it promptly replied, and EPCG as well as A2A had therefore not - until April 15, 2016 - deemed that said requests could result in actions such to configure a risk if not remote - personal or capital - at the expense of its employees and/or the companies.

On April 15, 2016, the former Italian CFO appointed by A2A in EPCG, who resigned from said office only a few days before for reasons completely unrelated to the issue under consideration, was arrested by the Montenegrin police on order of the Special Attorney. Investigative measures are still covered by investigation confidentiality. On the basis of what is currently known, the accusation concerns a hypothesis of abuse of office in the management of service contracts stipulated by the same EPCG, and also concerns two other Italian managers seconded by A2A in EPCG in the period 2010-2012, as well as the former pro-tempore Co-General Manager of A2A, who signed the service contracts. On May 6, 2016, the former CFO was released on payment of a bail deposit and withdrawal of the passport. On December 07, 2016, the passport was returned and the CFO returned to Italy. Given the fact that in Montenegro there is a law on liability of legal persons for offences committed by their managers in their own interest, the company also monitored the possibility of extension of the investigation to A2A S.p.A. At June 30, 2017, this event did not occur, but in the following weeks it emerged from press reports in Montenegro, and lastly with the notification in Podgorica on July 25, 2017, in the hands of the defendant appointed for this purpose by A2A, that the shares held by A2A in EPCG have been the subject of a precautionary measure of seizure. This precautionary measure was judicially challenged by A2A S.p.A., obtaining complete revocation on September 29, 2017. From the precautionary measure, there was also evidence that the proceedings in question were extended to A2A on July 03, 2017. Subsequently, following a civil/commercial agreement signed by A2A on October 23, 2017 with EPCG, and the resolution adopted by the latter on November 17, 2017 to not constitute as injured party in the criminal proceedings, as there was no damage, the Special State Prosecutor ordered the withdrawal of the accusations on December 28, 2017 and therefore the filing of the proceedings against A2A S.p.A. as well as against the three Montenegro officials, originally investigated like the Italian managers. The proceedings against the natural persons still under investigation are currently pending the trial phase, since in June 2019, the Court of Podgorica validated the request for indictment made by the Special Prosecutor.

Based on the assessments made, the foregoing and the information available to date, A2A believes that the risk of potential penalties applicable and/or claims for compensation or indemnity actions, can be assessed as remote. Considering the state of the proceedings and for the same reasons outlined herewith, it is also impossible to quantify in certain terms the amount of said indemnities or penalties, direct or indirect.

Only approximately, and as broad reference, it is in fact possible to indicate that the amount of the penalties contemplated by the Montenegrin law on the liability of legal persons could theoretically – in the extreme variability of the local law with an unclear discipline – be significantly greater (from 2 to 100 times the amount of the alleged damage, as stated in the precautionary measure), even though it is appropriate to consider that there is no sound case-law on the matter and that the proceeding against A2A can be filed.

In view of the above, the company - in accordance with IAS 37 - considered it correct to handle the case in question providing adequate information and not allocating specific risks provision.

Administrative Litigation

Dispute over public water derivation fees

Derivations of public water for the production of hydroelectricity in Lombardy

With Regional Law no. 22/2011, Lombardy essentially doubled the fee for hydroelectric use of public water, thereby infringing the principles of gradualism and reasonableness in the determination of fees, already recognized by the case law, and also violating the principle of equal competition between operators in the national territory.

Faced with the payment requests made by the Region for the years 2012 and 2013, Edipower S.p.A. (now A2A S.p.A.) therefore paid the fee considering solely the increase arising from the planned inflation rate as compared to the previous year. As a consequence, for 2012 and 2013 the Region issued injunctions for the payment of the amount not paid by the company; Edipower S.p.A. (now A2A S.p.A.) appealed against these injunctions before the Regional Court of Public Waters ("TRAP") of Milan, proposing the exception of unconstitutionality of the regional provision.

The same conduct was adopted by Edipower S.p.A. (now A2A S.p.A.) for the annuities of the 2014, 2015 and 2016 fees.

However, given the consolidation of unfavourable law and contrary to the thesis of Edipower S.p.A. (now A2A S.p.A.) (ref. sent. TSAP no. 138/2016 and sent. Const. Court no. 158/2016), there was the extinction of almost all the appeals established by Edipower S.p.A. (now A2A S.p.A.) and payment the amount originally ordered, in order to avoid the increase of legal interest and the risk of condemnation to significant legal fees, as happened to other operators, while keeping intact its right to recover any amounts overpaid. Against this background, the injunctions for payment of October 2016 relating to the years 2014-2015 have not been opposed by Edipower S.p.A. (now A2A S.p.A.), which undertook to pay, with reserve of repetition in the event of a favourable judicial outcome, the quantum state fee not yet paid. The only judgment (“pilot”) still pending before the Milan Regional Court of Public Waters concerning the 2013 State fee for the Liro Auction was last settled by Ruling no. 3247 of July 19, 2019 in which the Milan TRAP rejected A2A’s appeal.

The same issue also concerns the large-scale derivations in Lombardy of A2A, which, since the outset, in view of its specific circumstances, fully pays, but with reservation of repetition, the fee demanded by the Region and then sues for excess repetition. In December 2016, the only case pending for A2A before the Milan TRAP on the “doubling” of the state fee was also concluded, with partial loss of A2A in this respect.

In addition, the D.G.R. (Regional Council Resolution) of Lombardy no. 5130-2016 ordered, by implementing paragraph 5 of art. 53-bis of Regional Law 26/2003 introduced by Regional Law 19/2010, the subjection of the Lombardy hydroelectric concessions already expired to an “additional fee” established “provisionally” at 20 €/kW of nominal power of concession, subject to the request for settlement at the outcome of the assessments underway by the regional offices regarding the profitability of expired concessions. It is noted that said additional fee is imposed retroactively from the original expiry of each concession, and therefore for Grosotto, Lovero and Stazzona from January 01, 2011, for Premadio 1 from July 29, 2013 and for Grosio from November 15, 2016.

A2A, which has always challenged even in court the legitimacy - in the first place constitutional - of the aforementioned paragraph 5, challenged, like other operators, the D.G.R. 5130-2016 before the Superior Court of Public Waters, the related and consequent provisions as well as the D.G.R. 7693-2018 and consequent provisions, which reiterated the forecast of the application of an additional fee up to 2020 and, where envisaged, the revocation of the exemption of part of the state fee.

The provisions of the Regions concerning the temporary continuation of expired or expiring concessions could, as from 2019, be justified by the provisions introduced by the Conversion Law no. 12/2019 of Legislative Decree no. 135/2018, the constitutional compatibility of which is nevertheless controversial.

For disputes relating to public water derivation fees, at today’s date, the Company set aside risk provisions for the total amount of 48 million euro equal to the entire claim of the counterparties.

2iRG/Unareti - tender for the gas distribution service of Atem Milan 1 (Regional Administrative Court Milan R.G.) 2304/2018)

2iRete Gas S.r.l. notified an appeal against the award of the gas distribution service ordered by the Municipality of Milan in favour of Unareti S.p.A., asking for a precautionary suspension of the award and formulating an investigative request, announcing the right to notify additional reasons as a result of the satisfaction of the request for access to the documents. After the delivery of the part of the offer documents not covered by omissis, 2i Rete Gas S.r.l. notified additional reasons and further detailed some of the reasons for the illegitimacy of the measure already stated in the initial appeal. To date, the defects of the award can be classified under three categories of topics: reasons for excluding Unareti S.p.A., reasons for re-establishing the commission and reasons for redefining the ranking. Within the terms, Unareti S.p.A. notified an cross appeal in which 2i Rete Gas filed an argument with further critical aspects of the proceedings.

After the Council Chamber of November 22, 2018, in which at the joint request of the parties the Regional Administrative Court adjourned the hearing to November 21, 2019, the Council Chamber of February 7, 2019, dedicated to the discussion of the request for access to Unareti S.p.A.’s full offer formulated by 2i Rete Gas S.r.l., the Milan Regional Administrative Court issued on February 13, 2019 the Order no. 300 with whom it granted full access to the documents for viewing only. The company notified an appeal to the Council of State with a request for precautionary suspension of the order that was accepted (r.g. 1504/2019). Following the Council Chamber of May 21, 2019, the Council of State,

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with Sentence no. 3936 of June 12, 2019, accepted Unareti S.p.A.'s appeal, reforming the order of the Regional Administrative Court and therefore rejecting the request for access made in the course of the first instance proceedings by 2iRete Gas S.r.l.

The proceedings therefore continue before the Milan Regional Administrative Court, where a hearing on the merits has been scheduled for November 21, 2019.

The possible risk is the modification of the award measure, which could also lead to a review of the tender procedure.

Landfill Grottaglie - Linea Ambiente S.r.l. c/Municipalities of Grottaglie, San Marzano and Carosino (Council of State R.G. 1505/2019)

On November 28, 2018, the Lecce Regional Administrative Court issued Ruling no. 143/2019 (notified to the company on January 28, 2019) by means of which it upheld the appeal notified by the municipalities of Grottaglie, San Marzano and Carosino against the Province of Taranto and against Linea Ambiente S.r.l. and the Apulia Region for annulment of Executive Determination no. 45 of April 5, 2018, concerning the expression of environmental compatibility (EIA), the release of the IEA and the assessment of landscape compatibility relating to the Grottaglie landfill.

The Company suspended the contributions from January 29, 2019 and filed an appeal with the Council of State for the annulment of said ruling. On May 32, 2019, the Council of State, with a precautionary order notified on March 1, 2019, considered that the precautionary requirements of the company could be adequately protected through the sole prompt fixing of the merit.

With a measure notified on February 22, 2019, the Province of Taranto referred the environmental compatibility assessment to the Council of Ministers' resolution, together with the request for Integrated Environmental Authorisation for the orographic optimization of the Grottaglie landfill site; the Presidency began the hearings of the parties involved.

With an application filed on May 2, 2019, the Company - believing that there are well-grounded reasons for the Council of Ministers to take a favourable decision in relation to the project to optimize the orographic landfill of Grottaglie presented by it - requested the Council of State to remove the appeal from the hearing list, with the exception of reinstatement, in order to allow the progress of the procedural phase before the Presidency of the Council of Ministers initiated by the aforementioned measure of the Province of Taranto.

The Council of State, at its hearing of 23 May, decided on the appeal and is awaiting the ruling.

AcsM Agam Ambiente S.r.l. c/Municipality di Varese concerning the reorganization of the sanitation service (Regional Administrative Court Milan R.G. 2282/19)

AcsM Agam Ambiente S.r.l. (beneficiary as a result of the extraordinary operations for the award of the sanitation service in the municipality of Varese, absent to Aspem S.p.A. in 1999 and until December 31, 2030) appealed before the Milan Regional Administrative Court, supplemented with subsequent additional grounds, against the numerous municipal deeds that found that the award had been terminated on December 31, 2018 and that ordered the call for tenders for the sanitation service in the municipality of Varese. The appeal was discussed on June 20, 2019 and the Regional Administrative Court on July 16, 2019 filed Ruling no. 1633 rejecting the fourth appeal brought by AcsM Agam Ambiente S.r.l. (expiring early on December 31, 2018) and asserts the company's lack of interest in the grounds of appeal relating to the tender documents, given that their acceptance would not lead to resumption of the award of the service terminated on December 31, 2018. The company is evaluating the appeal to the Council of State in the short term following the notification by the Municipality because the ruling is a mere acceptance of the arguments of the Municipality, on which the company does not agree.

The service is managed by the company as a result of an extension until September 30, 2019. AcsM Agam Ambiente S.r.l. took part in the tender launched by the Municipality to assign the service, without acquiescence, and is awaiting the final award; according to public information, the company is third in the ranking.

* * *

The following information is provided in connection with the main litigation of a fiscal nature.

A2A gencogas S.p.A. (formerly Abruzzoenergia S.p.A.) - General IRES/IRAP/VAT audit for fiscal years 2014 and 2015

On January 19, 2016, the Finance Police - Chieti Unit commenced a general audit of A2A gencogas S.p.A. (formerly Abruzzoenergia S.p.A.) for fiscal years 2014 and 2015 for IRES, IREP and VAT purposes. This audit was completed on May 25, 2016. The company submitted comments to the formal notice of assessment by the inspectors. In December 2016, the Revenue Agency of Chieti issued notices of assessment for IRES, IRAP and VAT for the years 2011 and 2012. The company has proposed a timely appeal against all the deeds notified. The Provincial Tax Commission of Chieti issued favourable sentences. The company appealed. The CTR of Chieti accepted the appeal for VAT 2011 and 2012 and rejected it for IRES for the same years. On May 8, 2019, the Company filed an appeal with the Supreme Court for IRES 2011 and 2012. The 2011 and 2012 IRAP appeal has not yet been discussed. In August 2017, the Revenue Agency of Chieti also issued notices of assessment for IRES, IRAP and VAT for the years 2013 and 2014, all appealed against by the company. The Chieti Provincial Tax Commission rejected the company's appeals. The company appealed. A risk provision of 2 million euro has been recognized.

A2A S.p.A. - Registration tax for transfer of business unit and sale of the investment Chi.na.co. S.r.l.

On April 4, 2016, the Provincial Directorate I of Milan - Regional Office of Milan 1 - notified the invitation to appear to provide clarifications on a business transfer in the company Chi.na.co. S.r.l. and the subsequent sale of the investment held in it under control for registration tax purposes. The invitation was followed by a contradictory with the Office and subsequent notification by the latter of the notice of liquidation to the acquiring counterparty, which filed an appeal on September 28, 2016. The Provincial Tax Commission of Milan rejected the appeal with sentence filed on July 07, 2017. On February 13, 2018, the acquiring company filed an appeal, which was rejected by the Milan Regional Administrative Court. On April 8, 2019, the Company filed an appeal with the Supreme Court. The risks provision recognized for 1.4 million euro was fully used for the payment of the amounts requested with the liquidation notice.

A2A Ambiente S.p.A. (formerly Aprica S.p.A.) - Technical audit of the Brescia waste-to-energy plant

On March 07, 2013, the Brescia Customs Agency commenced a technical audit of the Brescia waste-to-energy plant owned by Aprica S.p.A. (now owned by A2A Ambiente S.p.A.). The audit was completed on January 16, 2014 with the serving of a formal notice of assessment for the years 2008 to 2011. For 2008 and 2009, the Customs Authority served payment notices on May 07 and 21, 2014 together with the respective penalties. The company appealed against these two demands in July 2014. For the year 2009, in December 10, 2014, the company signed a conciliation agreement with the Customs Agency of Brescia for the final closure of the dispute and the consequent termination of the proceedings. For 2008, the litigation of first instance ended favorably for the company. On September 24, 2015, the Office appealed. The company filed counter-claims on November 17, 2015. With sentence of June 06, 2016, the Regional Tax Commission partially upheld the company's reasons. The Office has appealed to the Supreme Court and the company has resisted with counter-claim and cross appeal notified on February 20, 2017. On August 05, 2014, the Customs Authority served formal notices of assessment for 2012 and 2013. In March 2016, the company defined with the Customs Agency of Brescia the years from 2010 to 2013 with the payment of the amounts due on the basis of the criteria identified in the deed of reconciliation for the year 2009. As a result of the settlement agreements, the fund has been released for the excess and there is a residual risks provision of 0.3 million euro for the year 2008.

A2A S.p.A. (merging company of AMSA Holding S.p.A.) - VAT Tax assessments for tax years from 2001 to 2005

In early 2006, the Italian Finance Police – Lombardy Regional Unit, Milan – carried out a tax audit of AMSA Holding S.p.A. (now A2A S.p.A.) for VAT purposes for tax years 2001 to 2005.

The audit ended with the issue of a final report contesting the legitimacy of the ordinary VAT rate, in place of the special rate applied by suppliers for waste disposal and plant maintenance, as well as the subsequent deduction made after the invoices issued for these services were duly paid.

The report was followed by formal notices of assessment from the Tax Revenue Office (Milan 3 Office) for each year audited; appeals were then filed with the Provincial Tax Commission within the term provided by law.

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The appeals for 2001 and for 2004 and 2005 were discussed on January 25, 2010 and on February 17, 2010 respectively, with a favourable outcome for the company in all cases. The Tax Revenue Office appealed against the verdict of the first court. The Regional Tax Commission rejected this appeal for all three years, 2001, 2004 and 2005.

For 2011, the Tax Revenue Office filed an appeal with the Supreme Court against which AMSA Holding S.p.A. (now A2A S.p.A.), filed a cross-appeal on November 09, 2012. At the hearing on December 12, 2018, the Company requested that the case be suspended in order to assess the facilitated settlement of the dispute. On May 24, 2019, the company filed an application for a facilitated settlement of pending tax disputes and definitively settled its tax claim.

The outcomes of the 2002 and 2003 disputes were also favourable for the company but the Tax Revenue Office filed an appeal against both sentences. The appeal for 2002 was discussed on November 30, 2010, and by way of a sentence lodged on February 02, 2011 the Milan Regional Tax Commission overturned the sentence of the first court, upholding the Tax Revenue Office's appeal on almost all counts with the exception of the hazardous waste category. The Company filed an appeal with the Supreme Court for 2002. The hearing was held on December 12, 2018 and, to date, no decision has been filed. For 2003 the appeal made by the Tax Revenue Office was discussed on November 07, 2011 before the Regional Tax Commission which rejected it with a sentence filed on November 11, 2011. The Tax Revenue Office has not appealed to the Supreme Court for 2003, 2004 and 2005 and the sentence has become final, thereby closing the litigation.

A risk provision of 1.4 million euro has been recognized.

Consob Recommendation no. 61493 of July 18, 2013

In response to Consob Recommendation no. 61493 published in July 2013, the A2A Group has carried out detailed analyses which have led to the identification of the hydroelectric production sector as the area applicable to the Group.

The capex made in this sector in the first half of 2019 were of a marginal amount and due to ordinary maintenance.

The company has availed itself of the possibility permitted by article 70, paragraph 8 and article 71, paragraph 1-bis of the Issuers' Regulations, and hence of derogating from the requirement to make an information document available to public in the event of significant mergers, spin-offs, share capital increases by means of the contribution of assets in kind, acquisitions and disposals.



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Attachments
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1 - Statement of changes in tangible assets

Tangible assets <i>millions of euro</i>	NET BOOK VALUE AT 12 31 2018	FIRST-TIME CONSOLIDATION ACQUISITIONS 2019	CHANGES DURING THE PERIOD		
			INVESTMENTS	CHANGES IN CATEGORY	
Land	116				
Buildings	590		3	5	
Plant and machinery	3,460	2	62	5	
Industrial and commercial equipment	38		5		
Other assets	120		7	9	
Landfills	66			1	
Construction in progress and advances	85		65	(20)	
Leasehold improvements	91		9		
Right-of-use assets	54				
Total tangible assets	4,620	2	151	-	

Tangible assets <i>millions of euro</i>	NET BOOK VALUE AT 12 31 2017	FIRST-TIME CONSOLIDATION ACQUISITIONS 2018	CHANGES DURING THE PERIOD		
			INVESTMENTS	CHANGES IN CATEGORY	
Land	113				
Buildings	606		2	3	
Plant and machinery	3,459	21	50	12	
Industrial and commercial equipment	36		4		
Other assets	98		5	14	
Landfills	66			3	
Construction in progress and advances	95		47	(31)	
Leasehold improvements	83		8	1	
Leased assets	50	11			
Total tangible assets	4,606	32	116	2	

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CHANGES DURING THE PERIOD							NET BOOK VALUE AT 06 30 2019
RECLASSIFICATIONS/ OTHER CHANGES		DISPOSALS/ SALES		WRITE-DOWNS	AMORTIZATION	TOTAL CHANGES FOR THE PERIOD	
GROSS VALUE	ACCUMULATED AMORTIZATION	GROSS VALUE	ACCUMULATED AMORTIZATION				
							116
					(16)	(8)	582
10	(1)	(9)	8		(130)	(55)	3,407
					(4)	1	39
(1)		(3)	3		(14)	1	121
4					(2)	3	69
(1)						44	129
					(7)	2	93
121					(13)	108	162
133	(1)	(12)	11	-	(186)	96	4,718

CHANGES DURING THE PERIOD							NET BOOK VALUE AT 06 30 2018
RECLASSIFICATIONS/ OTHER CHANGES		DISPOSALS/ SALES		WRITE-DOWNS	AMORTIZATION	TOTAL CHANGES FOR THE PERIOD	
GROSS VALUE	ACCUMULATED AMORTIZATION	GROSS VALUE	ACCUMULATED AMORTIZATION				
						-	113
		(1)	1		(17)	(12)	594
(5)		(4)	3		(132)	(76)	3,404
		(1)	1		(4)	-	36
		(12)	12		(12)	7	105
(2)					(2)	(1)	65
(1)						15	110
1					(5)	5	88
(1)					(3)	(4)	57
(8)	-	(18)	17	-	(175)	(66)	4,572

2 - Statement of changes in intangible assets

Intangible assets <i>millions of euro</i>	NET BOOK VALUE AT 12 31 2018	FIRST-TIME CONSOLIDATION ACQUISITIONS 2019	CHANGES DURING THE PERIOD		
			INVESTMENTS	CHANGES IN CATEGORY	
Industrial patent and intellectual property rights	24		3	1	
Concessions, licences, trademarks and similar rights	1,502		68	5	
Goodwill	444				
Assets in progress	44		30	(6)	
Other intangible assets	288				
Total intangible assets	2,302	-	101	-	

Intangible assets <i>millions of euro</i>	NET BOOK VALUE AT 12 31 2017	FIRST-TIME CONSOLIDATION ACQUISITIONS 2018	CHANGES DURING THE PERIOD		
			INVESTMENTS	CHANGES IN CATEGORY	
Industrial patent and intellectual property rights	19		4	1	
Concessions, licences, trademarks and similar rights	1,130		50	7	
Goodwill	457	9			
Assets in progress	40		17	(10)	
Other intangible assets	217	1			
Total intangible assets	1,863	10	71	(2)	

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CHANGES DURING THE PERIOD								NET BOOK VALUE AT 06 30 2019
	RECLASSIFICATIONS/ OTHER CHANGES		DISPOSALS/ SALES		WRITE-DOWNS	AMORTIZATION	TOTAL CHANGES FOR THE PERIOD	
	GROSS VALUE	ACCUMULATED AMORTIZATION	GROSS VALUE	ACCUMULATED AMORTIZATION				
						(7)	(3)	21
	1		(8)	7		(41)	32	1,534
	2						2	446
							24	68
	(14)	2				(11)	(23)	265
	(11)	2	(8)	7	-	(59)	32	2,334

CHANGES DURING THE PERIOD								NET BOOK VALUE AT 06 30 2018
	RECLASSIFICATIONS/ OTHER CHANGES		DISPOSALS/ SALES		WRITE-DOWNS	AMORTIZATION	TOTAL CHANGES FOR THE PERIOD	
	GROSS VALUE	ACCUMULATED AMORTIZATION	GROSS VALUE	ACCUMULATED AMORTIZATION				
						(6)	(1)	18
	(1)		(5)	3		(26)	28	1,158
							-	466
							7	47
	(86)					(6)	(92)	126
	(87)	-	(5)	3	-	(38)	(58)	1,815

3 - List of companies included in the consolidated financial statements

Company name	REGISTERED OFFICE	CURRENCY	SHARE CAPITAL (THOUSANDS)	
Scope of consolidation				
Unareti S.p.A.	Brescia	Euro	965,250	
A2A Illuminazione Pubblica S.r.l.	Brescia	Euro	28,600	
A2A Calore & Servizi S.r.l.	Brescia	Euro	150,000	
A2A Smart City S.p.A.	Brescia	Euro	3,448	
A2A Energia S.p.A.	Milan	Euro	3,000	
A2A Ciclo Idrico S.p.A.	Brescia	Euro	70,000	
A2A Ambiente S.p.A.	Brescia	Euro	220,000	
A2A Montenegro d.o.o.	Podgorica (Montenegro)	Euro	100	
A2A Energiefuture S.p.A.	Milan	Euro	50,000	
A2A gencogas S.p.A.	Milan	Euro	450,000	
A2Abroad S.p.A.	Milan	Euro	300	
Retragas S.r.l.	Brescia	Euro	34,495	
Camuna Energia S.r.l.	Cedegolo (BS)	Euro	900	
A2A Alfa S.r.l. in liquidation	Milan	Euro	100	
Plurigas S.p.A. in liquidation	Milan	Euro	800	
Proaris S.r.l.	Milan	Euro	1,875	
SEASM S.r.l.	Brescia	Euro	700	
Azienda Servizi Valtrompia S.p.A.	Gardone Val Trompia (BS)	Euro	8,939	
YADA ENERGIA S.r.l.	Milan	Euro	10	
Consul System S.p.A.	Milan	Euro	2,000	
Unareti Servizi Metrici S.r.l.	Brescia	Euro	100	
LaborAE S.r.l.	Milan	Euro	90	
Ecodeco Hellas S.A. in liquidation	Atene (Greece)	Euro	60	
Ecolombardia 4 S.p.A.	Milan	Euro	13,515	
Sicura S.r.l.	Milan	Euro	1,040	
Sistema Ecodeco UK Ltd	Canvey Island Essex (UK)	GBP	250	
A.S.R.A.B. S.p.A.	Cavaglià (BI)	Euro	2,582	
Nicosiambiente S.r.l.	Milan	Euro	50	
Bioase S.r.l.	Sondrio	Euro	677	
Aprica S.p.A.	Brescia	Euro	21,000	
Amsa S.p.A.	Milan	Euro	10,000	
SED S.r.l.	Robassomero (TO)	Euro	1,250	
Bergamo Servizi S.r.l.	Brescia	Euro	10	
LA BI.CO DUE S.r.l. (*)	Lograto (BS)	Euro	96	
A2A Recycling S.r.l.	Novate Milanese (MI)	Euro	5,000	
A2A Integrambiente S.r.l.	Brescia	Euro	10	

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	% OF SHAREHOLDING CONSOLIDATED BY GROUP AT 06 30 2019	SHAREHOLDING %	SHAREHOLDER	VALUATION METHOD
	100.00%	100.00%	A2A S.p.A.	Line-by-line consolidation
	100.00%	100.00%	A2A S.p.A.	Line-by-line consolidation
	100.00%	100.00%	A2A S.p.A.	Line-by-line consolidation
	93.63%	100.00%	A2A S.p.A. (87%) Linea Group Holding S.p.A. (13%)	Line-by-line consolidation
	93.73%	100.00%	A2A S.p.A. (87.20%) Linea Group Holding S.p.A. (12.80%)	Line-by-line consolidation
	100.00%	100.00%	A2A S.p.A.	Line-by-line consolidation
	100.00%	100.00%	A2A S.p.A.	Line-by-line consolidation
	100.00%	100.00%	A2A S.p.A.	Line-by-line consolidation
	100.00%	100.00%	A2A S.p.A.	Line-by-line consolidation
	100.00%	100.00%	A2A S.p.A.	Line-by-line consolidation
	100.00%	100.00%	A2A S.p.A.	Line-by-line consolidation
	100.00%	100.00%	A2A S.p.A.	Line-by-line consolidation
	91.60%	91.60%	A2A S.p.A. (87.27%) Unareti S.p.A. (4.33%)	Line-by-line consolidation
	81.90%	89.00%	A2A S.p.A. (74.50%) Linea Green S.p.A. (14.50%)	Line-by-line consolidation
	70.00%	70.00%	A2A S.p.A.	Line-by-line consolidation
	70.00%	70.00%	A2A S.p.A.	Line-by-line consolidation
	60.00%	60.00%	A2A S.p.A.	Line-by-line consolidation
	67.00%	67.00%	A2A S.p.A.	Line-by-line consolidation
	74.80%	74.80%	A2A S.p.A. (74.55%) Unareti S.p.A. (0.25%)	Line-by-line consolidation
	100.00%	100.00%	A2A S.p.A.	Line-by-line consolidation
	75.00%	75.00%	A2A Energy Solution S.r.l.	Line-by-line consolidation
	100.00%	100.00%	Unareti S.p.A.	Line-by-line consolidation
	100.00%	100.00%	Amsa S.p.A.	Line-by-line consolidation
	100.00%	100.00%	A2A Ambiente S.p.A.	Line-by-line consolidation
	68.78%	68.78%	A2A Ambiente S.p.A.	Line-by-line consolidation
	96.80%	96.80%	A2A Ambiente S.p.A.	Line-by-line consolidation
	100.00%	100.00%	A2A Ambiente S.p.A.	Line-by-line consolidation
	70.00%	70.00%	A2A Ambiente S.p.A.	Line-by-line consolidation
	99.90%	99.90%	A2A Ambiente S.p.A.	Line-by-line consolidation
	70.00%	70.00%	A2A Ambiente S.p.A.	Line-by-line consolidation
	100.00%	100.00%	A2A Ambiente S.p.A.	Line-by-line consolidation
	100.00%	100.00%	A2A Ambiente S.p.A.	Line-by-line consolidation
	80.00%	80.00%	A2A Ambiente S.p.A.	Line-by-line consolidation
	100.00%	100.00%	Aprica S.p.A.	Line-by-line consolidation
	64.00%	64.00%	Aprica S.p.A.	Line-by-line consolidation
	100.00%	100.00%	A2A Ambiente S.p.A.	Line-by-line consolidation
	100.00%	100.00%	A2A Ambiente S.p.A. (74%) Aprica S.p.A. (1%) Amsa S.p.A. (25%)	Line-by-line consolidation

Company name	REGISTERED OFFICE	CURRENCY	SHARE CAPITAL (THOUSANDS)	
A2A Security S.c.p.a.	Milan	Euro	50	
LumEnergia S.p.A.	Villa Carcina (BS)	Euro	300	
A2A Energy Solution S.r.l.	Milan	Euro	4,000	
Suncity Energy s.r.l.	Milan	Euro	100	
A2A Rinnovabili S.p.A.	Milan	Euro	50	
HELIOS 1 S.r.l.	Milan	Euro	12	
INTHE 1 S.r.l.	Milan	Euro	10	
INTHE 2 S.r.l.	Milan	Euro	210	
TFV 1 S.r.l.	Milan	Euro	210	
TFV 2 S.r.l.	Milan	Euro	110	
Fair Renew S.r.l.	Milan	Euro	10	
renewA21 S.r.l.	Milan	Euro	20	
renewA22 S.r.l.	Milan	Euro	220	
renewA23 S.r.l.	Milan	Euro	20	
renewA24 S.r.l.	Milan	Euro	20	
renewA25 S.r.l.	Milan	Euro	20	
renewA26 S.r.l.	Milan	Euro	20	
renewA27 S.r.l.	Milan	Euro	20	
renewA28 S.r.l.	Milan	Euro	20	
Bellariva Enertel 01 S.r.l.	Milan	Euro	10	
Bellariva Enertel 06 S.r.l.	Milan	Euro	10	
Bellariva Enertel 07 S.r.l.	Milan	Euro	10	
Bellariva Enertel 10 S.r.l.	Milan	Euro	10	
Energy Infrastructure Group S.r.l.	Milan	Euro	100	
Ts energy Italy S.p.A.	Milan	Euro	110	
Trovosix S.r.l.	Milan	Euro	20	
Sun Flower S.r.l.	Milan	Euro	10	
Solar Sicily S.r.l. unipersonale	Milan	Euro	10	
Onice S.r.l.	Milan	Euro	10	
Des Energia Dieci S.r.l.	Milan	Euro	10	
Des Energia Dodici S.r.l.	Milan	Euro	10	
Des Energia Tredici S.r.l.	Milan	Euro	10	
Des Energia Quattordici S.r.l.	Milan	Euro	10	
CS Solar2 S.r.l.	Milan	Euro	15	
I.Fotoguiglia S.r.l.	Milan	Euro	14	
Free Energy S.r.l.	Milan	Euro	10	
Linea Group Holding S.p.A.	Cremona	Euro	189,494	
Linea Gestioni S.r.l.	Crema (CR)	Euro	6,000	
LD Reti S.r.l.	Lodi	Euro	32,976	
Linea Green S.p.A.	Cremona	Euro	48,000	
Linea Ambiente S.r.l.	Rovato (BS)	Euro	19,000	
Lomellina Energia S.r.l.	Parona (PV)	Euro	160	

	% OF SHAREHOLDING CONSOLIDATED BY GROUP AT 06 30 2019	SHAREHOLDING %	SHAREHOLDER	VALUATION METHOD
	100.00%	100.00%	A2A S.p.A. (47.60%) Unareti S.p.A. (19.10%) A2A Ciclo Idrico S.p.A. (10.90%) Amsa S.p.A. (9.50%) A2A gencogas S.p.A. (4.10%) A2A Ambiente S.p.A. (4.10%) A2A Calore & Servizi S.r.l. (2.70%) A2A Energiefuture S.p.A. (2%)	Line-by-line consolidation
	94.42%	94.42%	A2A Energia S.p.A.	Line-by-line consolidation
	100.00%	100.00%	A2A S.p.A.	Line-by-line consolidation
	100.00%	100.00%	A2A Energy Solution S.r.l.	Line-by-line consolidation
	100.00%	100.00%	A2A S.p.A.	Line-by-line consolidation
	100.00%	100.00%	A2A Rinnovabili S.p.A.	Line-by-line consolidation
	100.00%	100.00%	A2A Rinnovabili S.p.A.	Line-by-line consolidation
	100.00%	100.00%	A2A Rinnovabili S.p.A.	Line-by-line consolidation
	100.00%	100.00%	A2A Rinnovabili S.p.A.	Line-by-line consolidation
	100.00%	100.00%	A2A Rinnovabili S.p.A.	Line-by-line consolidation
	60.00%	60.00%	A2A Rinnovabili S.p.A.	Line-by-line consolidation
	100.00%	100.00%	A2A Rinnovabili S.p.A.	Line-by-line consolidation
	100.00%	100.00%	A2A Rinnovabili S.p.A.	Line-by-line consolidation
	100.00%	100.00%	A2A Rinnovabili S.p.A.	Line-by-line consolidation
	100.00%	100.00%	A2A Rinnovabili S.p.A.	Line-by-line consolidation
	100.00%	100.00%	A2A Rinnovabili S.p.A.	Line-by-line consolidation
	100.00%	100.00%	A2A Rinnovabili S.p.A.	Line-by-line consolidation
	100.00%	100.00%	A2A Rinnovabili S.p.A.	Line-by-line consolidation
	100.00%	100.00%	A2A Rinnovabili S.p.A.	Line-by-line consolidation
	100.00%	100.00%	A2A Rinnovabili S.p.A.	Line-by-line consolidation
	100.00%	100.00%	A2A Rinnovabili S.p.A.	Line-by-line consolidation
	100.00%	100.00%	A2A Rinnovabili S.p.A.	Line-by-line consolidation
	100.00%	100.00%	A2A Rinnovabili S.p.A.	Line-by-line consolidation
	100.00%	100.00%	A2A Rinnovabili S.p.A.	Line-by-line consolidation
	100.00%	100.00%	A2A Rinnovabili S.p.A.	Line-by-line consolidation
	100.00%	100.00%	A2A Rinnovabili S.p.A.	Line-by-line consolidation
	100.00%	100.00%	A2A Rinnovabili S.p.A.	Line-by-line consolidation
	100.00%	100.00%	A2A Rinnovabili S.p.A.	Line-by-line consolidation
	100.00%	100.00%	Ts energy Italy S.p.A.	Line-by-line consolidation
	100.00%	100.00%	Ts energy Italy S.p.A.	Line-by-line consolidation
	100.00%	100.00%	Ts energy Italy S.p.A.	Line-by-line consolidation
	100.00%	100.00%	Ts energy Italy S.p.A.	Line-by-line consolidation
	100.00%	100.00%	Ts energy Italy S.p.A.	Line-by-line consolidation
	100.00%	100.00%	Ts energy Italy S.p.A.	Line-by-line consolidation
	100.00%	100.00%	Ts energy Italy S.p.A.	Line-by-line consolidation
	100.00%	100.00%	Ts energy Italy S.p.A.	Line-by-line consolidation
	100.00%	100.00%	Ts energy Italy S.p.A.	Line-by-line consolidation
	100.00%	100.00%	Ts energy Italy S.p.A.	Line-by-line consolidation
	100.00%	100.00%	Ts energy Italy S.p.A.	Line-by-line consolidation
	100.00%	100.00%	Ts energy Italy S.p.A.	Line-by-line consolidation
	100.00%	100.00%	Energy Infrastructure Group S.r.l.	Line-by-line consolidation
	100.00%	100.00%	Energy Infrastructure Group S.r.l.	Line-by-line consolidation
	51.00%	51.00%	A2A S.p.A.	Line-by-line consolidation
	100.00%	100.00%	Linea Group Holding S.p.A.	Line-by-line consolidation
	95.60%	93.35%	Linea Group Holding S.p.A.	Line-by-line consolidation
	100.00%	100.00%	Linea Group Holding S.p.A.	Line-by-line consolidation
	100.00%	100.00%	Linea Group Holding S.p.A.	Line-by-line consolidation
	80.00%	80.00%	Linea Ambiente S.r.l.	Line-by-line consolidation

5
Attachments
to the notes to
the Half-yearly
financial report

1. Statement of changes in tangible assets

2. Statement of changes in intangible assets

3. List of companies included in the consolidated financial statements

4. List of shareholdings in companies carried at equity

5. List of holdings in other companies

Company name	REGISTERED OFFICE	CURRENCY	SHARE CAPITAL (THOUSANDS)	
ACSM-AGAM S.p.A.	Monza	Euro	197,344	
Acsm - Agam reti Gas Acqua S.p.A.	Monza	Euro	57,000	
ComoCalor S.p.A.	Como	Euro	3,516	
Lario Reti Gas S.r.l.	Lecco	Euro	5,500	
Enerxenia S.p.A.	Como	Euro	6,769	
Serenissima Gas S.p.A.	Como	Euro	9,230	
Reti Valtellina Valchiavenna S.r.l.	Sondrio	Euro	2,000	
Acel Energie S.r.l.	Lecco	Euro	6,000	
Acsm Agam Ambiente S.r.l.	Varese	Euro	4,500	
Varese Risorse S.p.A.	Monza	Euro	6,000	
AEVV Impianti S.r.l.	Monza	Euro	800	
AEVV Farmacie S.r.l.	Sondrio	Euro	100	
Equity investments held for sale				
Elektroprivreda Cnre Gore AD Nikšić (EPCG)	Nikšić (Montenegro)	Euro	855,000	

(*) The percentage does not take into account the put option.

	% OF SHAREHOLDING CONSOLIDATED BY GROUP AT 06 30 2019	SHAREHOLDING %	SHAREHOLDER	VALUATION METHOD
	41.34%	41.34%	A2A S.p.A.	Line-by-line consolidation
	100.00%	100.00%	ACSM-AGAM S.p.A.	Line-by-line consolidation
	51.00%	51.00%	ACSM-AGAM S.p.A.	Line-by-line consolidation
	100.00%	100.00%	ACSM-AGAM S.p.A.	Line-by-line consolidation
	99.26%	99.62%	ACSM-AGAM S.p.A. (97.97%) Serenissima Gas S.p.A. (1.65%)	Line-by-line consolidation
	79.37%	78.44%	ACSM-AGAM S.p.A.	Line-by-line consolidation
	100.00%	100.00%	ACSM-AGAM S.p.A.	Line-by-line consolidation
	100.00%	100.00%	ACSM-AGAM S.p.A.	Line-by-line consolidation
	100.00%	100.00%	ACSM-AGAM S.p.A.	Line-by-line consolidation
	100.00%	100.00%	ACSM-AGAM S.p.A.	Line-by-line consolidation
	100.00%	100.00%	ACSM-AGAM S.p.A.	Line-by-line consolidation
	100.00%	100.00%	ACSM-AGAM S.p.A.	Line-by-line consolidation
	11.90%	11.90%	A2A S.p.A.	Equity

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4 - List of shareholdings in companies carried at equity

Company name	REGISTERED OFFICE	CURRENCY	SHARE CAPITAL (THOUSANDS)	
Shareholdings in companies carried at equity				
PremiumGas S.p.A. in liquidation	Bergamo	Euro	120	
Ergosud S.p.A.	Rome	Euro	81,448	
Ergon Energia S.r.l. in liquidation	Milan	Euro	600	
Metamer S.r.l.	San Salvo (CH)	Euro	650	
SET S.p.A.	Toscolano Maderno (BS)	Euro	104	
Ge.S.I. S.r.l.	Brescia	Euro	1,000	
Serio Energia S.r.l.	Concordia sulla Secchia (MO)	Euro	1,000	
Visano Soc. Trattamento Reflui S.c.a.r.l.	Brescia	Euro	25	
Sviluppo Turistico Lago d’Iseo S.p.A.	Iseo (BS)	Euro	1,616	
Futura S.r.l.	Milan	Euro	2,500	
COSMO Società Consortile a Responsabilità Limitata	Brescia	Euro	100	
Crit S.c.a.r.l.	Cremona	Euro	310	
Suncity Group S.r.l.	Pescara	Euro	14	
ES Energy S.r.l.	Jesi (AN)	Euro	10	
MSD Service S.r.l.	Acerra (NA)	Euro	10	
G.Eco S.r.l.	Treviglio (BG)	Euro	500	
Bergamo Pulita S.r.l.	Bergamo	Euro	10	
Tecnoacque Cusio S.p.A.	Omegna (VB)	Euro	206	
ASM Codogno S.r.l.	Codogno (LO)	Euro	1,898	
Gelsia Ambiente S.r.l.	Desio (MB)	Euro	4,671	
758 AM S.r.l.	Milan	Euro	20	
Como Energia S.c.a.r.l. in liquidation	Como	Euro	20	
SO.E.RA Energy Calor	Como	Euro	20	
Prealpi Servizi S.r.l.	Varese	Euro	5,451	
Equity investments held for sale				
Energy Trade S.p.A.	Bologna	Euro	2,000	
Total shareholdings				

SHAREHOLDING %	SHAREHOLDER	CARRYING AMOUNT AT 06 30 2019 (THOUSANDS)	VALUATION METHOD
50.00%	A2A Alfa S.r.l.	-	Equity
50.00%	A2A gencogas S.p.A.	-	Equity
50.00%	A2A S.p.A.	-	Equity
50.00%	A2A Energia S.p.A.	1,967	Equity
49.00%	A2A S.p.A.	788	Equity
47.00%	A2A S.p.A.	2,425	Equity
40.00%	A2A S.p.A.	746	Equity
40.00%	A2A S.p.A.	10	Equity
24.29%	A2A S.p.A.	735	Equity
20.00%	A2A Calore & Servizi S.r.l.	2,285	Equity
52.00%	A2A Calore & Servizi S.r.l.	104	Equity
32.90%	A2A Smart City S.p.A.	104	Equity
26.00%	A2A Energy Solution S.r.l.	5,512	Equity
50.00%	Suncity Energy S.r.l.	5	Equity
40.00%	Suncity Energy S.r.l.	4	Equity
40.00%	Aprica S.p.A.	2,673	Equity
50.00%	A2A Ambiente S.p.A.	21	Equity
25.00%	A2A Ambiente S.p.A.	238	Equity
49.00%	Linea Gestioni S.r.l.	1,899	Equity
30.00%	A2A Integrambiente S.r.l.	2,841	Equity
20.00%	A2A Rinnovabili S.p.A.	109	Equity
70.00%	ACSM - AGAM S.p.A.	11	Equity
50.00%	ACSM - AGAM S.p.A.	11	Equity
12.47%	ACSM - AGAM S.p.A.	-	Equity
21.29%	ACSM - AGAM S.p.A.	495	Equity
		22,983	

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5 - List of holdings in other companies

Company name	SHAREHOLDING %	SHAREHOLDER	CARRYING AMOUNT AT 06 30 2019 (THOUSANDS)
Immobiliare-Fiera di Brescia S.p.A.	1.21%	A2A S.p.A.	
AQM S.r.l.	7.80%	A2A S.p.A. (7.52%) LumEnergia S.p.A. (0.28%)	
AvioValtellina S.p.A.	0.18%	A2A S.p.A.	
Banca di Credito Cooperativo dell'Oglio e del Serio s.c.	n.s.	A2A S.p.A.	
Brescia Mobilità S.p.A.	0.25%	A2A S.p.A.	
Consorzio Italiano Compostatori	n.s.	A2A Ambiente S.p.A.	
L.E.A.P. S.c.a.r.l.	8.57%	A2A S.p.A.	
Consorzio Milan Sistema in liquidation	10.00%	A2A S.p.A.	
Consorzio Polieco	n.s.	A2A Ambiente S.p.A.	
Gugliesoni Ambiente S.c.a.r.l.	1.01%	A2A Ambiente S.p.A.	
Isfor 2000 S.c.p.a.	5.13%	A2A S.p.A. (4.94%) Linea Gestioni S.r.l. (0.19%)	
S.I.T. S.p.A.	0.26%	Aprica S.p.A.	
Stradivaria S.p.A.	n.s.	A2A S.p.A.	
Tirreno Ambiente S.p.A. in liquidation	3.00%	A2A Ambiente S.p.A.	
IBF Servizi S.p.A.	14.00%	A2A Smart City S.p.A.	
DI.T.N.E. S.c.a.r.l.	1.82%	A2A S.p.A.	
E.M.I.T. S.r.l. in liquidation	10.00%	A2A S.p.A.	
COMIECO	7.50%	A2A Recycling S.r.l. (4.61%) A2A Ambiente S.p.A. (2.89%)	
CONAPI S.c.a.r.l.	18.18%	A2A Recycling S.r.l.	
Blugas Infrastrutture S.r.l.	27.51%	Linea Group Holding S.p.A.	
Casalasca Servizi S.p.A.	13.88%	Linea Gestioni S.r.l.	
SABB S.p.A.	4.47%	Linea Gestioni S.r.l.	
Sinergie Italiane S.r.l. in liquidation	14.92%	Linea Group Holding S.p.A.	
Cassa Padana S.c.a.r.l.	n.s.	A2A Smart City S.p.A.	
Confidi Toscana S.c.a.r.l.	n.s.	Linea Ambiente S.r.l.	
Credito Valtellinese	n.s.	Linea Ambiente S.r.l.	
Idroenergia S.c.a.r.l.	n.s.	Lomellina Energia S.r.l.	
MORINA S.r.l.	5.00%	Azienda Servizi Valtrompia S.p.A.	
Comodepur S.c.p.a.	9.81%	ACSM - AGAM S.p.A.	
T.C.V.V.V. S.p.A.	0.25%	ACSM - AGAM S.p.A.	
Società Cooperativa Polo dell'Innovazione della Valtellina	n.s.	ACSM - AGAM S.p.A. A2A S.p.A.	
Total investments in other companies			7,413

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6

Evolution
of the regulation
and impacts
on the Business Units
of the A2A Group

In relation to the Evolution of the regulation and impacts on the Business Units of the A2A Group, the main changes in the first half of 2019 are shown below, while as already published in the Financial Statements at December 31, 2018 shall remain valid.

Strategic Framework 2019-2021 of the Regulatory Authority for Energy Networks and Environment

With Resolution 242/2019/A, ARERA approved the “*Strategic Framework 2019-2021*” where the Objectives and the Lines of Intervention in the various regulated sectors are identified with the relative implementation timing. The main elements on which the action of the Regulator will focus, also identified after a cycle of hearings with stakeholders, are:

- the “renewed” need for investment: sustainable development and a circular economy require new investment both in regulated segments (e.g. water supply and purification, DSO-TSO networks for the management of non-programmable renewables) and in contestable segments (in addition to generation, also waste treatment/disposal activities). The regulation should encourage technological innovation, also through experiments (Terna pilot projects) and special regulatory sandboxes on the Anglo-Saxon model;
- guarantee long-term signals, stability and certainty of the rules: in a context of profound change, it is difficult to identify the scenarios on which to carry out cost/benefit analyses, while investment choices (typically capital intensive) require a framework of certainty. The regulation should be flexible to take advantage of technological opportunities (digitization, storage development, sector coupling, etc.) but avoid situations of technological lock in and stranded cost;
- competition and consumers: in the energy sectors, the objective is to accompany the process of liberalisation of retail markets by making consumers increasingly aware and providing them with adequate means of protection. The main drivers will be the evolution of smart metering and the Integrated Information System to facilitate the transfer of information and price signals to consumers, and the definition of enhanced protection for the most vulnerable consumers. The growing role of the consumer in the energy market will also have to be intercepted. ARERA offers its technical support for a possible “partial transfer” of system charges to general taxation. Appropriate standards of service quality and management efficiency should be defined in environmental sectors;
- infrastructure development: ARERA’s objective is to align the interests of regulated entities with those of the system and of consumers, through output-based tools (overcoming the different treatment of OPEX vs CAPEX in the direction of TOTEX systems). Emphasis is placed on the importance of digitisation to streamline processes and actively manage networks. Finally, the regulation will have to integrate into the system the new production and consumption configurations (also with reference to the energy communities introduced by the Clean Energy Package) and the recharging of electric vehicles;
- waste: definition of an “asymmetric” regulation consistent with multi-level governance and the technical-managerial characteristics of the different contexts, which goes beyond the TARI-tribute in favour of the tariff and promotes the capacity of the local system to manage waste in its entirety and plant adequacy in a manner consistent with the objectives of the circular economy. Starting in 2020, tariff regulation for collection and transport services will be introduced, based on efficient costs and identified quality parameters, while tariff regulation for treatment plants is planned from 2021;
- Integrated Water Service: after the important results achieved in terms of stability of the rules and, therefore, promotion of investments, ARERA identifies the actions necessary to improve the conditions of access to the resource, complete the regulation on the user side (per capita rate, reduced rate band, arrears, etc.), overcome infrastructure deficiencies (regional water divide), improve the mechanisms of bonuses/penalties on the basis of the technical performance of operators, encourage technological development and digitisation, with particular reference to the measure. Action is planned to encourage the recovery of sewage sludge;
- energy markets: the shift in value from commodities to availability at particular times and with certain characteristics of flexibility makes it necessary to operate the capacity market and reform the Dispatching Services Market - MSD with opening up to all resources (also on the basis of Terna’s pilot projects). Underway are: the drafting of the new Testo Integrato Dispacciamento Elettrico - TIDE (Integrated Electricity Dispatching Act), the revision of the rules governing imbalances, and the immediate launch of the intra-day market, which is being continuously negotiated at the Italian

borders. In the case of gas, too, the difficulty of the current system in producing long-term signals for investments is recognised and this situation may require specific regulatory instruments. Especially in the new market segments of flexibility, particular attention will be paid to market monitoring (REMIT), also with support from ARERA to ensure the compliance of operators;

- district heating networks: considered drivers for decarbonisation. The regulation must protect the consumer by providing clear and simple information for aware participation in the market for air conditioning services; in this perspective, attention is also provided to the issues of metering and demand side management. The development of the networks must be assessed in synergy with the tenders for the distribution of gas in order to support the objectives of environmental sustainability. Finally, the regulation will have to ensure technical and economic conditions for the integration of new installations into the networks, subject to an assessment of the costs and benefits for the system.

6
Evolution of the regulation and impacts on the Business Units of the A2A Group

Generation and Trading Business Unit

Market Business Unit

Waste Business Unit

Networks and District Heating Business Unit

International Business Unit

Generation and Trading Business Unit

Remuneration of production capacity availability

The current mechanism for remunerating the availability of production capacity is the Capacity Payment defined in 2003 by Legislative Decree no. 379 as an administered, transitional system aimed at ensuring the adequacy of the electricity system during critical days, identified by Terna and when the difference between supply and demand could be at minimum levels.

The mechanism has been operating since 2004 as a result of Resolution 48/04, which provides that the Authority determines ex ante a specific revenue (about 200 million euro/year) collected through electricity bills and paid in the form of two payments (CAP1 and S) to generation plants authorized for the provision of dispatching services and that are available on critical days.

By way of Resolutions 30/2019/R/eel and 206/2019/R/eel, the Authority ordered the payment of the items relating to the capacity payment pertaining to 2018 (CAP1 and S) by February 28, 2019 and June 30, 2019, respectively. These items amount to approximately 29.8 million euro (with a contingent asset of approximately 8.2 million euro).

Resolution 233/2019/R/eel ordered the payment of the CAP1 amount for 2019 by September 30 (an estimated 18 million euro for the A2A Group), while Resolution 289/2019/R/eel established to pay the S amount by April 30, 2020.

Legislative Decree no. 379 of 2003 had also established that under regime the remuneration of the availability should have been based on a market mechanism (capacity market) subsequently drawn up by Resolution ARG/elt 98/11: it is technically a contract for one-way differences, i.e. an auction in which the operators assigned acquire the right to receive a premium (in euro/MW/year) for the obligation to offer all the capacity awarded on the energy markets (MGP) and services market (MSD), returning to the counterparty Terna the difference - if positive - between the reference prices of the markets and a strike price (in euro/MWh).

Resolution 95/2015/l/eel had set a period of initial implementation with annual capacity contracts and a regime phase (or full implementation) with three-year contracts for existing plant and 15-year contract for new plants.

After long informal discussions with the European institutions, the MiSE notified the Italian capacity market mechanism to DG Competition on August 23, 2017 that approved it on February 7, 2018 for 10 years, until December 31, 2028, having considered it compatible with the European Guidelines on state aid. At the same time, DG Competition approved a similar mechanism for Poland, the strategic reserve for Belgium and Germany, the interruptibility regime for Greece and the French demand management mechanism.

In March 2018, Terna put the rules into consultation, with a number of new features including:

- the introduction of “capacity undergoing rebuilding” and a minimum investment threshold of 209,000 euro/MW to obtain the qualification of “capacity undergoing rebuilding” and “new capacity” and, therefore, access to fifteen-year contracts;
- the duration of annual contracts for existing plants, even in the fully operational phase;
- the participation of all production units, without distinction of technology, even of those incentivized which, however, renounce the incentive of the GSE during the delivery period; of consumption units; of foreign capacity.

By means of Resolution 261/2018/R/eel, the Authority amended and supplemented the previous Resolution ARG/elt 98/11 to adapt the market bill to the discipline as approved by the EU.

In May 2019, the EU Parliament and Council officially adopted EU Regulation 943/2019 on the internal energy market, which entered into force on July 4, 2019. Among other measures, the Regulation defines the rules and principles that the capacity mechanisms implemented in the Member States must comply with, while guaranteeing a safeguard for capacity contracts closed by December 31, 2019.

In the meantime, on March 21, the Italian Government sent a new formal notification of the rules to the Commission, immediately excluding from participation in the capacity market plants with particularly high emission indices (coal and oil), anticipating the application in this respect provided

for in the EU Regulation. On June 14, the DG Competition formally granted the green light to the Italian capacity market mechanism as renotified once again.

The Ministerial Decree of June 28, 2019 approves Terna’s regulations (on the positive opinion of ARERA issued by Resolution 281/2019/R/eel):

1. the insolvency proceedings are confirmed in 2019 for deliveries 2022 and 2023;
2. existing, new, refurbished or upgraded capacity may participate in the auctions. New capacity, which has not been granted an authorisation but for which the relevant procedure has been initiated on the qualification date, can be selected in an additional session of the auction that is activated only if the capacity requirements below which the system is inadequate are not met, i.e. the quantity guaranteeing a maximum of 6 h/year of detachment for each area of the market (see point 5);
3. capacity exceeding both of the following emission limits at the same time (coal and oil) is excluded from participation: emissions exceeding 550 g CO₂/kWh (certification in qualification stage), emissions exceeding 350 kg CO₂/kW/average year (ex-post verification);
4. during the delivery period, the auction bonus cannot be combined with some incentives provided by the GSE (tariffs, Dedicated Withdrawal and Exchange on Site) while the WC and the Thermal Account can be combined;
5. the target value (3 h/year) of the LOLE indicator (loss of load expectation), which expresses the level of adequacy of the Italian electricity system, is confirmed. An additional level of system adequacy, below the target level of 6 h/year, used for the definition of capacity requirements and below which the system is inadequate, is also indicated.

Remuneration of plants essential for the safety of the electricity system

By means of Resolution 803/2016/R/eel, the 220 kV plant of the San Filippo del Mela power plant (groups 2, 5 and 6) was contracted by Terna under essentiality regime with the reintegration of costs for the five-year period 2017-2021 in consideration of the fact that the Sorgente-Rizziconi power line connecting Sicily to the Continent may not always be available (for example during maintenance periods) and the market in the Sicily area is currently still short in terms of supply. The Resolution also establishes that group 1 at 150 kV plays a back-up role in the event of unavailability of group 2.

Also envisaged is the commitment by A2A Energiefuture S.p.A. to contain the requests reinstatement of costs below a cap proposed by the company that ensures at the same time the coverage of fixed costs, variable costs of management and equitable remuneration, as well as a saving for the system as said highest level of reinstatement is lower with respect to the calculation provided by the standard must-run regime (referred to in Resolution 111/06).

The long-term contractualization of San Filippo del Mela therefore allows the company to manage the plant in profit ensuring to the system the maintenance of safety with a benefit in terms of overall cost savings.

By way of Resolutions 101/2019/R/eel and 111/2019/R/eel, Terna settled the balance for 2016 for an amount of approximately 10.7 million euro. Receivables still to be collected and relating to the essential nature of 2017 and 2018 amount to a total of about 46 million euro.

Valuation of electrical imbalances

Resolution no. 111/06 defines the rules for the calculation of imbalance prices to be applied to the differences between the feed-in and consumption plans and the actual production and withdrawals. The containment of these imbalances is desirable because it favours the reduction in costs that fall on the bill of end customers as Terna, in the face of more accurate forecasts by dispatching users, uses fewer resources for balancing the system in real time.

For this reason, the discipline of these imbalances has been the subject of several amendments by the Authority in order to align the regulation to the need for an efficient market configuration, pushing operators to make increasingly better production and consumption forecasts, avoiding arbitrage between prices on different markets.

6
Evolution of the regulation and impacts on the Business Units of the A2A Group

Generation and Trading Business Unit

Market Business Unit

Waste Business Unit

Networks and District Heating Business Unit

International Business Unit

Period July 2012-August 2014 (excluding June 2014)

Relating to the period July 2012 - August 2014 (excluding June 2014), by way of the appeal filed by some operators, Resolutions no. 342/2012/R/eel, no. 239/2013/R/eel and no. 285/2013/R/eel were annulled by the administrative judge for non-justification on the urgency of measures and for non-consultation. Terna therefore made recalculations of imbalance prices applying the discipline in force before and the adjustment invoices - despite the objections by the A2A Group companies - were directly compensated at June 30, 2015 (for a gross amount of approximately 6.8 million euro).

In response also to the solicitations of other dispatching users, the Authority initiated a process for the valorization of the actual imbalances between 2012 and 2014, by means of Resolution 333/2015/R/eel. A2A Trading S.r.l. (now A2A S.p.A.), Edipower S.p.A. (now A2A S.p.A.) and A2A Energia S.p.A. appealed to the Lazio Regional Administrative Court against the recalculations carried out by Terna as it did not take into account this initiation of proceedings. After about a year of consultations, Resolution 333/2016/R/eel closed the valuation process of imbalances for the period 2012-2014 and ordering no later than November 1, 2016, repayment by Terna to the A2A Group companies of the amount compensated in June 2015.

Despite having collected the amounts from Terna, the dispute is still pending because several operators, following independent paths, have appealed against the aforementioned Resolution 333/2016/R/eel, invoking its suspension, which was denied by the Regional Administrative Court but granted, for some and following the provision of guarantees, by the Council of State. At present, the meetings of the Lombardy Regional Administrative Court have, in most cases, rejected the requests of the recurrent operators, but the outcome of the appeals before the Council of State is still awaited.

Period January 2015 - June 2016

In June 2016, given the significant increase in imbalance costs, the Authority launched a survey in order to verify possible conduct on wholesale markets detrimental to the right of end users and other operators for correct determination of the value of dispatching resources, as well as to cancel any impacts of said conduct in terms of increased imbalance prices.

By means of Resolutions 342/2016/E/eel and 459/2016/E/eel, the Authority initiated numerous individual proceedings for the adoption of prescriptive and/or asymmetrical regulation measures. In particular, the following proceedings were opened for the A2A Group with respect to:

- A2A Energia S.p.A., A2A Trading S.r.l. (now A2A S.p.A.) and Linea Più S.p.A. (now A2A Energia S.p.A.), which was notified Resolution 342/2016/E/eel;
- A2A Energiefuture S.p.A., which was notified Resolution 459/2016/E/eel.

These proceedings have been concluded:

- in the filing for A2A Energia S.p.A. there are no conditions for the adoption of prescriptive measures or to initiate sanction proceedings;
- in adopting a prescriptive measure with respect to Linea Più S.p.A. (now A2A Energia S.p.A.), which involves returning approximately 3.9 million euro to Terna;
- in the filing for A2A Energiefuture S.p.A. following the subjection of the San Filippo del Mela plant to the essential regime with a commitment to contain costs, pursuant to Resolution 803/2016/R/eel.

In the context of Resolution no. 342/2016/E/eel, the Authority also initiated numerous sanction proceedings that concerned the A2A Group:

- A2A Trading S.r.l. (now A2A S.p.A.) for violation of article 14.6 of Resolution 111/06 ("diligent planning"). Although the Authority found that the conditions for adopting a prescriptive measure did not exist, by way of Resolution 122/2018/S/eel it imposed on the company a reduced pecuniary administrative sanction of 22,500 euro;
- Linea Più S.p.A. (now A2A Energia S.p.A.) for violation of article 14.6 of Resolution 111/06 with the imposition of a fine of approximately 1.5 million euro (Resolution 164/2018/S/eel).

Linea Più S.p.A. (now A2A Energia S.p.A.) has appealed to the courts against both the prescriptive measure and the sanction measure and to date, appeals against both the prescriptive measure and the sanction measure are pending before the Council of State (following the rejection of the relative appeals before the Lombardy Regional Administrative Court). In both cases, the company has already paid the amounts due to both Terna and ARERA.

Forward procurement of resources for voltage regulation in the Brindisi area

Resolution 675/2018/R/eel approved the Regulations and the Draft Contract proposed by Terna for the forward procurement, through competitive pay-as-bid auctions, of resources for voltage regulation in the Brindisi area. The supply of reactive energy is necessary not only to maintain the stability of voltage in the area, compromised by the presence of intermittent renewable sources, but also to reduce dispatching costs in the shortest possible time.

The following are the main characteristics of the auction:

- quota of 500 MVar/year and contract duration of 10 years;
- spending cap: 500 MVar*Reservation Price (RP in euro/MVar/year) or maximum price selectable, not known to participants, defined by Terna on the basis of the benefits expected from the forward contract and approved by the Authority;
- selection of offers with bids not exceeding the RP and priority to resources available from March 1, 2020, in ascending order of price, then to resources available from July 1, 2020 and finally from October 1, 2020 (three time windows for entry);
- envisaged up to 4 rounds of competition. The selection ends in round 1 if the target quantity is reached while respecting the RP and spending cap. Alternatively, we proceed with 3 more rounds.

The auction was held on February 20, 2019 and A2A Energiefuture S.p.A. was awarded 286 MVar of reactive energy at a weighted average price of 28,098 euro/MVar/year; the two contractual devices will enter into service on March 1, 2020 and July 1, 2020, respectively, with the willingness to carry out tests two months before they enter into service.

The contract must guarantee the supply of continuous and automatic voltage regulation, without active input, for a value no lower than the contracted power (net of scheduled maintenance and periods of accidental unavailability subject to deductibles). The remuneration is composed of a fixed part - to cover the investment/remuneration and equal to the product between the capacity committed and the price offered - and a variable part - to cover the costs related to the withdrawal of electricity necessary for the operation of the device - net of any penalties. The economic adjustment is made on a monthly basis.

Programmed and accidental unavailability up to a certain threshold is not subject to a penalty, while in case of accidental unavailability beyond the threshold there are penalties, which can reach, for each calendar year, up to 120% (maximum applicable ceiling) of the remuneration covered by the contract for each unavailable device. Finally, the guarantee requested by Terna is equal to 120% of the remuneration covered by the contract.

Incentives for production from renewable sources

Legislative Decree March 3, 2011, no. 28, in implementation of Directive 2009/28/EC, defined the incentive schemes for electricity production powered by renewable sources in order to achieve the European targets by 2020, then implemented with Ministerial Decrees July 6, 2012 and June 23, 2016 relating to plants from renewable sources other than photovoltaic.

These decrees establish incentive tariffs (feed-in premium) that are added to revenues deriving from the sale of energy on the market: for production units under specific power thresholds incentives are recognized through direct access or through registration to registers managed by the GSE, while for plants with higher power an auction procedure is envisaged.

As of January 1, 2016, plants from renewable sources that began operating before December 31, 2012 and that are part of the previous incentivizing scheme of Green Certificates (GC) are recognized an incentive paid by the Energy Services Manager (GSE) on net production for the entire remaining period of the right to GCs and that is added to the sales revenues on the market. Said incentive (I) is equal to:

- $I = k \times (180 - Re) \times 0.78;$
- k = technological coefficient of 1 for plants that entered into operation by December 31, 2007 and for subsequent ones, it assumes the values defined by Law no. 244/2007;
- Re = is the sale price of electricity on the market, recorded in the previous year and communicated by the Authority.

In 2019, the incentive (I) was 92.11 euro/MWh.

A similar instrument is granted to plants that benefited from the GCs issued on cogeneration combined with district heating for which the incentive (I) is set at 84.34 euro/MWh (calculated with respect to the average market price recorded in 2010).

As of January 1, 2016, incentives are paid quarterly by the GSE by the second quarter following the reference one and on the basis of the signing of an Agreement and upon registration and validation of the plants on the GSE portal.

At June 30, 2019, the incentives granted by the GSE to the A2A Group for incentive plants were estimated at around 36 million euro.

GSE incentive type millions of euro	
Feed-in tariff (hydro plants)	21.142
All-inclusive tariff (PV plants)	2.488
Energy account (PV plants)	12.302

On June 14, 2019, the EU Commission approved the new support scheme for electricity renewables under the EU State aid rules (Decree FER1), in particular for the production of photovoltaic, wind, hydroelectric and sewage gas. The MD, which will be issued by MiSE in agreement with the MATTM after the passage to the Court of Auditors, will provide the framework to encourage the achievement of national targets in the renewable energy sector by 2030.

GSE audits: photovoltaic systems of Helios 1 S.r.l.

The photovoltaic plants no. 532249 (Zollino 2) and no. 532101 (Torchiarolo) owned by Helios 1 S.r.l., a subsidiary of A2A Rinnovabili S.p.A., which became operational in 2011 and benefited from the second Energy Account, were the subject of an audit by the GSE, which began on November 2, 2016.

After various documentary additions and observations sent by the company, on January 14, 2019, the GSE concluded the verification procedure with a negative result, representing the failure to comply with standard IEC EN 61215 for some modules provided by Ecoware S.p.A. and ordering the recovery of all incentives granted.

On February 12, 2019, Helios 1 S.r.l. obtained from the GSE the opening of a review of the proceedings by virtue of the retrieval of further documentation and, in order to safeguard its rights, it nevertheless presented an extraordinary appeal to the President of the Republic against the negative conclusion of the proceedings.

To date, the company is not receiving incentives for the two plants pending the conclusion of the procedure but has not yet returned any amount from the past to the GSE.

In any case, we point out the presence of the rule contained in Law 96/2017, which provides, in the case of modules with irregular or missing certifications, a penalty for operators up to a maximum of 20% of the incentive tariff.

The overall economic impact for the two plants is, from the start of operation in 2011 until June 30, 2019, with the reduction of only 20%, equal to 1.25 million euro. Previous items will be requested from previous owners. The future impact of the Conto Energia agreement is estimated at 1.9 million euro.

Large hydroelectric derivation concessions

Upon conversion into law (Law no. 12/2019) with amendments to Legislative Decree no. 135 of December 14, 2018 (Simplification DL), the Legislator intervened in article 11-quater with an overall reorganization of the regulations concerning large-scale diversion hydroelectric concessions (> 3 MW).

In recent years, the failure to implement the primary rules aimed at allowing tenders for the award of expired concessions had led to the temporary continuation of management by the current owners.

Article 12 of Legislative Decree 79/1999, in its previous version, provided that the Regions should allocate concessions on the basis of criteria that should have been defined by a Ministerial Decree agreed between MiSE and MATTM, and adopted in agreement with the Unified State-Regions Conference, which was never issued, thus resulting in a de facto extension of the management of

concessions expired under paragraph 8 bis of said article 12, which provided for the exercise of the concession by the outgoing concession holder until reassignment, under unchanged conditions.

On September 26, 2013, as part of infringement procedure no. 2011/2026, the European Commission sent Italy a letter of formal notice, alleging that certain aspects of national legislation were not compatible with EU law. The Government had therefore proposed to the Commission an overall reorganization of the sector.

The new rules, introduced in the aforementioned art. 12 by Law no. 12/2019, provide that the Regions regulate with their own laws the methods, procedures and criteria for the allocation of concessions, which may be entrusted to economic operators identified through a tender, or to public/private joint ventures with selection of the private partner through a tender, or through forms of partnership under Legislative Decree 50/2016.

The procedure for awarding the contract must be started within 2 years of the entry into force of the Regional Laws mentioned above and, in any case, no later than March 31, 2022.

The duration of the new concessions will be between 20 and 40 years, with possible extension of the maximum period by a further 10 years depending on the complexity of the project proposal and the amount of investment.

The State fee to be paid to the Regions on a six-monthly basis will also be redefined by regional law (after consultation with ARERA), and is divided into a fixed component linked to the average nominal power of the concession and a variable calculated as a percentage of normalized revenues.

The Regions may also require concessionaires to supply 220 kWh per year free of charge for each kW of average rated power of concession.

For expired concessions, an additional fee will be paid and a free supply of energy will be possible within the terms indicated above.

Within 180 days from the entry into force of Law no. 12/2019, a MiSE Ministerial Decree must be issued, after consultation with the ARERA and the opinion of the Unified State-Regions Conference, which must establish the minimum amounts of both the fixed part of the State fee and the additional fee. After the expiry of this deadline, the Regions may set these amounts at not less than 30 euro/kW for the fixed component of the State fee, and 20 euro/kW for the additional fee.

With regard to compensation to outgoing operators, the new law, recalling RD 1775/1933, prescribes:

- for wet works, the transfer without compensation of ownership of the Regions, and in the case of investments - provided they are defined in the deed of concession or authorized by the granting body - an indemnity equal to the value of the part of the asset not depreciated;
- for dry works, the recognition of a residual value derived from accounting records or certified appraisal, net of depreciated assets. In the event of non-use by the incoming concessionaire, removal and disposal of movable property is envisaged at the expense of the proposer, while immovable property remains the property of the entitled parties.

In view of this new regulatory framework, on March 7, 2019, the European Commission sent a second complementary letter of formal notice¹ in which it complained about the fact that the Italian Government:

- proceeded with continuous extensions of expired concessions, failing to establish transparent and impartial selection procedures for the award;
- imposed on the incoming concessionaire, with particular reference to “dry” works
 - i. the obligation to pay compensation in excess of the unamortised value of the assets, in asymmetry of treatment with as provided for in the event of taking over by the Regions,
 - ii. the cost of removing and disposing of assets not intended to be used in the concession project.

On May 10, with reference to the criticisms raised by the European Commission, the Italian Government sent a specific letter of reply.

¹ Again on March 7, the Commission also issued formal notice to Austria, France, Germany, Poland, Portugal, the United Kingdom and Sweden to “ensure that public contracts in the hydroelectric energy sector are awarded and renewed in accordance with EU law”.

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The concessions for large-scale diversion of water held by A2A S.p.A. located in Valtellina (for a nominal capacity of the concession of approximately 200 MW) have for the most part expired⁽²⁾ and exercised in “temporary continuation” regime, also under the terms of Lombardy Regional Council Resolution no. X/7693 of January 12, 2018. The Lombardy Region has already requested the payment of an additional fee provisionally determined at the rate of 20 euro/kW, in addition to the non-application of the partial exemption from the state fee on the Premadio 1 and Grosio plants. A2A S.p.A. has not yet paid this fee and has continued to consider the benefit of the partial exemption to be in force, having challenged all the regional resolutions before the Superior Court of Public Waters⁽³⁾ on the basis of the cited paragraph 8bis of article 12 of Legislative Decree 79/1999, which provided for the continuation under unchanged conditions (more than 29 million euro claimed by the Region for the period January 1, 2011 - December 31, 2019⁽⁴⁾, however allocated to the financial statements).

Other A2A S.p.A. concessions (plants in Mese, Udine and Calabria with a total nominal concession capacity of about 345 MW) expire in 2029.

Transport and metering of natural gas for the fifth regulatory period (2020-2023)

By way of Resolution 114/2019/R/gas, the Authority approved the criteria for tariff regulation for the service of transport and metering of natural gas for the fifth regulatory period (RTTG 2020-2023). By way of Resolution 201/2019/R/gas, it also approved the recognised revenues of transport companies and determined the fees for 2020. In accordance with the provisions of the TAR Code (EU Regulation 460/2017 establishing a network code for harmonised tariff structures for the transport of gas), the Resolutions introduced some methodological innovations, which are summarised below.

With reference to recognised revenues:

- only costs relating to the purchase of peak capacity for hourly modulation, excluding costs relating to peak capacity, peak injection and space, shall be recognised to the largest transport company;
- the current method of recognising in kind costs relating to network losses, self-consumption and unrecognised gas (GNC) has been exceeded, providing that transmission companies (through Snam Rete Gas) are to procure the necessary quantities on the organised natural gas market; these items are valued on the basis of the weighted average price of forward products with delivery to the PSV in the tariff year in question. In addition, a specific mechanism is provided for the recognition of costs for the procurement of Emission Trading System (ETS) securities, granting transport companies a quantity of ETS securities determined according to standard logic and neutralizing the related price risk.

With reference to the structure of the transport tariff:

- the division of the tariff structure and the fees that make it up between capacitive components (applied at the points of entry and exit from the network) and components linked to the volumes transported is confirmed. In relation to the capacitive components, the allocation of the costs entry-exit 40(entry)-60(exit) of costs relating to the national network is confirmed, while, unlike the previous tariff period, the costs of the regional network are attributed 100% to the exit component. The overall ratio is 28(entry)-72(exit). The capacitive components applied at the exit points (CPu) thus cover the capital costs (as well as those relating to the hourly balancing of the network) of both the national and regional transport networks (the volumetric CR_v fee is therefore eliminated);
- for the purpose of calculating the unit fees of the tariff, the Authority adopted the CWD - Capacity-Weighted Distance method, exceeding the current matrix method. In the new scenario, the Authority applied a 50% discount to the entry/exit fee to storage facilities resulting from the application of the CWD method. Finally, it should be noted that, in application of the new calculation method, it has (i) reduced the entry/exit points from storage from 3 to 1, (ii) reduced the exit areas from 6 to 1 and (iii) merged the entry points from domestic production into 10 hubs;
- a bundled tariff (single fee that includes exit and redelivery) is defined as from October 2020, in parallel with the application of the single contributions at the exit point. For the thermal year

² The concessions of Grosotto, Lovero and Stazzona expired 31/12/2010 while the one of Premadio 1 at 28/07/2013 (Premadio 2 has validity until 31/12/2043). The Grosio concession expired on 15/11/2016.

³ For further information, reference should be made to the section entitled “Update of the main legal and tax disputes still pending”.

⁴ With regard to 2019, the provision includes the amount calculated for the entire year.

2019-2020, capacity transfers shall continue to be made at both exit and redelivery points and for the transitional period from January 1 - September 30, 2020, the pro-forma fees shall be applied (applied to transfers to exit points of interconnections between the national and regional networks) and (applied to regional network transfers). In relation to the latter, two distinct fees are determined >15 km and <15 km depending on the distance of the redelivery points from the national network;

- the variable fee called CV_v is used to cover operating costs, GNC, self-consumption, losses and ETS costs and is applied to the quantity of gas withdrawn from a network exit point (including exit points to storage facilities and points of interconnection with foreign countries) and no longer to the volumes injected into the national network;
- a new volumetric fee, called CV_{FC} , is introduced for the purpose of recovering sums relating to revenue adjustment factors, applied to redelivery points and exit points to storages. This amount is zero in 2020.

With reference to the metering tariff: a tariff structure is adopted which, in exchange for the possibility for end customers directly connected to the transport network to transfer ownership and management of the metering plant to the transport company, provides for the introduction of a specific CM^{CF} tariff component, applied only to the redelivery points for which the metering plant has been transferred.

With reference to the tariff components covering the general costs of the gas system: some new features have been introduced, including the elimination of the tariff component ϕ and the creation of the new "Transport expense account" to replace the current "Transport equalisation imbalance account". The CRV^{FG} component is applied to the redelivery points that supply the distribution networks and to those that supply end customers directly connected to the regional networks (it is no longer applied to the volumes of gas fed into the national network).

In terms of process, by May 31 of each year, the Authority determines and publishes the transport and metering tariffs valid for the following year.

In summary, the expected impacts of the tariff forecasts for the fifth regulatory period:

- general increase in fees compared to 2019. Entry costs were the most penalised: there was a partial reabsorption of the tariff differences between North and South. The costs of entry from the terminals are also clearly increasing. The increase is due to both the new method adopted and the increase in recognised revenues;
- for the thermoelectric plants of the A2A Group: it is estimated - on a like-for-like basis for capacity booking of approximately 6,000 MW - that fixed costs will fall by approximately 7.6 million euro by 2021 and that variable costs will rise by 10 million euro by 2020 (with a potential increase in the wholesale price of the electricity market).

Settlement gas: new regulation from January 1, 2020

Over the years, ARERA has carried out numerous interventions aimed at ensuring the efficient provision of natural gas balancing services, in particular with regard to the determination of physical and economic items for each user (carriers, users of balancing, users of distribution or sellers and end customers).

The bill provides for two settlement sessions: a balancing session (at a monthly level) and an adjustment session (subsequent to and in conjunction with the consolidation of metering data).

By way of Resolutions 72/2018/R/gas and 148/2019/R/gas, ARERA approved the new regulation on settlement gas as from January 1, 2020 and which:

- confirms the structure based on monthly balancing sessions with subsequent adjustment sessions (one for the annual adjustment and one for the multi-annual adjustment);
- introduces a simplification of procedures for the determination of economic items and balancing;
- introduces the adjustment of the deviation fees and the variable fees on the basis of the daily allocation as a result of the adjustment session;
- introduces the thermicity factor (Wkr parameter) for the correction of the sampling profiles based on the climatic trend, determined and published by the RdB;
- simplifies procedures for the determination of physical items;

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- assigns Snam Rete Gas S.p.A. the task of supplying the difference between the quantities withdrawn from the city gates and the sum of expected consumption;
- transfers to the Integrated Information Service managed by Acquirente Unico S.p.A. the activities of profiling, aggregation of measures, calculation of the annual withdrawal and allocation of withdrawal profiles.

In addition, Resolution 147/2019/R/gas provided for the reform of the conferments at the redelivery points (PdR) underlying the city gates, which, in short, starting from October 2020, consists of:

- the ex officio determination of the transport capacity of the PdR underlying the city gates;
- the allocation of capacity by the transport company to each BU for the supply of the PdR served by it (on the basis of the correspondence reports and related monthly updates);
- overcoming the variance penalties for the PdR underlying the city gates.

Closing of the dispute concerning Resolution ARG/gas 89/10 and settlement of amounts

By means of Resolution ARG/gas 89/10, in the presence of a cyclical phase characterized by a reduction in gas consumption, by an excess of supply and a widespread downward renegotiation of take-or-pay contracts, the Authority had decided to immediately transfer to customers the potential benefits determined by this situation introducing, for thermal year 2010-2011, a reduction coefficient k of 0.925 applied to the indexed component of the QE (variable fee of the final tariff to cover gas procurement costs). This revision was confirmed by the subsequent Resolution ARG/gas 77/11, which provided for an extension until September 30, 2012 of said mechanism, revising slightly upward the value of the coefficient k (from 0.925 to 0.935).

The sales companies of the A2A Group had appealed against both resolutions, contesting the arbitrariness of the value of the k . Following a lengthy dispute, the Council of State, by Sentence no. 4825 of November 18, 2016, confirmed the claimants' reasons.

By means of Resolution 737/2017/R/gas, the Authority redetermined the coefficient k , setting it at 0.952 for both thermal years 2010-2012, while by means of Resolution 32/2019/R/gas, it introduced a mechanism for recognising the amounts due to sellers by establishing a component on the distribution tariff and gas metering paid by customers with consumption up to 200,000 Smc/year (sub-component of UG_2 called UG_{2k}). The collection of revenue will take place over a period of 3 years starting on April 1, 2019.

On May 31, A2A Energia S.p.A., LumEnergia S.p.A., ACEL Energie S.p.A. and Enerxenia S.p.A. applied to the CSEA for access for a total of 21.7 million euro, which will be settled in three sessions between April 1, 2020 and December 31, 2021.

On March 21, 2019, the Confederazione generale dell'artigianato e delle imprese (Confartigianato) lodged an appeal against Resolution 32/2019/R/gas with a request for suspension, which was not accepted by the Lombardy Regional Administrative Court, which set November as the date for the hearing on the merits.

Application for restitution of part of the administrative sanction imposed on Plurigas S.p.A.

With Resolution no. 229/06, the Authority imposed an administrative sanction on Plurigas S.p.A. (currently in liquidation) of 1.5 million euro for non-compliance with certain requests for information. The company had started a dispute on the methods of quantifying the fine, which in the meantime had been paid for a total amount of 1,522,083.33 euro (including interest).

With Sentence no. 1084/2012 of February 27, 2012, the Council of State, at the end of the ongoing dispute, annulled the aforementioned Resolution no. 229/06 in the part relating to the quantification of the amount of the sanction, requiring the Authority to recalculate it taking into account the effective economic capacity of Plurigas S.p.A.. On December 15, 2016, by way of Resolution 755/2016/S/gas, the Authority, in compliance with the sentence of the Council of State, recalculated the amount of the sanction in the amount of 980 thousand euro.

On February 21, 2017 Plurigas S.p.A. submitted an appropriate request for reimbursement to the Revenue Office in response to the compliance measure. It was only in May 2019, in response to the company’s continuous reminders, that the Revenue Agency forwarded the request for reimbursement to the MiSE, currently the competent body in this regard. The Authority then gave the MiSE the go-ahead and revised the amount to be repaid to the extent of 520,000 euro in order to take account of the statutory interest due on account of the late payment of the penalty.

To date, the file is being signed by the Minister for Economic Development for payment by the Ministry of Economy and Finance, where the funds are held.

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2017 Competition Law and termination of price protections for electricity and gas

The Annual Law for the Market and Competition (Law August 4, 2017, no. 124, or 2017 Competition Law) contains provisions aimed at removing regulatory barriers to the opening of markets, promoting the development of competition and guaranteeing the protection of consumers. Article 1, from paragraphs 59 to 85, introduces relevant provisions concerning the energy market, providing for:

- the end of the electricity and gas price protection regimes as of July 1, 2019 (deadline subsequently extended to July 1, 2020 under Law 108/2018);
- provisions regarding mandatory contractual conditions and comparability of offers;
- promotion of buying groups;
- establishment of a list of subjects authorized to sell electricity;
- redefinition of the mechanisms to support citizens on fuel poverty;
- provisions aimed at combating the phenomenon of so-called maxi-bills;
- access by utilities to databases containing information on the credit and the identity of customers.

The Authority has fulfilled the following obligations required by the 2017 Competition Law:

- with Resolution 555/2017/R/com, it regulated a specific type of offer on the free market under similar conditions of protection (PLACET offers) and identified the minimum contractual conditions for all free market contracts for electricity and natural gas;
- by means of Resolution 746/2017/R/com, it imposed information obligations on suppliers regarding gas protection and operators of greater electricity protection to inform customers of the overcoming of price protections;
- by means of Resolution 762/2017/I/eel, it proposed to the MiSE the criteria, methods, technical, financial and honorability requirements for registration and the permanence in the Electricity Sales List;
- by means of Resolution 51/2018/R/com, it defined the operating requirements of the Offers Portal for the collection and publication of commercial offers managed by Acquirente Unico S.p.A.;
- submitted to the MiSE the 117/2018/I/com Report on the monitoring of retail markets for electricity and gas necessary for the purpose of verifying the achievement of the objectives set by the 2017 Competition Law;
- by means of Resolution 59/2019/R/com, it approved the voluntary guidelines for the promotion of electricity and natural gas offers in favour of purchasing groups aimed at domestic end customers and small businesses.

The requirements for the MiSE are still pending:

- approval of the Electricity Sales List;
- social bonus reform;
- MD on the modalities of implementation of the end of price protection schemes according to mechanisms that ensure competition and plurality of suppliers and offers in the free market.

Finally, by means of Resolution 270/2019/R/com, ARERA entrusted Acquirente Unico S.p.A., once it had obtained the favourable opinion of the Guarantor for the protection of personal data as indicated by the 2018 Budget Law, with the creation of the Consumption Portal, which increases consumer awareness by making historical, electrical and gas consumption data available in a clear and usable manner. In this first phase, the customer will immediately be able to view past consumption data, readings and self-readings of the last 12 months. The granularity of the available data will depend on the type of meter installed and the frequency of making available the readings to the Integrated Information System.

Additional mechanisms to cover efficient costs on the electricity protected market

With reference to the additional cost compensation mechanisms for greater electricity protection, the following is noted:

- in April, A2A Energia S.p.A. submitted a request for access to the mechanism to compensate for arrears of end customers of the TIV, aimed at recognizing any charges related to arrears exceeding the unpaid ratio already considered for the purpose of updating the RCV component (COMP 2018), for an amount equal to 8.2 million euro. Acel Energie S.p.A. submitted a request for an amount of approximately 100,000 euro;
- in March, A2A Energia S.p.A. submitted a request for access to the mechanism regarding the exit of customers from the greater protection service, aimed at recognising the additional fixed cost connected to a customer exit rate towards the free market greater than that implicitly recognised in the definition of the RCV component (PUC 2018), for an amount equal to 0.5 million euro.

Initiation of sanctioning and prescriptive proceedings for the invoicing of consumption

By means of Determination DSAI/65/2018/com, the Authority initiated sanctioning and prescriptive proceedings against A2A Energia S.p.A. aimed at ascertaining violations in relation to the invoicing of energy consumption, in relation to the alleged application of specific fees to end customers for the receipt of invoices in paper format.

On December 14, 2018, the company promptly submitted a proposal for commitments, pursuant to article 45 of Legislative Decree 93/11 and article 16 of Annex A to Resolution 243/2012/E/com, still under evaluation.

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Attributions to ARERA of regulation and control powers in the waste sector

In 2018, with reference to the cycle of waste, including differentiated, urban and similar waste, the Authority adopted various initiations of proceedings in order to perform the regulatory and control functions assigned to it by the 2018 Budget Law and to collect information on the sector.

The resolutions provide for the convening of technical meetings with stakeholders, as well as the publication of recognition documents and, given the complex governance of the sector, they have been sent to the MATTM, the MEF, the Presidency of the Council of Ministers, the Regions and the ANCI.

Initiation of proceedings by the Authority

Handling of complaints and disputes with users

Resolution 82/2018/R/rif initiated the proceedings for the identification of the first activities relating to the definition of a system of safeguards for the handling of complaints and disputes of end users, aimed at extending to the waste sector the system of safeguards already in place for the regulated energy and water sectors (TICO - Resolution 209/2016), which provides for a special Conciliation Service with the use of the Single Buyer (Consumer Desk). The proceedings are expected to be closed by December 31, 2019.

Tariff regulation

By means of Resolution 225/2018/R/rif, the proceedings were initiated for the adoption of tariff regulation measures with regard to the integrated waste cycle, with particular reference to:

- a) definition of the tariff method for determining the fees for the integrated waste service and the individual services that constitute management activities (even in the case of TARI);
- b) establishment of the criteria for the definition of tariffs for access to treatment plants;
- c) procedures for approving tariffs set by the relevant governing body or competent authority for the integrated service and by treatment plant operators;
- d) verification of the correct drafting of the ambit plans.

In a press release dated May 10, 2018, ARERA in any case established that, in order to guarantee a clear and certain framework of rules for the sector, until the adoption of the tariff measures, the criteria and operating procedures laid down by the regulations in force prior to Law no. 205/17 regarding the definition and approval of the tariffs to be applied continue to apply on a temporary basis until such time as they are adopted.

Quality regulation

By means of Resolution 226/2018/R/rif, the proceedings were initiated for the adoption of measures to regulate the quality of service in the integrated waste cycle, focused on the:

- a) definition of the levels of quality of services, after consultation with the Regions, managers, consumer associations and
- b) dissemination of knowledge and transparency of the conditions under which services are provided for the benefit of users.

Registry and monitoring

By means of Resolution 715/2018, the proceedings were initiated with regard to the creation of a specific sector registry and the definition of forms to be used for monitoring the tariffs of the integrated service for the management of urban and similar waste for the years 2018-2019. A specific consultation and publication of the final measure is expected by 2019.

Request for information about the service of treatment of urban and assimilated waste

Resolution no. 714/2018 provides for a request for information to be sent to the parties involved in the disposal of municipal and assimilated waste (TMB plants, incineration plants and landfills - at a later date, a request is also expected to be sent to plants treating differentiated fractions) by means of special forms subsequently adopted with Determination no. 1/2019.

The survey is aimed at acquiring the functional elements both for the definition of the regulation of access conditions and for the performance of the control functions of the Authority, with particular reference to the prices charged by operators to users.

DCO 713/2018/R/rif on “Criteria for determining the fees for the integrated management service for urban and similar waste and for the individual services constituting management activities”

The DCO 713/2018 presents the first guidelines of the Authority for the tariff regulation of the single services that characterize the integrated waste management service (the phase of collection and transport, and that of disposal and treatment).

In 2019, additional, more detailed DCO will be published, which will outline the mechanisms for approving and articulating user charges and the criteria for defining the conditions of access to recovery and disposal facilities.

ARERA envisages the start of regulation from 2020 (on the basis of actual costs in 2018) consisting of a first half period (2020-21) in which the new mechanisms for defining and verifying tariffs will be introduced, as well as the first criteria for accounting unbundling of the activities managed, and a second half period (2022-23) focused on cost and service efficiency, as well as possible measures to encourage the aggregation of collection and transport operators.

For the two-year “transitional” period (2018-2019) a monitoring activity is foreseen in which the Authority could carry out assessments on the correct application of the principle of cost efficiency.

End of Waste status

Following Council of State Sentence no. 1229/2018 (February 2018) - according to which article 184-ter of Legislative Decree 152/2006 would not allow local administrations to authorise the end of waste status (EoW) on a case-by-case basis, in an innovative way and, therefore, not referring, for this purpose, to criteria established at State or European level, a regulatory deadlock has been created and significant uncertainty has arisen for investments in the waste recovery sector.

In fact, according to the CoS, the conditions for authorising the recovery process must be defined exclusively at Community or State level, but the MATTM has not adopted the appropriate measures to overcome the aforementioned stalemate, despite the new Directive 851/2018 of the EU Package on the Circular Economy (which will be transposed by July 2020) re-established the “case-by-case”.

To overcome this impasse, as part of the conversion of the “Unblock Site” Decree, an amendment was approved that revises paragraph 3 of article 184-ter of Legislative Decree 152/2006. The scope of this provision - although it would have liked to guarantee the uniform application of the EoW criteria on the national territory - is nevertheless limited: in fact, it takes as a reference the types of waste, recovery operations and products obtained regulated by Ministerial Decrees of February 5, 1998, June 12, 2002, no. 161, and November 17, 2005, no. 269, without intercepting the aspects of technological innovation that characterised the new recovery processes activated in the period between the publication of the aforementioned Decrees and today. It should be noted that, with this amendment, the possibilities not provided for by the simplified regulations (Ministerial Decree of February 5, 1998) cannot be authorised. Moreover, with the new provision, the reference that allowed the competent authorities to use the mechanism on a “case-by-case” basis on the occasion of new authorisations is removed (art. 9-bis of Decree Law 172/2008).

The regulation introduced refers to the MATTM for the issue of the Ministerial Decree containing the guidelines on the basis of which, within the next 12 months, the holders of new authorisations issued in accordance with the aforementioned Ministerial Decree must submit a request for updating to the competent authority.

The new legislation does not seem to resolve the situation created by the CoS Sentence, with regard to a significant part of the sectors potentially subject to recovery processes and in particular the biomethane sector, for which references for the identification of criteria for the end of waste status are not published at the moment.

In the meantime, with Decree no. 6785 of May 15, 2019, the Lombardy Region has provided that the competent authorities may authorise the production of biomethane, including from waste treatment plants, using the criteria set out in the Ministerial Decree of March 2, 2018 (see previous paragraph). In June, the same measure was adopted by the Lazio Region. The compliance of these decrees with art. 184-ter of Legislative Decree 152/2006 is, however, controversial.

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Tenders for the assignment of waste treatment and disposal services - AGCM preliminary investigation for Linea Ambiente S.r.l., LGH S.p.A. and A2A S.p.A. (with A2A Ambiente S.p.A.'s involvement in the inspection activities) by hypothesis of agreement

On December 12, 2018, AGCM initiated proceedings against Linea Ambiente S.r.l., LGH S.p.A., A2A S.p.A., CORE S.p.A., Herambiente S.p.A., Hera S.p.A., Rea Dalmine S.p.A. and Sogliano Ambiente S.p.A. to ascertain an alleged agreement restricting competition, in violation of article 101 TFEU.

AGCM has taken action following a report by AMA (a company wholly owned by the Municipality of Rome and operating in the environmental services sector) regarding the outcome of two tender procedures (nos. 17 and 40/2018) launched by the same company for the treatment of undifferentiated waste (RUR) and the recovery or disposal of waste, FOS (Stabilized Organic Fraction) and CDR produced by TMB owned by AMA, as well as the transport of these materials to the treatment plants.

The measure assumes that the companies under investigation have carried out a coordination activity aimed at refraining from participating in the aforementioned tender procedures, with the consequent awarding of the same services following private negotiations at more onerous conditions. Finally, AMA has contracted some of the services with an RTI (already a provider of treatment and disposal services to the company following a call for tenders in 2016), which also includes Herambiente S.p.A. and Linea Ambiente S.p.A..

The AGCM points out that it cannot be ruled out that *"the success of any consultation (...) required the involvement of two of the main Italian groups active in the sector (A2A and Hera), which could have submitted bids in the tenders launched by AMA and managed the related services"*.

The Authority therefore decided to carry out inspections of the companies involved in the proceedings on December 18, 2018. The premises of LGH S.p.A. were not subject to verification, while A2A Ambiente S.p.A. was also involved in the inspection activities. At the moment, A2A Ambiente S.p.A. is not a party to the proceedings, since the Authority considered that it could be in possession of documents relevant to the correct reconstruction of the facts under investigation.

The proceedings are expected to be completed by the end of 2019.

Regulation EEC/EU December 19, 2018, no. 2026 EU – Regulation 2018/2026 of the Commission, of December 19, 2018, amending Annex IV of EC Regulation no. 1221/2009 of the European Parliament and of the Council on the voluntary participation of organisations in a community eco-management and audit system (EMAS)

The Regulation updates Annex IV on the Environmental Communication, i.e. on the contents of the Environmental Statement that registered organisations must draw up. The standard provides for a transitional period to allow organisations to adapt to new developments: if the validation of the environmental statement or the updated environmental statement must be carried out between January 9, 2019 and January 9, 2020, on that occasion the statement may, in agreement with the environmental verifier, be validated without taking into account the changes made to Annex IV of the EMAS Regulation.

Law no. 12 of February 11, 2019 – Conversion into law, with amendments, of Decree Law no. 135 of December 14, 2018, containing urgent provisions on support and simplification for companies and public administration

With this decree, as of February 13, 2019, the national electronic register for the traceability of waste is established, managed directly by the Ministry of the Environment and the Protection of the Land and Sea, in which the bodies and companies that carry out waste management activities are required to register. The Minister of the Environment and the Protection of the Land and Sea, with own decree, must define the methods of organisation and operation of the national electronic register, the methods of registration of obligated entities and those that wish to join voluntarily.

Decision EEC/CEEA/CECA June 7, 2019, no. 1004 - Commission Implementing Decision EU 2019/1004 of June 7, 2019 establishing the rules for calculation, verification and reporting of data on waste pursuant to Directive 2008/98/EC of the European Parliament and of the Council and repealing Commission Implementing Decision C(2012) 2384

The European Commission has defined the rules for calculating, verifying and reporting data on the achievement of the targets for preparing for re-use and recycling of municipal waste set out in Directive 2018/851/EU. The framework normally provides for waste to be counted at the time of its input into the recycling operation. However, Member States may decide to measure outgoing waste after any sorting operation, provided that the waste from operations prior to recycling is nevertheless deducted from the total count and the outgoing waste from sorting is actually recycled. Specific rules are laid down for sorted municipal organic waste and separated recycled metals after incineration of municipal waste.

Regional Council Resolution Lombardy June 17, 2019, no. XI/1777 - Revision of Regional Council Resolution July 1, 2014, no. X/2031 as regards sludge eligible for use in agriculture

With this deed, Regional Council Resolution is revised. X/2031 of 2014 with regard to sludge that can be withdrawn for use in agriculture and, in particular, the types of waste that can be used in agriculture are reduced. From June 21, 2020, the following EWC codes may no longer be withdrawn: 04.02.20; 07.01.12; 07.03.12; 07.06.12; 07.07.12; 10.01.21; 19.11.06. Also from that date, the competent authorities will have the task of adapting the individual authorisation measures to the provisions approved by this deed at the earliest opportunity (renewal, review valid for renewal, review, substantial modification, substantial variant).

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2018 final and 2019 provisional reference tariffs for the distribution and metering of natural gas

Resolution 98/2019/R/gas approved the 2018 final reference tariffs for the distribution and metering of natural gas (based on 2017 final Capex, net of divestments and grants related to the same year), while by means of Resolution 128/2019/R/gas, the provisional ones for 2019 were approved (based, among other things, on the 2018 pre-final Capex).

In the 2018 and 2019 tariffs, the DCVER component was zeroed to cover the operating costs related to metrological verifications, as these costs will be recognised on the basis of a methodology - currently being defined - that will consider the costs actually incurred by the operators. Similarly, as established by Resolution 904/2017/R/gas, for both the 2018 and 2019 tariffs, the operating and capital costs relating to the remote management/remote reading of electronic meters will continue to be recognised until 2020.

The 2019 tariffs are defined with a WACC of 6.3% for distribution activities and 6.8% for metering (Resolution 639/2018/R/com updating WACC as of 2019).

RAB GAS value underlying 2019 provisional tariffs <i>millions of euro</i>	Unareti	ASVT	LD Reti	ACSM-AGAM Group ^(*)	Total
Cap. Centralized	49	1	11	13	73
RAB Gas Distribution	810	11	161	181	1,164
RAB Gas Metering	136	1	23	24	183
Total	995	13	195	217	1,420

(*) includes the companies ACSM-AGAM Reti Gas-Acqua S.p.A., Lario Reti Gas S.r.l., Serenissima Gas S.p.A., Aspem S.p.A. and Reti Valtellina Valchiavenna S.r.l..

Lastly, Resolutions 859/2017/R/gas and 711/2018/R/eel established the mandatory tariffs to be applied to final customers for gas distribution and metering services for 2018 and 2019, respectively.

New measures pertaining to tariffs and quality relating to the natural gas distribution and metering service, for the 5th regulatory period (2020-2026)

DCO 170/2019/R/gas contains the main lines of action for defining the criteria for tariff regulation and the quality of gas distribution and metering services in the fifth regulatory period. The following are the main additions:

- recognised operating costs: likely increase X-Factor (especially for metering). The Authority also proposes the progressive elimination of the current differentiation in size of the unit components to cover operating costs, while maintaining the density of the area served;
- capital costs: investment incentive mechanism based on a comparison of actual investment with the corresponding standard cost. Against this comparison, and without prejudice to the recognition of the actual investment (if it falls within predefined thresholds of variation with respect to the standard cost) an extra remuneration could be obtained. Synergically with this mechanism, it is also proposed to introduce a pre-defined capitalisation rate valid for tariff purposes. It is also proposed to gradually release, during the fifth regulatory period, the amount of contributions existing at December 31, 2011 that are not currently considered for calculating tariffs. Finally, the Authority will assess the possible unification of the Beta parameter of the WACC between distribution and metering;
- security and continuity: a streamlining of the procedures for the definition of bonuses/penalties is necessary and to this end, among other things, a revision of the current regulatory mechanisms is envisaged (introducing the indicator pursuant to UNI TS 11297). It is proposed to introduce pressure

monitoring in BP networks (possibly through innovative functions of smart gas meters), with an impact on the level of bonuses/penalties, as well as an indicator of the weighted average residual life of AP/MP/BP pipelines and, in the future, regulatory mechanisms to incentivise correct asset management policies;

- support for innovation and environmental protection: the Authority intends to introduce mechanisms to support innovative investments and environmental protection (e.g. relating to Bi-Remi Cabins for biomethane injection, reduction of leakage through the use of less leaking materials, synergistic use of gas network/electrical sector (P2G), etc..) through the introduction of “regulatory sandbox”.

The regulator considers it possible to start the new regulatory period from 2021 by extending the current regulation for the whole of 2020. Subsequent DCO reports are expected (including the specific one concerning the quality of service expected in July).

Criteria for tariff regulation for the natural gas transport and metering service for the fifth regulatory period (2020-2023) and reference tariffs for the natural gas transport and metering service for 2020

By way of Resolution 114/2019/R/gas, the Authority approved the rules applicable to the definition of natural gas transport tariffs for the period 2020-2023 (5th regulatory period - RTTG). The main additions introduced are summarised below:

- definition of eligible revenues: the method adopted is similar to the current one and provides for the calculation of eligible revenues as the sum of the (i) return on net invested capital (WACC: 5.7%, as updated by Resolution 639/2018/R/com), (ii) depreciation rate (useful life substantially unchanged) and (iii) operating costs (calculated on actual costs ex unbundling 2017). The provisions of Annex A to Resolution 468/2018/R/gas shall remain valid for admission to the tariff recognition of investments relating to specific interventions on the transport network. Incentive mechanisms for infrastructure development are also provided for (initially input-based and then moving to an output-based logic during the regulatory period);
- recognition of costs relating to network losses, self-consumption and gas not accounted for: the current method of recognition in kind of these items is exceeded, moving to monetary recognition based on the weighted average price of forward products with delivery to the PSV in the reference tariff year;
- equalisation mechanisms: introduction of (i) a monthly flow from transport companies other than Snam Rete Gas S.p.A. to the latter for the equalisation of revenues relating to the national network, aimed at transferring the share of revenues pertaining to the national network from transport companies that collect the revenues deriving from the application of the CPu fee to companies that carry out transport activities on the national network and (ii) an annual flow from/to the companies to/from the CSEA for the equalisation of revenues relating to the regional network.

The new RTTG has introduced a series of additions regarding the calculation of the tariff (from the “matrix” method to the CWD - Capacity Weighted Distance method), the tariff structure (the CRr component disappears, since the total costs of the regional network are completely allocated to the CPu capacity component applied to the exit from the network, the CVfc volumetric component is introduced) and the application methods (application of the CPu to the exit points from the network, CV applied to the volumes withdrawn, etc.).

The new RTTG has also provided for a new way of managing the Corrective Factors (FC) of the eligible revenues, i.e. elements aimed at ensuring, annually and for each operator, equality between the eligible revenues and the revenues actually obtained from the application of the tariffs fixed by the Authority, including revenues from deviations:

- until the end of the fourth regulatory period: these amounts were paid in 4 annual instalments. The amount relating to a single year was then subtracted directly from the eligible revenue for that year;
- from the fifth regulatory period: elimination of instalments and management of these differences directly with the CSEA in the year following the reference year. Eligible revenues are not netted of this amount.

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This implies, therefore, (i) the need to close items still open in 2019 (i.e. the entire amount of FC for 2018 and the remaining instalments for the period 2014-2017) and (ii) the increase in total eligible revenues in 2020 compared to 2019. However, in view of this increase, it should be remembered that the management of FC is carried out on an annual basis directly with the CSEA. This will result in a cash outflow for Retragas S.p.A. in 2019 of approximately 3 million euro, pertaining to 2020.

Following the definition of the new regulatory framework, by means of Resolution 201/2019/R/gas, the Authority approved the revenues recognised and the tariff fees for the activity of natural gas transport and metering for 2020.

RAB gas transport value Retragas S.p.A. underlying 2020 provisional tariffs <i>millions of euro</i>	
RAB Gas Transport	43
RAB Gas Transport Metering	1
Total	44

Finally, the procedure for defining the regulatory framework for quality of service is still ongoing (see DCO 203/2019/R/gas).

Application for restitution of part of the administrative sanction imposed on AEM Gas S.p.A. for violation of the provisions on technical quality and safety of the natural gas distribution service following the 2006 Via Lomellina event

At the end of June 2019, Unareti S.p.A. submitted a request to MiSE for the repayment of part of the sanction of 1,493,000 euro, paid on July 25, 2008 by the company (formerly A2A Reti Gas S.p.A., formerly AEM Distribuzione Gas e Calore S.p.A.) to the Revenue Agency, pursuant to Resolution VIS no. 46/08 of the Authority, for violation of certain provisions concerning the technical quality and safety of the natural gas distribution service following the event in via Lomellina in Milan in 2006.

In fact, the sanction was subsequently subject to redetermination, in the amount of 734,000 euro, by order of the Authority no. 569/2013/S/gas, in compliance with Council of State Sentence no. 03007/2011, of the annulment of the previous resolution - in the part relating to the determination of the amount.

The amount to be returned, equal to the difference between the sanction imposed in 2008 and the sanction recalculated in 2013, amounts to 759,000 euro, in addition to the legal interest accrued from the date of payment of the sanction initially determined, until the date of return of the amount unduly paid.

Penalty procedure, closed with simplified procedure, for the detection and availability of natural gas metering data

In February 2017, the Authority carried out an inspection visit at Unareti S.p.A. to verify the consistency, with respect to the provisions of the regulation, of the methods for collecting, storing and providing gas metering data adopted by the company for the years 2014-2016. In particular, the verification concerned carrying out the minimum number of attempts to collect metering data, the respect of the maximum interval between two consecutive attempts, the provision of the data to sellers and the payment of automatic compensation. Subsequently, further requests for data integration were made, to which the company has always provided rapid and complete feedback.

As a result of the checks and analysis of the data, some limited cases of non-compliance with the regulatory provisions of the TIVG have emerged. Consequently, with Determination 13/2019 DSAI, the sanction was determined and, considering the nature of the procedure, Unareti S.p.A. was granted the possibility to make the payment of the same in the reduced amount of one-third, equal to 32,000 euro, renouncing to the further formalities and taking steps to remedy the disputed conduct. The payment of the sanction, made within the time limits set by the decision, has led to the extinction of the sanctioning procedure.

2018 final and 2019 provisional reference tariffs for the distribution and metering of electricity

By means of Resolution 76/2019/R/eel, the Authority approved the 2018 final tariffs of reference for electricity distribution and metering activities, while by way of Resolution 117/2019/R/eel, it approved the 2019 provisional tariffs. In particular, the 2018 final tariffs consider total investments up to 2017, including those relating to commercialization activities, 2017 disposals and 2017 contributions, while the 2019 provisional ones are calculated considering, among other things, the pre-final investments in 2018.

The tariffs for 2019 were determined using a WACC of 5.9% (as updated by Resolution 639/2018/R/com as of 2019) and based on the tariff regulation of Resolution 654/2015/R/eel (TIT 2016 - 2019).

RAB EE value underlying 2019 provisional tariffs millions of euro ^(*)	Unareti	LD Reti	Reti Valtellina Valchiavenna	Total
RAB EE Distribution	529	34	12	575
RAB EE Metering	61	3	2	66
Totale	590	37	14	641

(*) Company estimate.

With regard to operators up to 25,000 POD, Resolution 237/2018/R/eel defined the criteria for the recognition of operating and capital costs in the tariff. In particular, the tariffs for the distribution activity will be calculated using a parametric method whereby the recognized opex and capex will be fixed taking into account certain relevant quantities such as distributed energy and user density (opex) and, together with the previous ones, the age of the networks (capex), while those for the metering activity will take into account a conventional profile of installation of the LV electronic meters and their average cost). The transition to this method will take place gradually over the period 2018-2023. At the moment, decisions approving the tariffs are awaited.

The same Resolution provided that for distributors serving at least 25,000 PODs and up to 100,000 PODs, the individual regime applies, while Resolution 232/2019/R/eel approved the tariffs for 2018.

Lastly, it is noted that Resolutions 882/2017/R/eel and 907/2017/R/eel established the 2018 obligatory tariffs applicable, respectively, to non-domestic customers and domestic customers. Similarly, 2019 obligatory tariffs were defined by means of Resolutions 671/2018/R/eel and 673/2018/R/eel.

Procedure for infra-period updating of tariff regulation and quality of electricity transmission, distribution and metering services

By way of Resolution 126/2019/R/eel, the Authority initiated the procedure for the infra-period revision (2020-2023) of the tariff regulation and the quality of the distribution and metering of electricity. The main guidelines for this update can be summarised as follows:

- possible introduction of tariff logics based on the recognition of total expenditure (Totex) gradually, with application to larger distribution companies starting from the next regulatory period (2024) and after preliminary analysis and testing of regulatory solutions to be applied;
- the parameters subject to infra-period revision will be, in particular, the recognised operating costs and the productivity recovery rate (X-factor), especially with reference to the source costs deriving from the 2G metering service. Mechanisms for sharing net revenues from activities other than distribution will then be evaluated by defining a mechanism for allocation of revenues from such activities (e.g. use of distribution infrastructures by TELCOs);
- development of indicators capable of providing the weighted average residual life of the networks, which can then be used to define specific regulatory mechanisms;
- in order to adequately support innovation and environmental protection, the development of so-called regulatory sandboxes for deserving ideas, suggested by operators, to be tested in the field also by granting derogations - limited in time and space - to the regulation.

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Measures are planned in terms of technical quality of service (observability of power flows and status of resources spread over MV networks, voltage regulation of MV networks) and commercial, as well as in terms of tariff design (e.g. for E-Vehicle). It is also intended to introduce regulatory mechanisms aimed at encouraging aggregation between operators.

Finally, during the new tariff half-period, experimentation should begin with regard to the restoration of old risers, as well as the completion of the regulatory framework applicable to resilience, with the definition and start of the mechanism - already hypothesized - of incentives for the effective and timely restoration of supply in the event of severe and extensive weather events.

The procedure is expected to be completed by December 20, 2019 (with the exception of certain issues relating to the allocation of network costs between the various types of users and the revision, simplification and unification of the rules governing connections for passive and active end customers). Currently, publication of the DCO is awaited.

Resilience Plans for the electrical network

TIQE 2016-2023 also contains initiatives aimed at increasing the resilience of the electricity system: specifically, Title 10 was the subject of significant additions aimed at defining the scope of application of resilience obligations, the content and timing of implementation of the action plan and appropriate incentive mechanisms.

Determination 2/2017 DIEU approved the *"Guidelines for the presentation of work plans for increasing the resilience of the electrical system - part one"*. This document, which was also issued as a result of the findings of a specific technical panel (Terna, CEI, RSE, distributors with more than 50,000 PODs, including Unareti S.p.A.), illustrates the methodology for identifying priority interventions to address the issue of grid resistance, as well as the methodology (and parameters to be used) to estimate the costs and related benefits associated with these interventions.

The Authority subsequently implemented DCO 645/2017/R/eel regarding the resilience of the transmission and distribution networks and the MiSE also intervened on the matter with its own guidance document on prevention and management of adverse weather events that required electricity distribution service concessionaires to integrate their development plans with a special section that is very analytical and subject to monitoring, dedicated to interventions to increase the resilience and robustness of the network.

Following this, Resolution 31/2018/R/eel: i) introduces the obligation for all the main distribution companies⁵) to draw up, and periodically communicate to the Authority, resilience plans for at least three years and coordinated with Terna or with the reference and/or underlying distributor; ii) provides for a single reputational incentive mechanism consisting of the obligation to publish the resilience plan on the website by June 30 of each year.

In addition, Resolution 668/2018/R/eel defined a bonus/penalty type economic incentive for resilience enhancement interventions based on:

- a) specific criteria aimed at identifying which interventions can be considered eligible for the incentive mechanism,
- b) a method of calculating bonuses and penalties respectively at a percentage share of the net benefit of the individual intervention carried out within the established time frame and of the net present value of the actual costs based on the extent of the delay.

At the moment, the obligations to develop the resilience plans refer only to the aspect of the validity of distribution networks to mechanical stress (i.e. to specific critical risk factors such as floods, fall of out-of-band trees, ice sleeves and heat waves), while for that relating to the timeliness of the restoration of the supply, please refer to subsequent measures, which will probably be defined as part of the interim review of the regulation applicable to the activity of distribution and metering of electricity.

At the end of June 2019, Unareti S.p.A. sent out its 2019-2021 plan, prepared in accordance with the regulatory amendments described above.

⁵ The "main distribution companies" are those with: i) more than 300,000 users; ii) more than 100,000 users; iii) less than 100,000 users directly connected to the National Transmission Grid.

Standard network code for the electricity transport service and collection of the General System Charges (OGS)

Article 3, paragraph 11, of Legislative Decree no. 79/99 provides that the collection of the revenue necessary for the coverage of OGS is through an increase in the tariff fee for access to the network. The methods of collection are defined by articles 40 and following of the Integrated Text of the provisions for the delivery of electricity transmission and distribution services (TIT) and provide that the distributor pays to CSEA/GSE the OGS collected by the sellers at end customers (in both cases regardless of the actual payment).

The Lombardy Regional Administrative Court, in accepting appeals submitted by some sellers, declared Resolution 268/2015/R/eel (CADE - Standard network code for electricity transport) illegitimate in the part in which it provides that the guarantees that sellers are required to provide to the distributor must cover the OGS in addition to transport fees. This ruling clarified that end customers are the subjects of the electricity supply chain obliged, from a legal and economic point of view, to incur OGS, highlighting the absence of rules that provide the conferment to sellers of this obligation and not conferring to the Authority the power to integrate contracts between distributor and seller. The Sentence of the Council of State no. 5620/2017 of November 30, 2017 rejected the Authority's appeal confirming the annulment of Resolution 268/2015/R/eel and orientations outlined above.

The Authority appealed against the sentence and intervened transitionally with Resolution 109/2017/R/eel reducing the quantification of guarantees and at the same time initiating proceedings aimed at identifying mechanisms for recognizing adequate compensation to sellers and distributors for any non-collection of tariff components to cover OGS.

Pending a multi-party legislative reform of the rules (see also the "Parliamentary Resolution on urgent initiatives to collect general costs of the electricity system" approved on January 16, 2019 by the Chamber's Production Activities Committee), Resolution 50/2018/R/eel introduced a mechanism for offsetting OGS paid but not collected by distributors. The mechanism is aimed at distribution companies that have fulfilled their obligations to pay the OGS starting from credits accrued since January 1, 2016 in relation to transport contracts terminated for non-fulfilment for at least 6 months, and is financed by an account specifically set up with the CSEA, partly implemented by any amounts collected by distributors after recognition of the amount for previous years, and by the tariff revenue implemented by the components to cover the OGS.

Due to the outstanding amounts recorded in 2017 by some transport users, Unareti S.p.A. submitted a request to the CSEA, collecting in 2018, 14.5 million euro to cover the OGS paid but not collected from sellers. Following the settlement agreement subsequently entered into with Gala S.p.A., part of this compensation will, however, be returned to CSEA as part of the request that Unareti S.p.A. will submit in 2019.

At the hearing on November 7, 2018, the Lombardy Regional Administrative Court, rejecting the appeal filed by Codacons, upheld the validity of the mechanism introduced by Resolution 50/2018/R/eel.

The validity of Resolution 109/2017 was then reconfirmed also by the Lombardy Regional Administrative Court in February 2019 with Sentence no. 270/2019, which rejected Gala S.p.A.'s appeal. However, the same Lombardy Regional Administrative Court subsequently annulled it in July 2019 following the appeal filed by Repower Vendita Italia S.p.A., reiterating the same grounds as those of the 2017 sentences, and therefore the disputed transfer of the obligation falling on end customers to the sellers.

Energy efficiency certificates and tariff contribution recognized to distributors for fulfilment of the obligation

Energy Efficiency Certificates (TEE) or White Certificates (WC) are negotiable certificates issued by the GSE that certify the achievement of energy savings in final uses through the realization of energy efficiency interventions. The system was introduced by Ministerial Decrees July 20, 2004 as amended, and provides for electricity and natural gas distributors to reach annual quantitative targets for primary energy savings, expressed in tonnes of oil equivalent (TOE) saved. A TEE/WC is equivalent to 1 TOE.

Electricity and gas distributors can fulfil the obligation by directly realizing energy efficiency projects that entitle the issue of WC or by purchasing WC from other entities that generate them on the

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market (typically from Energy Service Companies – ESCO). The Authority defines the methods for determining and paying the tariff contribution to be paid to distributors and the revenue is collected through fees applied to electricity and gas bills.

The table shows the energy saving target level in Italy and for electricity and gas distributors for the years 2017-2020 defined by MiSE Ministerial Decree January 11, 2017.

		National Energy Saving Targets (Mtep/year)	Targets for distributors of electricity ⁽¹⁾ Millions of WC	Targets for distributors of gas ⁽¹⁾ Millions of WC	Minimum target ⁽²⁾ (%)	Period to compensate the residual obligatory portion ⁽²⁾ (no. years)
Ministerial Decree December 28, 2012	2013	4.60	3.03	2.48	50%	2
	2014	6.20	3.71	3.04	50%	2
	2015	6.60	4.26	3.49	60%	2
	2016	7.60	5.23	4.28	60%	2
Ministerial Decree January 11, 2017	2017	7.14	2.39	2.95	60%	1
	2018	8.32	2.49	3.08	60%	1
	2019	9.71	2.77	3.43	60%	1
	2020	11.19	3.17	3.92	60%	1

1 Obligated entities: electricity and gas distributors with more than 50,000 final customers.
2 Minimum target and compensation period: the obliged entity that achieves an obligation portion of less than 100% but still at least the minimum target set by the Ministerial Decree (50% or 60%) may offset the residual portion in the two-year period (n+2) or in the following year (n+1) without incurring penalties.

The Ministerial Decree of May 10, 2018 amended the Ministerial Decree of January 11, 2017, providing, from June 1, 2018, for the setting of a maximum value (cap) for the tariff contribution of 250 euro/WC. In addition, from May 15 to May 31, the GSE issues WC to the overrun to distributors that request it at a value equal to the difference between 260 euro/WC and the value of the tariff contribution for the year of obligation, up to a maximum delta of 15 euro.

The obliged parties can request the WC to the overrun until the minimum obligation is reached, provided they are already in possession of a WC amount of at least 30% of the minimum obligation on their ownership account. For the cancellation of these WC for the purpose of fulfilling the obligation, the tariff contribution will not be recognized. Distributors can then redeem all or part of the amount paid for the purchase of WC from the GSE for delivery of WC generated by projects or bought on the market. The redemption takes place from the first WC and is possible only if the obliged party holds a number of WC exceeding the minimum obligation for the current year of obligation. However, it is not possible to proceed with the redemption in the same year of obligation in which the WC were issued.

The tariff contribution for the current year will be paid for the WC cancelled as replacement of the GSE ones. The return of the sum paid to the GSE is made by an adjustment to the tariff contribution.

For each obligated party, the possibility of fulfilling on November 30 of each year up to 40% of the obligation of the current year and 75% of any remaining quotas of the previous obligatory years is confirmed. The Ministerial Decree of May 10, 2018 reintroduces the possibility of offsetting the residual compulsory portion in the following two compulsory years.

The other changes include the obligation for parties registered in the WC Register to notify the GME of the investments held in the share capital of other parties registered in the WC Register or in the WC market.

Furthermore, the following definitions have been modified:

- baseline consumption is the primary energy consumption of the technological system assumed as a reference point for the purpose of calculating the additional energy savings for which WC are recognized. The baseline consumption is equal to the value of the consumption before the realization of the energy efficiency project. In the case of new plants, buildings or sites for which there are no energy consumption values prior to the intervention, the baseline consumption is equal to the reference consumption;

- projects involving the use of renewable sources for non-electric uses are allowed only in relation to their capacity to increase energy efficiency and generate non-renewable energy savings.

With the new Ministerial Decree is the publication of the types of incentive intervention with the standardized mode and the related files containing the methods of calculation (including installation of LED for street lighting and conduct measures) applicable to interventions with starting date of realization subsequent to the date of entry into force of the Ministerial Decree.

Unareti S.p.A. is the third distributor in Italy obliged to achieve energy savings under the WC mechanism.

The energy efficiency obligations attributed to Unareti S.p.A. for the year 2018 (June 1, 2018 - May 31, 2019) amount to 294,019 TEE. At November 30, 2018, Unareti S.p.A. had already cancelled 78,300 TEEs (equal to about 26% of the 2018 obligation), collecting 13.7 million euro from CSEA (against an advance payment of 175 €/TEE, defined in Resolution 487/2018/R/EFR). As of May 31, 2019, the TEEs corresponding to the 2016 compensation (92,739 TEEs) were cancelled and the minimum obligation (60%) of 2018 was reached thanks to the purchase from the GSE of a quantity of TEEs (98,080) to the overrun. Consequently, by September 30, approximately 30 million euro should be paid to the company by CSEA as a tariff contribution.

The other obligated parties of the A2A Group (ACSM-AGAM Reti Gas Acqua S.p.A., Lario Reti Gas S.p.A. and LD Reti S.p.A.) have also correctly fulfilled their obligation, including the compensation for the year 2016.

The value of the tariff contribution for TEEs cancelled in 2018 was 248.89 euro/TEE, compared with a stable market price of around 259 euro/TEE. As a result of the cap on the tariff contribution at a level below the average level of trade on the market or through bilateral contracts, the regulatory mechanism does not allow the perfect coverage of costs; in view of the above scenario, for the obligation year 2018 there is, therefore, an average economic loss of about 10 euro/TEE for WC purchased on the market and 11.11 euro/TEE for WC withdrawn by the GSE (in relation to Unareti S.p.A., a negative result of about 3 million euro is therefore estimated for the fulfilment of the obligation 2018 including the compensation for 2016).

The Determination 1/2019 defined the quantities of WC to be cancelled for each distributor subject to the obligations for 2019.

Obligated Party	TEE 2019 Obligation
Unareti S.p.A. (Ele + Gas)	322,008
ACSM-AGAM Reti Gas Acqua S.p.A.	33,022
Lario Reti Gas S.p.A.	20,649
LD Reti S.p.A.	71,121
Total	446,800

On May 2, the Ministry of Economic Development published the Directorial Decree containing the Operational Guide provided for in article 15 of the Ministerial Decree of January 11, 2017, as amended by the Ministerial Decree of May 10, 2018. The Guide consists of three sections: a) clarifications for the presentation of projects; b) sector guides; c) list of ineligible operations. At the same time, the list of project types that access the mechanism has been updated.

On May 13, the MiSE also published the Operational Guide for the issuance of WC to the overrun in which it is expected that the request that the obliged party can make to the GSE from May 15 to 31 concerns the year of obligation in progress (compensation for past years of obligation is therefore excluded), after verification of the achievement of 30% of the minimum obligation (60%).

Finally, with Resolution 209/2019/R/EFR, ARERA intervened on the method of calculating the tariff contribution, valid from June 1, 2019. In particular, the calculation will include the quantities of TEE traded bilaterally, limited to those at a price below 250 euro/TEE. This change is necessary for the development of bilateral agreements, the level of which has frequently been above 250 euro/TEE, thus risking misaligning the magnitudes of the relationship between quantity (which under the current system also includes trades above 250 euro/TEE) and prices (which instead do not consider trades above 250 euro/TEE) within the calculation formula. As a result of this intervention and, therefore, of

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the reduction in the weight of bilateral contracts (below the cap threshold of 250 euro/TEE), a positive effect is estimated in the formula for calculating the tariff contribution of about 1 euro/TEE (at current market conditions, the tariff contribution should come close to the cap).

Activities of the Authority in the regulation and control of the Integrated Water Service (SII)

Tariff updates and Constraint to Operator Revenues (VRG)

As of January 1, 2017, A2A Ciclo Idrico S.p.A. has been proceeding with the billing of the previous tariff items relating to the 2007-2011 period approved by the EGA Council with Resolution July 5, 2016, no. 16 and equal to about 10 million euro/year for 5 years. At the same time, the company is applying the tariffs approved by the Authority with Resolution 807/2016/R/idr for the period 2016-2019.

Resolution 918/2017/R/idr defined the procedures to update the tariffs for the two-year period 2018-2019 using the cost parameters that can be deduced from the 2016 and 2017 financial statements. By means of the same Resolution, the parameters of the Water Risk Premium were updated (from 1.5% to 1.7%), as well as the inflation rates to update operating costs, gross fixed investment deflators, and rate t_c for the calculation of financial and fiscal charges. Therefore, the component covering financial and tax charges is 5.33%.

Resolution 86/2019/R/idr confirmed for both A2A Ciclo Idrico S.p.A. and ASVT S.p.A. the annual increases of 8.5% also for the period 2018-2019, already approved by Resolution 807/2016/R/idr. While for ACSM-AGAM Reti Gas Acqua S.p.A. (formerly Aspem), after the approval of the 2012-2019 tariffs by the EGA and the Assembly of Municipalities and by the Province, the approval process is expected to be completed by the end of 2019 also by ARERA (7.9 million euro was also recognised for previous items).

millions of euro	VRG 2017	VRG 2018	VRG 2019	RAB 2015 (*)	RAB 2016 (**)	RAB 2017 (***)
A2A Ciclo Idrico	79.4	91.4	99.7	220	257	265
ASVT	7.8	8.4	9.03	9.07	11.9	15
ACSM-AGAM Reti Gas Acqua (not including Como)	20.1	21	23.6	32.1	32.2	39

(*) underlying 2017 tariffs
(**) underlying 2018 tariffs
(***) underlying 2019 tariffs

Prime Ministerial Decree August 29, 2016 on “Measures for the containment of default in the integrated water service”

Prime Ministerial Decree of August 29, 2016, implementing articles 60 and 61 of the Environmental Connection, entrusts to the Authority the definition of forms of containment of default, access to the vital minimum quantity of water (equal to 50 litres/day per capita) to all resident home users at a facilitated tariff (amount to be guaranteed even in case of default) and the definition of customers that cannot be disconnected.

Following the issue of two DCO (603/2017/R/idr and 80/2018/R/idr), ARERA published the third DCO 158/2019/R/idr on the management of arrears, providing that:

- the operator follows a specific procedure, with well-defined timing, before suspending the service. If this is not respected, the user has the right to be compensated by the operator;
- for households (other than those that cannot be switched off), the suspension of the service is only possible after the limitation procedure;
- for condominium users, the operator may not proceed to limit/suspend the supply against partial payments equal to at least half of the amount and made within the deadline provided for in the notice of default.

2018 Budget Law: National plan for action in the water sector

Article 1, paragraph 516, of Law 205/2017 requires, for the purpose of planning and implementing the measures necessary to mitigate the damage related to the phenomenon of drought and to promote the strengthening and adaptation of water infrastructures, with a specific Prime Ministerial Decree adoption of the “National Plan of Action in the Water Sector”, divided into two sections: “aqueducts” section and “reservoirs” section, for the achievement of the following priority objectives:

- a) achievement of adequate levels of technical quality;
- b) recovery and expansion of the maintenance and transport of the water resource, also with reference to the storage capacity;
- c) dissemination of tools aimed at saving water in agricultural, industrial and civil uses.

The measures contained in the National Plan and reported by the EGAs are financed with public resources.

With Report 268/2018/R/idr, the Authority drew up a first list of necessary and urgent measures. The list shows the construction of the aqueduct, sewerage and treatment network, which is currently completely absent, in the municipality of Calvisano (BS) managed by A2A Ciclo Idrico S.p.A., to which a loan of approximately 22 million euro is allocated. Funding will only be disbursed following the relevant Prime Ministerial Decree. The total investment (21.8 million euro for the aqueduct alone, plus 23.5 million euro for sewerage/treatment) will be developed in the next regulatory period 2020-2023.

With the Report 252/2019/R/idr, ARERA has updated the list of interventions with the detail of the amounts to be applied to each of the two Chapters of expenditure 2019 and 2020. In particular, for the Municipality of Calvisano, two tranches are envisaged for 2019 and 2020 of 3.8 million euro.

Activities of the Authority in the regulation and control of the district heating/cooling sector (or district heat)

Legislative Decree no. 102/2014, which transposes Directive 2012/27/EC on energy efficiency, granted the Authority specific powers to regulate and control under articles 9, 10 and 16, including in the district heating/cooling sector, even if only on specific aspects, since this is not a RAB-based regulation, as the current one for other network services.

The powers concern, in fact, the preparation of measures on connection and disconnection from the networks, commercial and technical quality of service, the way in which operators make public the prices of the supply of heat.

The Authority is also entrusted with the task of implementing the provisions on metering, billing, access to consumer data for buildings connected to district heating/cooling networks in order to increase customer awareness and change consumer behaviour.

After an initial measure (Resolution 282/2017/R/tlr) on the sub-billing of district heating costs between real estate units in condominiums, the Authority defined with Resolution 24/2018/R/tlr (TUAR) and subsequent amendments and integrations the criteria for determining connection fees and the procedures for the exercise by the user of the right of withdrawal.

Operators can freely determine the connection fees in compliance with a consistency constraint between costs and revenues (pending the conclusion of the proceeding initiated by means of Resolution 111/2017/R/tlr regarding the separation of accounting and administration in the district heating service, the criteria for the attribution of indirect costs can be defined independently by the operators). At the same time as the connection estimate, specific information obligations are introduced towards customers regarding the binding economic conditions of service provision, so as to allow an assessment of the overall cost-effectiveness of the same and ensure maximum transparency on the contents and associated costs.

It is possible for the customer to withdraw from the contract with 30 days’ notice, without payment of any fee or penalty by requesting the operator, alternatively, to deactivate the supply or disconnect from the network; in the case of deactivation, only the suspension of the supply is envisaged while in the case of disconnection, the operator is required to remove the thermal energy meter and any other parts of the plant. Customers with a contractual power of more than 1,200 kW are excluded from the right of withdrawal. Lastly, specific reporting obligations to the Authority are envisaged for operators in order to allow monitoring of the sector and compliance with the regulation.

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By means of Resolution 277/2018/R/tlr, the Authority, following the critical issues highlighted by operators, postponed the entry into force of the TUAR from June 1, 2018 to October 1, 2018 with the end of the regulatory period December 31, 2021.

Resolution 661/2018/R/tlr defined the regulation of the commercial quality of district heating services (RQCT) for the period July 1, 2019 - December 31, 2021. The scope of application of the regulation with regard to end customers depends on the size of the operators determined on the basis of the total contractual power of the customers served: micro operators up to 6 MW of total contractual power, medium operators over 6 MW and up to 50 MW and larger operators over 50 MW.

Services subject to commercial quality include: quotes, execution of works, activations, complaint handling, as well as prompt intervention.

Automatic compensation is provided in the event of non-compliance with specific standards for reasons attributable to the operator, the value of which is commensurate with the power contractually committed by the user, in order to consider the size of the user affected by the violation. For users with contractually committed power up to 50 kW (single-family users and small condominiums) the compensation is equal to 30 euro. For users with contractually committed power exceeding 50 kW and up to 350 kW, the compensation is equal to 70 euro.

Resolution 574/2018/R/tlr approved the "Information obligations for entities operating in the district heating and cooling sector (OITLR)", at the same time providing for the repeal of previous Resolutions 339/2015/R/tlr and 23/2018/R/tlr with a view to rationalizing the provisions.

The DCO 637/2018/R/tlr and 177/2019/R/tlr set out proposals for minimum obligations for transparency of district heating and cooling services with regard to supply contracts, service delivery prices, billing documents, quality information and environmental performance. The Authority intends to publish the final measure by the summer of 2019, with a view to its entry into force on January 1, 2020.

By means of DCO 691/2018/R/tlr, the first guidelines on technical quality were presented, with reference to security and continuity of service, as well as energy and environmental performance. This consultation is based on data collection initiated by the Authority with reference to the networks managed in 2017 and the main activities and procedures currently adopted by operators to ensure security and continuity of service.

Given the absence of tariff leverage (in fact, unlike other regulated sectors, the legislative framework does not allow the application, to date, of economic incentive mechanisms such as bonuses-penalties), the Authority is therefore oriented to use in the first regulatory period only service obligations, standards (specific or general) and reputational mechanisms (publication of operators' performance).

GSE checks: cogeneration plant combined with district heating in Canavese (MI)

The cogeneration plant combined with district heating in Canavese (MI), belonging to A2A Calore e Servizi S.p.A., obtained the IAFR 5072 qualification from the GSE for the purpose of obtaining GC pursuant to Law no. 239 of August 23, 2004, and the subsequent implementing Ministerial Decree of October 24, 2015. The disbursement period of the incentive started on January 1, 2011 for a duration of 8 years.

On March 12, 13 and 14, 2018, the GSE began a verification process by means of a site visit to analyse both the CAR qualification and the obtaining of GC.

A letter of first result sent by the GSE on March 25, 2019 communicated a recalculation of the GC for the years 2011-2016 considering that the quantities of heat supplied to the users connected to the network installed after December 31, 2009 cannot be eligible for the GC. In other words, this term must refer to the commissioning not only of the production plant but also of the distribution network installed up to that time.

The company sent a letter of comments on June 24, 2019, in which, in addition to contesting the late interpretation of the GSE, it requested a recalculation of the GC following an update of the map and pointed out some inconsistencies in the calculation method proposed by the GSE.

In any case, 12.5 million euro of funds have been set aside in the budget to cover any amounts that may be returned to the GSE (and which for the period 2011-2016 amount to 11.1 million euro).

International Business Unit

The International Business Unit includes the activities carried out by the Group in relation to the management of the investments held by A2A in foreign companies, together with the oversight of international development activities.

Therefore, the Business Unit analyzes and selects the market opportunities, such to allow the provision of know-how and technological systems deriving from the A2A core business; particular focus is on the realization of high-tech waste treatment plants.

In 2018, a project was initiated in Spain for the design, supply, realization and start-up, as a sub-appointed supplier, of a waste treatment plant with 150,000 t/y of MSW.

With reference to the service activity on waste treatment plants in the United Kingdom, in December 2018, a contract was signed for the provision of services and assistance on plants owned by the customer Renewi with a duration of three years, with the option of extending it for a further two years.

In addition, in June 2019, it was signed for the design, supply, realization and start-up, as a sub-appointed supplier, of a waste treatment plant with 78,000 t/y of MSW in Croatia.

Preliminary activities and necessary for participation in other international tenders were also carried out.

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Scenario
and market

Macroeconomic scenario

Overview

World growth continued to lose momentum in the first half of 2019 as a result of a deceleration in global trade; however, some of the major advanced economies performed better than expected.

In the United States and Japan, growth was stronger than expected in the first quarter of the year, supported by the positive contribution of exports. According to data from the U.S. Department of Commerce, U.S. GDP increased by +3.1%, up from +2.2% in the last quarter of 2018. For the second quarter, growth is expected to slow due to the decline in domestic demand: according to the Federal Reserve, GDP is expected to reach +1.9%. Japanese GDP grew by 0.6% in the first quarter of 2019, better than the +0.5% estimated by analysts (source: Economic and Social Research Institute of the Japanese Cabinet Office).

China, in spite of the trade war with the United States, recorded an increase in GDP of +6.4% in the first quarter of the year, better than the estimated +6.3% and in line with that of the previous quarter. Leading analysts expect growth not to exceed +6.1% in the second quarter of the year and to fall further to +6.0% in the second half of 2019. On the other hand, expansion slowed down in India, which closed the first quarter of the year at +5.8%, the weakest figure in the last 20 quarters; in Brazil, the macroeconomic scenario remains fragile.

According to the preliminary estimate contained in the Eurozone Economic Outlook of Ifo Institute and Istat, the GDP of the Eurozone, after the expansion of +0.4% recorded in the first quarter of 2019, mainly driven by domestic demand and fixed investments, is expected to slow down to +0.3% in the second quarter affected by the decline in industrial production.

As far as Italy is concerned, ISTAT indicates that GDP, after having grown by 0.1% in the first quarter of 2019, affected by the modest growth in consumption and exports, is expected to decline in the second quarter due to the negative contribution of foreign demand.

According to the preliminary estimate published by Eurostat, inflation in the Eurozone rose by 1.2% in June, in line with what was recorded in May. On average in the first half of 2019, the inflation acquired was +1.4%.

According to preliminary estimates by ISTAT, in June 2019, the national consumer price index in Italy (NIC) remained stable at +0.8%, the same level as in May. The stability of inflation is the synthesis of opposing dynamics: on the one hand, it accelerates the growth of the prices of recreational, cultural and personal care services (from +1.0% to +1.3%) and attenuates the decline in those of services related to communications (from -7.2% to -5.9%); on the other hand, the prices of unregulated energy goods reverse the trend, going from +2.4% to -0.6%. On average in the first half of 2019, the inflation acquired was +0.9%.

At its meeting of June 6, 2019, the Governing Council of the European Central Bank (ECB) left the reference rate at an all-time low of zero and reaffirmed its commitment to maintain it at current levels at least until the first half of 2020 and, in any event, as long as necessary to ensure that inflation continues to converge at levels below but close to 2% over the medium term. As regards non-standard monetary policy measures, the Governing Council of the ECB confirms its policy of fully reinvesting the capital redeemed on maturing securities under the asset purchase programme "for an extended period of time and in any case as long as it is needed" in order to maintain favourable liquidity conditions and a large degree of monetary accommodation. The ECB also released details of the third edition of targeted longer-term refinancing operations (TLTROs), a new series of long-term loans to banks at low interest rates, from September 2019 to March 2021, in order to provide liquidity to the financial system and encourage institutions to lend to businesses and consumers.

Confirming its expectations, at its meeting of June 19 and 20, 2019, the Federal Reserve (FED) left interest rates on federal funds in the range of 2.25% to 2.50% unchanged. However, it is not excluded that a cut in the cost of money, by half a percentage point, could arrive as early as July in the event of a worsening of the economic outlook.

The average EUR/USD exchange rate stood at 1.13 dollars in the first half of 2019, down 7% from the same period of the previous year, continuing the depreciation trend of the single currency that began in the second half of 2018 as a result of the uncertainties surrounding the Eurozone, such as the slowdown in economic growth and political tensions.

Outlook

Global economic activity is expected to decrease in 2019 and remain broadly stable in the medium term. The main risk factors for the world and European economies are linked to the evolution of trade tensions between the United States and China, the performance of the Chinese economy, which is expected to grow at a slower pace, the outcome of negotiations on the agreement for the United Kingdom's exit from the European Union (Brexit) and the uncertainty regarding the political structures in emerging economies that affects investment at the international level.

According to the most recent forecasts made in June by ECB experts, world GDP in 2019 will grow by 3.3%, (0.2% less than estimated in March) and then increase slightly in 2020 to 3.6% when the geopolitical uncertainties that, since the second half of 2018, have limited business investment, international trade and the expansion of local economies should be resolved. Beyond 2020, world growth is expected to be around 3.6% in the medium term, driven mainly by India and China.

With regard to advanced economies, the International Monetary Fund (IMF) forecasts GDP in 2019 at +1.8% (lower than +2.0% in January), while the forecast for 2020 remained unchanged at +1.7%. In particular, the Federal Reserve has revised downwards the growth estimates for the United States: this year, the economy is expected to grow by 2.1% compared to the previously estimated 2.3% and by 1.9% in 2020.

With regard to emerging and developing economies, growth of 4.4% is expected in 2019, compared to 4.5% of the January estimates; for 2020, an acceleration is foreseen, although more contained than initially expected: it has gone from the previous +4.9% to the current +4.8%. The International Monetary Fund has cut its growth estimates for the Chinese economy to +6.2% for 2019 (0.1% less than the April estimate) and +6.0% for 2020 (from +6.1% previously indicated) due to the negative impact of trade tensions with the United States. India is expected to achieve the best result which, if as expected, it will grow at a rate of 7.3% in 2019 and 7.5% in 2020, it will outperform China as the world's fastest-growing economy. Estimates have been reduced for Brazil, which is expected to grow by 2.1% in 2019 and 2.2% in 2020. The growth estimate for Russia for 2019 was also cut to +1.2%, while it remains unchanged in 2020 and 2021 at +1.8%.

The macroeconomic projections for the Eurozone, formulated by the experts of the European Central Bank, indicate GDP growth of 1.2% in 2019 and 1.4% in both 2020 and 2021 (respectively -0.2% and -0.1% compared to the previous estimate). The risks for growth prospects in the Eurozone remain linked to continuing uncertainties related to geopolitical factors, the growing threat of protectionism and situations of vulnerability in emerging markets. Another important factor is the persistent weakness of the manufacturing sector, especially in countries facing specific problems of the automotive industry such as Germany (according to European Commission estimates, the country is not expected to exceed growth of +0.5% in 2019 and +1.5% in 2020).

The Bank of Italy has revised downwards its growth estimates for Italy: GDP will grow by 0.3% this year (-0.3% compared to the January forecast), by 0.7% in 2020 and by 0.9% in 2021. The revision mainly reflects the greater weakness in foreign demand observed in recent months.

Inflation in the Eurozone, according to the June forecasts of the ECB's experts, is expected to increase by 1.3% in 2019, 1.4% in 2020 and 1.6% in 2021 compared to 1.2%, 1.5% and 1.6% respectively in the macroeconomic projections made in March 2019. The upward revision of inflation for the current year is linked to the support provided by the ECB's monetary policy measures as well as the expected stronger wage policy.

Inflation dynamics in Italy are expected to remain moderate and recover gradually. Consumer prices are expected to increase by 0.8% on average this year, 1.0% in 2020 and 1.5% in 2021 (source: Bank of Italy). Compared to previous projections published in January, inflation has been revised downwards by 0.2 percentage points this year, 0.3% the following year and 0.1% in 2021 reflecting less favourable demand conditions.

As regards the level of interest rates, both the European Central Bank (ECB) and the Federal Reserve (FED) will be faced with important monetary policy choices and both will be faced with the risk of a fall in inflationary expectations. The attitude of the Federal Reserve has changed since April, when rates were expected to remain unchanged throughout 2019. Following the expansionary wave from the ECB, the FED is also preparing to cut rates in the near future and to implement appropriate policies to support the economy. It is not excluded that a first substantial retouching, of half a percentage point, can arrive already at the meeting scheduled for the end of July. The ECB's interest rates will remain at zero at least until the end of 2019 and in any case until inflation has reached

7 Scenario and market

Macroeconomic scenario

Energy market trends

stable levels of around 2%. At the same time, the Governing Council of the ECB declares its readiness to react in the future to any adverse circumstances and to adapt all its instruments, as it sees fit, to ensure that inflation continues to approach its target level on a sustained basis.

For 2019, the experts predict a EUR/USD exchange rate of 1.14 annual average, before rising to 1.17 in 2020 and stabilising at around 1.20 in the medium to long term, when the ECB is expected to adopt less accommodative monetary policies and increase the cost of the single European currency in order to contain inflation (source: Ref).

Energy market trends

Electricity

As far as the national electricity market is concerned, in Italy in the first half of 2019, there was a net requirement of 157,320 GWh (source: Terna), showing a decrease of 1.3% compared to the volumes of the same period of 2018; in seasonally adjusted terms, and corrected for calendar and temperature, the change is equal to -0.5%.

Net electricity production in the first half of 2019 amounted to 139,193 GWh, up 2.6% compared to the same period of the previous year. The sources of thermoelectric production increased, amounting to 91,269 GWh (+6.1%), wind (+16.1%) and photovoltaic (+9.8%); there was a significant decline in hydroelectric sources (-17.1%) and a slight decline in geothermal sources (-0.4%). National production, excluding pumping, covered 87.8% of the demand for electricity in the first half of 2019, while net imports satisfied the remainder.

In terms of electricity prices, the Base Load PUN (Single National Price) in the first half of 2019 rose by 2.4%, amounting to 55.1 €/MWh against 53.8 €/MWh in the first half of 2018. Average prices substantially in line with the first half of 2018 for high load time slots (-0.3% for the Peak Load PUN reaching 60.3 €/MWh). The average price in low load time slots (Off-Peak PUN) recorded an increase of 4.3% to 52.3 €/MWh. For 2019, forward curves indicate Base Load PUN prices with average values close to 58.0 €/MWh.

Natural Gas

On average in the first half of 2019, the demand for natural gas increased by 4.3% compared to the same period of 2018, amounting to 40,157 Mcm (source: Snam Rete Gas). This growth was driven by consumption of the thermoelectric sector (+16.7% compared to the first half of 2018), which, helped by lower electricity production from renewable sources and in a context of lower gas costs, consolidated an upward trend that began in March. By contrast, consumption in both the civil sector (-1.0%) and the industrial sector (-0.4%) was substantially in line with the first half of 2018.

On the supply side, growing demand during the period under review continued to be driven by imports of natural gas, which accounted for 94.1% of national demand, net of inventory trends; national production, which satisfied the remainder, was down by 9.8%.

Regarding prices, the price of gas to the TTF in the first half of 2019 amounted to 15.7 €/MWh, down 25.3% over the first half of 2018. The downward trend, which began in October of the previous year with the listing of the PSV and continued in June, at its lowest level since October 2016, of 14.21 €/MWh, is continuing. Specifically, the average price of gas to the PSV for the first half of 2019 amounted to 18.7 €/MWh, down 16.4% compared to the corresponding period of 2018. For 2019, forward curves indicate prices with average values close to 18.0 €/MWh.

The trend in the respective prices resulted in a PSV-TTF differential of 3.0 €/MWh for the reporting period, up compared to the differential of the first quarter of 2018 (+1.4 €/MWh). The PSV gas market tends to confirm a structural spread with respect to the TTF also for the year 2019: for the year 2019, the forward curves forecast a spread of around 2.8 €/MWh.

Oil and coal

After a period of high volatility, the price of crude oil in the first part of the year showed a trend of moderate but constant growth until June: a sign of the solidity of the agreements between producer countries. On average in the first half, the price stood at 66.1 \$/bbl, showing a decrease of 7.0% compared to the same period of the previous year (71.1 \$/bbl). The depreciation of the euro against the dollar meant that the prices expressed in €/bbl were substantially in line with the same period of the previous year. The elements that contributed to the rise in prices were: the entry into force of American sanctions against Iran, the worsening of the geopolitical situation in Venezuela, the expectation of an imminent agreement on duties between China and the United States and the decision of the Opec countries and other producing countries, Opec Plus, to extend the coordinated cuts in production until next March 2020 (decision taken at the meeting in Vienna on June 25-26).

According to the Energy Information Administration (EIA), oil supply exceeded demand by as much as 0.9 million barrels a day in the first half of the year. In particular, the second quarter showed a global oil surplus of 0.5 million barrels per day. The Energy Information Administration (EIA) has cut its

forecast for the growth of global oil demand by 160,000 barrels a day in 2019 to 1.22 million barrels a day, while in 2020, demand is expected to rise to 1.4 million barrels a day.

In the first half of 2019, coal showed a downward trend which, starting from the high prices in January (81.80 \$/tonne), registered the minimum level in June, with a price close to 49 \$/tonne. The sharp fall in coal prices confirms the now definitive delink of fuel prices from oil prices, which is more likely to be driven by decarbonisation policies. In fact, it seems that the policies of the decline in demand have contributed to the reduction in prices. In Germany, the main consumer in Europe, the consumption of coal for thermal generation in the first months of the year were reduced by 24% compared to the previous year. At the same time, the import cap imposed in China and the gradual return to operation of nuclear power plants in Japan have led to an abundance of supply. On average in the first half, the price stood at 64.9 \$/bbl, showing a decrease of 26.3% compared to the same period of the previous year (88.0 \$/bbl). The depreciation of the single currency versus the dollar lessened the decrease in the prices expressed in euro (-21.2%) compared with the same period in 2018. Coal price scenarios for the coming months will continue to be linked to Chinese demand trends and the possibility of unblocking current import restrictions. For the current year, forward curves indicate prices with average values close to 62.0 \$/tonne.



8

Result
sector by sector

Result sector by sector

The A2A Group operates in the following “Business Units”:

Generation and Trading Business Unit

The activity of the Generation and Trading Business Unit is related to the management of the generation plants portfolio⁽¹⁾ of the Group with the dual purpose of maximizing the availability and efficiency of the plants, minimizing operating and maintenance costs (O&M) and maximizing the profit deriving from the management of the energy portfolio through the purchase and sale of electricity and fuels (gaseous and non-gaseous) and environmental certificated on domestic and international wholesale markets. This Business Unit also includes the activity of trading on domestic and foreign markets of all energy commodities (gas, electricity, environmental certificates).

Market Business Unit

The activities of the Market Business Unit are aimed at the retail sale of electricity and natural gas to customers in the free market and sale to customers served under protection scheme, the management of public lighting, traffic regulation systems, votive lamps. Furthermore, it deals with providing energy efficiency and electric mobility services.

Waste Business Unit

The activities of the Waste Business Unit relates to the management of the integrated waste cycle, which ranges from collection and street sweeping to the treatment, disposal and recovery of materials and energy.

In particular, collection and street sweeping mainly refers to street cleaning and the collection of waste for transportation to its destination.

Instead, waste treatment is an activity that is carried out in dedicated centres to convert waste in order to make it suitable for the recovery of materials.

Lastly, disposal of urban and special waste in combustion plants or landfills ensures the possible recovery of energy through waste-to-energy or the use of biogas.

Networks and District Heating Business Unit

The activities of the Networks and District Heating Business Unit mainly consists of the technical and operational management of networks for the distribution of electricity, the transport and distribution of natural gas and the management of the entire integrated water cycle (water captation, aqueduct management, water distribution, sewerage network management, purification). It is also aimed at the sale of heat and electricity produced by cogeneration plants (mostly owned by the Group), through district heating networks and ensures the operation and maintenance of cogeneration plants and district heating networks. Also included are the activities related to the management services for heating plants owned by third parties (heat management services).

International Business Unit

The International Business Unit includes the provision of know-how and technologies for the realization of waste pre-treatment plants.

A2A Smart City

The company is the reference operator within the A2A Group for the provision of telecommunications services. In particular, it provides services related to the management of fixed and mobile telephony and data transmission lines as well as services related to the management and development of infrastructure in support of communication. A2A Smart City is also a major provider in the realization and management of video surveillance and access control systems.

¹ Total installed capacity of 8.9 GW.

Corporate

Corporate services include the activities of guidance, strategic direction, coordination and control of industrial operations, as well as services to support the business and operating activities (ex. administrative and accounting services, legal services, procurement, personnel management, information technology, communications etc.) whose costs, net of amounts recovered from accrual to individual Business Units based on services rendered, remain the responsibility of the Corporate.

8	Result sector by sector
	Result sector by sector
	Generation and Trading Business Unit
	Market Business Unit
	Waste Business Unit
	Networks and District Heating Business Unit
	International Business Unit
	A2A Smart City
	Corporate

Generation and Trading Business Unit

The following is a summary of the main quantitative and economic data relating to the Generation and Trading Business Unit.

Quantitative data - Electricity sector

<i>GWh</i>	06 30 2019	06 30 2018	CHANGE	% 2019/2018
SOURCES				
Net production	7,685	7,982	(297)	(3.7%)
- thermoelectric production	5,767	5,865	(98)	(1.7%)
- hydroelectric production	1,857	2,086	(229)	(11.0%)
- photovoltaic production	61	31	30	96.8%
Purchases	15,024	16,303	(1,279)	(7.8%)
- exchange	7,810	6,018	1,792	29.8%
- wholesalers	1,792	1,619	173	10.7%
- Trading/Service portfolio	5,422	8,666	(3,244)	(37.4%)
TOTAL SOURCES	22,709	24,285	(1,576)	(6.5%)
USES				
Sales to Group Retailers	5,706	4,264	1,442	33.8%
Sales to other wholesalers	5,177	4,920	257	5.2%
Sales on the exchange	6,404	6,435	(31)	(0.5%)
Trading/Service portfolio	5,422	8,666	(3,244)	(37.4%)
TOTAL USES	22,709	24,285	(1,576)	(6.5%)

The sales figures are stated gross of any losses.

The Group's electricity output in the first half of the current year amounted to 7,685 GWh, to which should be added purchases of 15,024 GWh for a total availability of 22,709 GWh.

Hydroelectric output was down compared with the same period of the previous year (-11%). The lower output produced by facilities in the northern area was only partially offset by higher output from the Calabria reservoirs.

Thermoelectric production in the first half of 2019 stood at 5,767 GWh (5,865 GWh at June 30, 2018); while production at the combined-cycle plants was higher, there was a decrease at the Monfalcone plant following its shutdown in March due to an unprofitable scenario and at the San Filippo del Mela plant due to fewer calls from Terna.

Finally, production from photovoltaic sources increased, thanks to the acquisitions of companies operating in the sector at the end of the previous year, which led the Group to hold approximately 100 megawatts of installed solar capacity.

Purchases of electricity amounted to 15,024 GWh (16,303 GWh at June 30, 2018): more purchases on the stock exchange were more than offset by lower volumes traded as part of trading activities.

Sales to the Market Business Unit increased in the period under review (+33.8%) and sales on wholesale markets increased (+5.2%). Market sales were substantially in line (-0.5%), while quantities traded as part of trading activities decreased by 37.4%.

Overall in the period in question, electricity sales of the Generation and Trading Business Unit reached a total of 22,709 GWh (24,285 GWh at June 30, 2018).

Quantitative data - gas sector

<i>millions of cubic metres</i>	06 30 2019	06 30 2018	CHANGE	% 2019/2018
SOURCES				
Procurement	3,136	2,396	740	30.9%
Withdrawals from stock	10	24	(14)	(58.3%)
Internal consumption/GNC	(9)	(9)	-	0.0%
Trading/Service portfolio	4,093	2,361	1,732	73.4%
TOTAL SOURCES	7,230	4,772	2,458	51.5%
USES				
Market Business Unit uses	1,145	922	223	24.2%
Thermoelectric uses	1,002	953	49	5.1%
Heat and Waste Business Unit uses	49	66	(17)	(25.8%)
Wholesalers	941	470	471	100.2%
Trading/Service portfolio	4,093	2,361	1,732	73.4%
TOTAL USES	7,230	4,772	2,458	51.5%

Quantities are shown in terms of standard cubic metres with an equivalent Gross Calorific Value (GCV) of 38100 MJ on redelivery.

The volume of gas sold in the year in question amounted to 7,230 million cubic meters, an increase of 51.5% over 2018 (4,772 million cubic meters).

In particular, there was an increase in the volume of gas sold to wholesalers (+471 million cubic meters), the quantities sold to the Market Business Unit (+223 million cubic meters) and the quantities traded in the Trading Portfolio (+1,732 million cubic meters). Gas for thermoelectric uses increased by +5.1% due to higher consumption by combined-cycle facilities in the current year, while the quantities sold to the other Business Units of the Group decreased (-25.8%).

Economic data

<i>millions of euro</i>	01 01 2019 06 30 2019	01 01 2018 06 30 2018	CHANGE	% 2019/2018
Revenues	2,248	1,758	490	27.9%
Gross Operating Income	117	225	(108)	(48.0%)
% of Revenues	5.2%	12.8%		
Depreciation, amortizations, provisions and write-downs	(81)	(85)	4	(4.7%)
Net Operating Income	36	140	(104)	(74.3%)
% of Revenues	1.6%	8.0%		
Investments	31	22	9	40.9%
FTE	1,097	1,106	(9)	(0.8%)
Labour costs	45	46	(1)	(2.2%)

The revenues amounted to 2,248 million euro, up by 490 million euro compared to the same period of the previous year. The increase was mainly due to higher volumes of electricity and gas, partly offset by lower revenues from green certificates.

EBITDA of the Generation and Trading Business Unit amounted to 117 million euro, a decrease of 108 million euro compared to the first half of the previous year. Before non-recurring items (equal to +3 million euro in 2019 and +7 million euro in 2018), the Ordinary EBITDA dropped by 104 million euro.

The comparison with the first half of 2018 is significantly penalised by the exceptional results achieved in the previous year on the environmental markets (-94 million euro) and on the ancillary services market (MSD).

8
Result sector by
sector

Result sector by
sector

Generation and
Trading Business
Unit

Market Business
Unit

Waste Business
Unit

Networks and
District Heating
Business Unit

International
Business Unit

A2A Smart City
Corporate

The reduction in margins that followed, further amplified by the lower hydroelectric production recorded during the period (-11%), was limited by the Business Unit, thanks to a good performance of CCGT plants (both volume and spread), better margins achieved in the photovoltaic sector and the contribution made by the gas portfolio, which has suffered a particularly penalising scenario in 2018.

Depreciation, amortization, provisions and write-downs totalled 81 million euro (85 million euro at June 30, 2019).

As a result of the above changes, net operating income amounted to 36 million euro (140 million euro at June 30, 2018).

In the first half of 2019, capex were 31 million euro, mainly related to extraordinary maintenance works carried out on the thermal plants (approximately 21 million euro) and on the hydroelectric units of Valtellina, Mese, Udine and Calabria (approximately 6 million euro). Development works was also carried out for a total of 3 million euro, related to Brindisi plants – begin of installation works on the synchronous compensators – and Cassano – capex to increase flexibility.

In the year under review, FTEs for the period amounted to 1,097 units (1,106 FTEs in the first half of the previous year).

Market Business Unit

The following is a summary of the main quantitative and economic data relating to the Market Business Unit.

Quantitative data

	06 30 2019	06 30 2018	CHANGE	% 2019/2018
Electricity Sales				
Electricity Sales Free Market (GWh)	5,651	4,298	1,353	31.5%
Electricity Sales under Greater Protection Scheme (GWh)	737	835	(98)	(11.7%)
Electricity Sales Protection Market (GWh)	112	-	112	n.s.
Total Electricity Sales (GWh)	6,500	5,133	1,367	26.6%
	06 30 2019	06 30 2018	CHANGE	% 2019/2018
POD Electricity				
POD Electricity Free Market (#/1000)	636	478	158	33.1%
POD Electricity under Greater Protection Scheme (#/1000)	524	585	(61)	(10.4%)
Total POD Electricity (#/1000)	1,160	1,063	97	9.1%
	06 30 2019	06 30 2018	CHANGE	% 2019/2018
Gas Sales				
Gas Sales Free Market (Mcm)	1,030	650	380	58.5%
Gas Sales under Greater Protection Scheme (Mcm)	362	336	26	7.7%
Total Gas Sales (Mcm)	1,392	986	406	41.2%
	06 30 2019	06 30 2018	CHANGE	% 2019/2018
PDR Gas				
PDR Gas Free Market (#/1000)	681	486	195	40.1%
PDR Gas under Greater Protection Scheme (#/1000)	811	796	15	1.9%
Total PDR Gas (#/1000)	1,492	1,282	210	16.4%

The quantities are stated gross of losses.
The data related to the POD and PDR does not include the numbers relating to large customers.

The Market Business Unit sold 6,500 GWh of electricity in the year under review, up 26.6% compared to the same period of the previous year and 1,392 million cubic meters of gas (+41.2% compared to the first half of 2018). The ACSM-AGAM group contributed 193 GWh to the increase in electricity sales and 274 Mcm to the increase in gas sales.

The growth in both the electricity and natural gas segments was mainly due to the greater volumes sold to large customers on the free market, which more than offset the lower sale volumes to “protected” customers.

8 Result sector by sector

Result sector by sector

Generation and Trading Business Unit

Market Business Unit

Waste Business Unit

Networks and District Heating Business Unit

International Business Unit

A2A Smart City Corporate

Economic data

<i>millions of euro</i>	01 01 2019 06 30 2019	01 01 2018 06 30 2018	CHANGE	% 2019/2018
Revenues	1,423	1,009	414	41.0%
Gross Operating Income	116	111	5	4.5%
% of Revenues	8.2%	11.0%		
Depreciation, amortizations, provisions and write-downs	(23)	(11)	(12)	n.s.
Net Operating Income	93	100	(7)	(7.0%)
% of Revenues	6.5%	9.9%		
Investments	11	5	6	n.s.
FTE	860	721	139	19.3%
Labour costs	28	22	6	27.3%

Revenues were 1,423 million euro (1,009 million euro at June 30, 2018), up 41% due to larger quantities sold and the higher electricity unit prices. Revenues rose by 169 million euro in the first half of the year following the consolidation of the ACSM-AGAM group.

EBITDA of the Market Business Unit equalled 116 million euro (111 million euro in the first half of 2018).

Net of non-recurring items (+3 million euro in 2019 and +16 million euro in 2018), Ordinary EBITDA of the Business Unit grew by 18 million euro (+19% on the first half of the previous year). The change was due to a significant increase in margins in the energy retail sector (+28 million euro) and a decrease in the energy solutions sector (-10 million euro).

The increase in the energy retail segment was partially due to the change in the consolidation perimeter (consolidation of the ACSM-AGAM group and simultaneous exit of the Aspem group) for 13 million euro and in part to the excellent performance of the Business Unit (+15 million euro).

In the half-year under review, the contribution margins of the electricity and gas segments were significantly higher (+23 million euro), thanks to the increase in the number of customers in the deregulated market (+104 thousand compared to the end of 2018), higher unit margins and higher sales volumes to large customers, which offset a decrease in unit gas consumption due to the milder temperatures of the current year. This sustained growth was only partly offset by higher costs, mainly for marketing and external communication to attract new customers.

The reduction in margins in the energy solutions segment was due to the lesser opportunities that white certificates market has offered to operators, both in terms of price and volumes exchanged, also following approval of the Decree by the Ministry of Economic Development on May 10, 2018, which regulated the price of sale of Energy Efficiency Certificates (EECs) and the methods of procurement by distributors obliged to cancel the certificates.

Depreciation, amortization, provisions and write-downs totalled 23 million euro, of which 6 million related to the ACSM-AGAM Group (11 million euro in 2018).

As a result of the above changes, Net Operating Income amounted to 93 million euro (100 million euro in the same period of the previous year).

In the reporting period, the business unit capex totalled approximately 11 million euro, including the ACSM-AGAM group's investments of 1 million.

Capex in the period mainly regarded (for 8 million euro) the energy retail segment in connection with development maintenance works and the development of hardware and software platforms. New development projects were also pursued in the public lighting segment for about 2 million euro.

In 2019, net of 104 employees of the ACSM-AGAM group and the exit of 10 FTE for the deconsolidation of the Aspem group, there was an increase of 45 FTE compared to the same period of the previous year. The increase is partly due to a further change in the scope of consolidation (acquisition of the X3Energy business unit) and partly to greater hiring to strengthen certain areas of activity, in line with the development objectives of the Market Business Unit.

Waste Business Unit

The following is a summary of the main quantitative and economic data relating to the Waste Business Unit.

Quantitative data

	06 30 2019	06 30 2018	CHANGE	% 2019/2018
Waste collected (Kton)	858	838	20	2.4%
Residents served (#/1000)	3,586	3,528	58	1.6%
Waste disposed of (Kton)	1,675	1,755	(80)	(4.6%)
Electricity sold (GWh)	877	889	(12)	(1.3%)
Heat sold (GWht) *	857	777	80	10.3%

(*) Quantities at the plant entrance.

In the first half of 2019, the quantity of waste collected, amounting to 858 thousand tonnes, was up compared to the same period of the previous year thanks to the contribution of the ACSM-AGAM group.

Despite the contribution of the ACSM-AGAM Group, the quantity of waste disposed of, amounting to 1,675 thousand tonnes, decreased by 4.6% compared to the same period of the previous year, mainly due to less disposals in landfills, in particular in the Grottaglie landfill following the blockage of deliveries from January 2019.

The quantities of heat sold increased by 10.3% due to both the contribution of the ACSM-AGAM group and the greater quantities requested by the district heating sector, while the quantities of electricity fell slightly (-1.3%).

Economic data

<i>millions of euro</i>	01 01 2019 06 30 2019	01 01 2018 06 30 2018	CHANGE	% 2019/2018
Revenues	522	508	14	2.8%
Gross Operating Income	135	136	(1)	(0.7%)
% of Revenues	25.9%	26.8%		
Depreciation, amortizations, provisions and write-downs	(56)	(37)	(19)	51.4%
Net Operating Income	79	99	(20)	(20.2%)
% of Revenues	15.1%	19.5%		
Investments	46	38	8	21.1%
FTE	5,895	5,767	128	2.2%
Labour costs	159	155	4	2.6%

In the first half of the year, the Waste Business Unit recorded revenues of 522 million euro (508 million euro at June 30, 2018), up by 14 million euro compared to the first half of the previous year, thanks to the consolidation of the new ACSM-AGAM Group.

EBITDA of the Waste Business Unit equalled 135 million euro (136 million euro at June 30, 2018).

Net of non-recurring items (zero balance in 2019 and +2 million euro in 2018), the Ordinary Gross Operating Margin increased by 1 million euro.

The increase in margins was mainly due to the transfer prices of electricity produced by the waste-to-energy plants and the positive trend in the transfer prices of waste similar to urban waste, as well as higher revenues from the transfer to the landfill of inert lots of Corteolona and to the sludge plant.

8 Result sector by sector

Result sector by
sector

Generation and
Trading Business
Unit

Market Business
Unit

Waste Business
Unit

Networks and
District Heating
Business Unit

International
Business Unit

A2A Smart City
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These positive effects were offset by higher disposal costs and lower revenues from the transfer to other Group landfills (Grottaglie, Barengo and Comacchio).

Depreciation, amortization, provisions and write-downs equalled 56 million euro (37 million euro at June 30, 2018). The change is mainly due to the release of surpluses of tax dispute provisions recorded in the previous year.

As a consequence of the above changes, Net Operating Income amounted to 79 million euro (99 million euro in the previous year).

Capex in the first half of 2019 totalled 46 million euro (of which 4 million euro relative to the ACSM-AGAM Group) and were mainly related to maintenance and development work on waste-to-energy plants (22 million euro), treatment plants and landfills (12 million euro), the purchase of vehicles, containers, operating systems and restructuring of corporate buildings in the collection segment (12 million euro).

The increase of 128 FTE is due to changes in the scope of consolidation that occurred in the two comparative years (-152 FTE for the deconsolidation of the Aspem group and +197 for the simultaneous consolidation of the ACSM-AGAM Group), to the winning of new tenders or the expansion of urban waste collection and sanitation services, to the transfer of resources to other Business Units, as well as to the hiring of new employees who left the company in the previous year and to the expansion of some facilities that carry out waste treatment activities.

Networks and District Heating Business Unit

The following is a summary of the main quantitative and economic data relating to the Networks and District Heating Business Unit.

Quantitative Data - Networks

	06 30 2019	06 30 2018	CHANGE	% 2019/2018
Electricity distributed (GWh)	5,833	5,878	(45)	(0.8%)
Gas distributed (Mcm)	1,736	1,510	226	15.0%
Gas transported (Mcm)	207	215	(8)	(3.7%)
Water distributed (Mcm)	38	32	6	18.8%
RAB Electricity (M€) ⁽¹⁾	649	631	18	2.9%
RAB Gas (M€) ⁽²⁾	1,423	1,194	229	19.2%

- (1) A2A estimates.
(2) Provisional figures, underlying the calculation of allowed revenues for the period.

Electricity distributed amounted to 5,833 GWh, down slightly from the first half of the previous year (5,878 GWh). The quantities of gas distributed reached 1,736 Mcm, up 15% compared to the quantities of the previous year and the water distributed was 38 Mcm, up compared to the quantities distributed the previous year of 6 million cubic meters; both increases are due to the consolidation of the ACSM-AGAM Group.

Quantitative Data - Heat

<i>GWh_t</i>	06 30 2019	06 30 2018	CHANGE	% 2019/2018
SOURCES				
Plants in:	847	834	13	1.6%
- Lamarmora	272	302	(30)	(9.9%)
- Famagosta	46	67	(21)	(31.3%)
- Tecnocity	33	39	(6)	(15.4%)
- Other plants	496	426	70	16.4%
Purchases from:	1,120	1,056	64	6.1%
- Third parties	252	269	(17)	(6.3%)
- Other Business Units	868	787	81	10.3%
TOTAL SOURCES	1,967	1,890	77	4.1%
USES				
Sales to end customers	1,641	1,646	(5)	(0.3%)
Distribution losses	326	244	82	33.6%
TOTAL USES	1,967	1,890	77	4.1%

- Note:
- The figures only refer to district heating. Sales relating to heat management are not included.
- Purchases include the quantities of heat purchased from the Waste Business Unit.

Sales of heat by the Business Unit amounted to 1,641 GWh_t, in line with the sales of the previous year: the contribution of the ACSM-AGAM group offset the lower sales made in the first half of 2019 due to the milder temperatures of the current year compared to those recorded in 2018.

8 Result sector by sector

Result sector by sector

Generation and Trading Business Unit

Market Business Unit

Waste Business Unit

Networks and District Heating Business Unit

International Business Unit

A2A Smart City Corporate

Economic data

<i>millions of euro</i>	01 01 2019 06 30 2019	01 01 2018 06 30 2018	CHANGE	% 2019/2018
Revenues	568	590	(22)	(3.7%)
Gross Operating Income	223	192	31	16.1%
% of Revenues	39.3%	32.5%		
Depreciation, amortizations, provisions and write-downs	(80)	(77)	(3)	3.9%
Net Operating Income	143	115	28	24.3%
% of Revenues	25.2%	19.5%		
Investments	142	108	34	31.5%
FTE	2,639	2,315	324	14.0%
Labour costs	54	51	3	5.9%

The Networks and District Heating Business Unit’s revenues amounted to 568 million euro (590 million euro at June 30, 2018). The reduction in revenues is mainly due to the lesser revenues relating to the tariff contributions recognised to distributors to cancel out the energy savings obligations (EECs), partly offset by the contribution made by the ACSM-AGAM group for 72 million euro.

EBITDA of the Networks & District Heating Business Unit amounted to 223 million euro (192 million euro at June 30, 2018). The consolidation of ACSM-AGAM accounted for 16 million euro (19 million euro in the first half of 2019; 3 million euro of the former Aspem group in the first half of 2018).

The change in the Business Unit’s marginality was in part attributable to the change in the scope of consolidation mentioned above, in part to the organic growth of the business. The district heating sector in particular made a positive contribution: the increase in unit margins more than compensated for the drop in sales due to mild temperatures, higher environmental costs (CO2) and the lack of revenues from green certificates in Canavese.

The increase in revenues allowed for gas distribution and the increase in revenues in the water sector thanks to the increase in tariffs approved by the regulatory authority also contributed positively.

Depreciation, amortization, provisions and write-downs amounted to 80 million euro (77 million euro in the previous year), of which 10 million related to the ACSM-AGAM group.

As a result of the above changes, Net Operating Income amounted to 143 million euro (115 million euro at June 30, 2018).

Capex equalled 142 million euro (14 million euro related to the ACSM-AGAM group) and regarded:

- in the electricity distribution segment, development and maintenance work on plants and in particular the connection of new users, maintenance work on secondary cabins, the extension and refurbishment of the medium and low voltage network and the maintenance and upgrading of primary plants (42 million euro);
- in the gas distribution segment, development and maintenance work on plants relating to the connection of new users and the replacement of medium and low pressure piping and smart gas meters (47 million euro);
- in the integrated water cycle segment, maintenance and development work carried out on the water transportation and distribution network and the sewerage networks and purification plants (32 million euro);
- in the district heating and heat management sector, development and maintenance of plants and networks for a total of 21 million euro.

In the first half of 2019, FTEs stood at 2,639 units, +324 FTEs compared to the same period of 2018. The change is due to changes in the scope of consolidation that occurred in the two comparison periods (mainly due to the deconsolidation of the Aspem group for -100 FTE and the consolidation of the ACSM-AGAM group for +374 FTE), and to the hirings made for investments planned in the companies of the Business Unit and personnel who left in the previous year and not replaced at the same time.

International Business Unit

Economic data

millions of euro	01 01 2019 06 30 2019	01 01 2018 06 30 2018	CHANGE	% 2019/2018
Revenues	2	3	(1)	(33.3%)
Gross Operating Income	(1)	-	(1)	n.s.
% of Revenues	(50.0%)	0.0%		
Depreciation, amortizations, provisions and write-downs	-	-	-	n.s.
Net Operating Income	(1)	-	(1)	n.s.
% of Revenues	(50.0%)	0.0%		
Investments	-	-	-	n.s.
FTE	18	12	6	50.0%
Labour costs	1	1	-	0.0%

The International business unit generated revenues of 2 million euro at June 30, 2019 (3 million euro at June 30, 2018) related to the construction of high-tech waste treatment plants.

EBITDA and EBIT were negative for 1 million euro (nil in the first half of the previous year).

In the year under review, FTE amounted to 18 units (12 FTE in the first half of 2018). The increase is due to the hirings made to strengthen the Business Unit.

8 Result sector by sector

Result sector by
sector

Generation and
Trading Business
Unit

Market Business
Unit

Waste Business
Unit

Networks and
District Heating
Business Unit

International
Business Unit

A2A Smart City
Corporate

A2A Smart City

Economic data

<i>millions of euro</i>	01 01 2019 06 30 2019	01 01 2018 06 30 2018	CHANGE	% 2019/2018
Revenues	30	22	8	36.4%
Gross Operating Income	4	4	-	0.0%
% of Revenues	13.3%	18.2%		
Depreciation, amortizations, provisions and write-downs	(3)	(2)	(1)	50.0%
Net Operating Income	1	2	(1)	(50.0%)
% of Revenues	3.3%	9.1%		
Investments	7	6	1	16.7%
FTE	145	147	(2)	(1.4%)
Labour costs	4	4	-	0.0%

In the first half of 2019, the revenues of the company A2A Smart City S.p.A. came to 30 million euro, up by 8 million euro compared to the previous year due to the expansion of services offered to other Group companies and third-party operators.

EBITDA was 4 million euro, in line with the first half of the previous year.

Depreciation, amortization, provisions and write-downs amounted to 3 million euro (2 million euro in the first half of 2018).

Net of Depreciation, amortization, provisions and write-downs, Net Operating Result amounted to 1 million euro (2 million in the first half of 2018).

Capex in the period, amounting to 7 million euro, mainly refer to work on the telecommunication networks.

In the first half of 2019, FTEs stood at 145 units (147 FTEs at June 30 of the previous year).

Corporate

Economic data

millions of euro	01 01 2019 06 30 2019	01 01 2018 06 30 2018	CHANGE	% 2019/2018
Revenues	119	105	14	13.3%
Gross Operating Income	(12)	(11)	(1)	9.1%
% of Revenues	(10.1%)	(10.5%)		
Depreciation, amortizations, provisions and write-downs	(12)	(9)	(3)	33.3%
Net Operating Income	(24)	(20)	(4)	20.0%
% of Revenues	(20.2%)	(19.0%)		
Investments	15	8	7	87.5%
FTE	1,398	1,171	227	19.4%
Labour costs	63	55	8	14.5%

The Gross Operating Margin, corresponding to the Corporate structure costs not recharged to the various Group companies, amounted to -12 million euro in the first half of 2019, of which -3 million related to the ACSM-AGAM group (-11 million in the corresponding period of the previous year).

Depreciation, amortization, provisions and write-downs amounted to 12 million euro (9 million euro in the previous year), of which 1 million related to the ACSM-AGAM group.

After depreciation, amortization, provisions and write-downs there was a Net operating loss of 24 million euro (a net operating loss of 20 million euro in the first half of the previous year).

Capex of the period amounted to 15 million euro, of which 3 million euro relating to the ACSM-AGAM group mainly related to work on IT systems and on buildings.

In the first half of 2019, FTEs stood at 1,398 units, +227 FTEs compared to the same period of the previous year. Net of the changes in the scope of consolidation (deconsolidation of the Aspem group for -35 FTE and simultaneous consolidation of the ACSM-AGAM group for +196 FTE) and the transfer of assets to and from the other Business Units of the Group, there was an increase of 24 FTE compared to the first half of 2018, due to the strengthening of the activities of some of the Corporate Departments.

8
Risultati per
settore di
attività

Risultati per
settore di attività

Business Unit
Generazione e
Trading

Business Unit
Mercato

Business Unit
Ambiente

Business Unit
Reti e Calore

Business Unit
Estero

A2A Smart City

Corporate





9

Risks and uncertainties

Risks and uncertainties

The A2A Group has a risk assessment and reporting process which is based on the Enterprise Risk Management method of the Committee of Sponsoring Organizations of the Treadway Commission (CoSO report) and best risk management practice and is in compliance with the Corporate Governance Code as updated by Consob in 2011, which states: “...Each issuer shall adopt an internal control and risk management system consisting of policies, procedures and organizational structures aimed at identifying, measuring, managing and monitoring the main risks....”.

The Group has also implemented a specific procedure that defines in detail the roles, responsibilities and methodologies for the Enterprise Risk Management (ERM) process.

This process requires a risk model to be set up that takes account of the Group’s characteristics, its multi-business vocation and the sector to which it belongs. This model is not a static reference, but is subject to periodic revision consistent with the evolution of the Group and the context in which it operates. The methodology adopted is characterized by the regular identification of the risks to which the Group is exposed. In this context, an assessment process is carried out which, through the involvement of all its structures, allows the Group to identify the most important risks and establish the relative controls and mitigation plans. At this stage, the involvement of risk owners is essential as responsible for the identification, assessment and update of risk scenarios (specific events in which risk can materialize) related to activities of its competence. This phase is carried out with the support and coordination of the Group Risk Management organizational structure through operating methods that allow clearly identifying risks, the related causes and management methods.

The methodology adopted is modular and leverages on the fine-tuning of the experience gained and methods of analysis used: on the one hand, it aims to develop the risk assessment further with specific reference to the consolidation of the mitigation process and on the other to develop and integrate risk management activities in business processes. This evolution is carried out consistent with the gradual increase in the awareness of management and the business structures about risk management issues, achieved among other things through the use of specific training support provided by Group Risk Management.

The ERM process also supports the Group’s ISO9001, ISO14001 and ISO45001 certifications.

Set out below is a description of the main risks and uncertainties to which the Group is exposed.

It is noted that in terms of greater estimated impact on the Group, the main types of risk are the following, in order of importance:

- legislative and regulatory amendments;
- energy scenario;
- economic and social-environmental context;
- business interruption;
- climate changes;
- information technology.

Risk of legislative and regulatory amendments

The A2A Group operates in highly regulated sectors whether they are managed under natural monopoly (such as infrastructure for the distribution and transport of electricity and gas, the integrated water cycle and district heating) or under free market regime (such as energy management, trading and sale of energy carriers and other services to customers).

The 2018 Budget Law, moreover, has extended the regulatory and control competences of the Authority for Electricity, Gas and Water System (AEEGSI, which changes its name to ARERA - Regulation Authority for Energy, Networks and the Environment) to include the separate and combined municipal and equivalent waste collection cycle.

Among the risk factors, therefore, the constant and not always predictable evolution of the legislative and regulatory framework of reference shall be considered.

For these risk factors, the Group adopts a legislative and regulatory risk monitoring and management policy in order to mitigate, to the extent possible, the effects through oversight on various levels,

which primarily involves collaborative dialogue with the institutions (ARERA, Competition and Market Protection Authority, Authority for Communications Guarantees, Ministry of Economic Development) and with technical bodies of the sector (GSE Energy Services Operator, GME Energy Markets Operator, Terna) as well as active participation in category associations and working groups established at said entities.

Also the view to European regulations, following the work of Brussels through participation in the tables of Eurelectric and Cedec, allows seeing “in advance” the subject of transposition into Italian law (in some cases automatic as per regulations).

To address these issues, the top management set up a specific organization structure called “Regulatory Affairs and Market”, reporting directly to the Managing Director, broadening the mandate, strengthening the link with the business and exceeding the vision for which the relationship with the regulator shall be interpreted solely as compliance (or litigation).

Constant dialogue with Business Units is also envisaged, not only for the simulation of impacts on current activities but also for the evaluation of new initiatives.

The Institutional and Regulatory Committee was also set up, composed of the Chairman and CEO, as well as the National Institutional Relations Manager and the Regulatory Affairs and Market Manager. This Committee meets periodically involving from time to time the Managers of the Business Units concerned, and the Managers of the staff structures in order to transfer to them the new regulations, agree on a corporate position on evolving standards and collect the requests of the business to convey them to the stakeholders of reference.

Regulatory Affairs and Market implemented constantly updated monitoring and control tools (ex. Regulatory Review produced every six months or the Regulatory Agenda drawn up at the time of the Budget/Plan), in order to consider the potential impacts on the regulation on the company.

From January 2017 and January 2019, respectively, the organizational structure also monitors the regulatory risk for the LGH Group and the ACSM-AGAM Group in order to monitor and manage their impact in a coordinated manner.

The main topics involved in current changes in regulations and legislation, with major potential effects on the Group, are as follows:

- the rules governing large-scale diversion of hydroelectric concessions following Law no. 12/2019 (converting the Simplification Decree) which, in article 11-quater, provided for an overall reorganization of the subject, giving the Regions an increasingly important role;
- implementation of the capacity market regulations approved by the Ministerial Decree of June 28, 2019, for which Terna is expected to hold auctions in the last quarter of the year;
- tenders concerning the granting of concessions for the gas distribution service;
- the PdL currently under discussion at the Environmental Commission of the Chamber on “*Provisions on public and participatory management of the integral water cycle*” for impacts that - if approved - it may have on the integrated water service;
- the certification of energy savings within the White Certificates mechanism by the Energy Services Manager;
- the impact on the development of district heating due to the start of regulation of the sector by ARERA for the aspects relating to commercial and technical quality only;
- the impact on the waste sector that the first ARERA measures may have after the granting of regulatory and control powers following the 2018 Budget Law;
- the provisions of the 2017 Competition Law on the termination of price protection schemes for electricity and gas customers from July 1, 2020.

Finally, it should be noted that, in view of the numerous interventions by the Antitrust Authority in the sectors of interest to the A2A Group (in terms of initiating investigations into abuse of a dominant position, agreements and investigations) the Board of Directors of A2A S.p.A. recently approved the adoption of the Antitrust Compliance Programme with the consequent appointment of a person responsible for its implementation.

For a more detailed discussion of these risks, reference should be made to the section “Regulatory developments and impacts on the Business Units of the A2A Group”.

Energy scenario risk (commodity price risk)

Given the features of the sectors in which it operates, the Group is exposed to energy scenario risk, namely the risk linked to changes in the price of energy raw materials (electricity, natural gas, coal and fuel oil) and the exchange rates connected with these. Significant, unexpected and/or structural changes in commodity prices, especially in the medium term, may result in a reduction in the Company's operating margins.

The Group has approved an Energy Risk Policy that regulates the procedures by which commodity risk are monitored and managed, or the highest level of variability to which the result is exposed with reference to the trend of prices of energy commodities.

Consistent with the provisions of the Policy, the commodity risk limits of the Group are defined and approved annually by the Board of Directors.

Market risk is managed by constantly monitoring the total net exposure of the Group's portfolio and addressing the main factors affecting the trend. Appropriate hedging strategies are defined, where necessary, designed to maintain this risk within the established limits, typically through hedging at 12 months and partially at 24 months.

The objective of stabilizing the cash flows generated by the asset portfolio and outstanding contracts is thus pursued through the management of physical contracts and derivative financial instruments, limiting to the extent possible, the volatility of the Group's economic and financial results following changes in commodity prices.

Economic and social-environmental context risk

The Group's activities are sensitive to economic cycles and general economic conditions in the countries in which it operates. A slowing economy could determine, for example, a drop in consumption and/or of industrial production, having as a result a negative effect on the demand for electricity and of other carriers offered by the Group, thereby affecting the results and prospects and preventing the implementation of planned development strategies. Moreover, the operational activities of sites and infrastructures, their profitability, the implementation of adjustment programs or conversion of certain facilities rather than growth in some business areas, planned by the Group, may be impaired as a result of possible actions taken by some stakeholders, not favourable to the presence of the sites due to a negative perception of Group activities in the areas served.

With regard to the activities of the Generation and Trading Business Unit, the current context of the energy markets in which the production facilities operate, with specific reference to the thermoelectric ones, confirms the moderately positive trend, with reference to an overall economic framework and a still favourable national and international energy context. However, there is still a risk that this trend could be interrupted or subject to a trend reversal, with economic repercussions also in combination with a possible unfavourable development of some aspects of the implementation of the capacity market regulation approved by the Decree of the Ministry of Economic Development of June 28, 2019. It is therefore evident that all the measures undertaken on generation plants at the time, such as activities and projects aimed at guaranteeing operating flexibility, efficiency and availability when these requirements are requested from the production units, remain active and operative. These include, in particular, the planning of flexible investments in combined cycle plants, modernization of plants and machinery, and structural cost containment programs.

In addition, a process of revision, standardization and overall adjustment of maintenance contracts was implemented as well as specific rationalization actions in the management of spare parts warehouses.

Also regarding the production of energy from thermoelectric sources, it is noted that the Group pays particular attention, by means of stable and cooperative dialogue, through the organizational structure Institutional and Territorial Relations, with institutions, local authorities and communities, to the issues of risk regarding the manufacturing sites that use or used fossil fuels (Monfalcone, Brindisi, San Filippo del Mela). This control is aimed at encouraging a correct perception of the plants as well as creating the best conditions to pursue the future implementation of adaptation and conversion projects according to innovative and advanced technologies, designed to encourage the development of electricity production from renewable sources, in the context of the National Energy Strategy. This is also in order to guarantee employment levels. Also with regard to the generation of electric power, there was the evolution of the issue of risk related to the award of large derivation hydroelectric concessions in connection with the conversion into law of the Law 12-2019 (conversion into law of the so-called "Simplification Decree Law") and the related criteria for implementation and definition of incremental costs for concessionaires compared with the previous regulations. In the context of the operation of

hydroelectric power plants, great attention is still paid to collaborative dialogue both with bodies and institutions and with stakeholders, aimed at reaching agreements and conventions to better manage any pressures exerted both with reference to the volumes of water to be released for other uses (e.g. irrigation/drinking) and with reference to the interaction with new infrastructures or systems.

With regard to the Waste Business Unit and the Networks and District Heating Business Unit, the issue is confirmed with regard to relations with certain stakeholders regarding the future construction of new plants, the expansion of existing plants or the provision of services in new territories. With specific reference to waste-to-energy, waste recovery and wastewater treatment plants, due to an incorrect perception of the works, forms of opposition and protest could be promoted through the use of social networks, with potential effects on the conduct of existing activities and the implementation of development programs. However, it should be noted that recently, there has been a movement of opinion more oriented, than in the past, to the solution of environmental issues through the construction of waste recovery and disposal plants.

To oversee the issues, the Group carries out an activity of constant dialogue with local communities and with the relevant Entities and Authorities, also through participation in public debates, special press conferences and communication and awareness campaigns, as well as through the organization of multi-stakeholder forums, designed to promote dialogue with the territory. The forum was established with the aim of identifying solutions that can respond in a targeted and effective manner to the needs and expectations of stakeholders and that allow promoting the environmental, economic and social sustainability activities carried out by the Company and the Group and services provided in the territory.

We also highlight that the Group Companies active in the business of public lighting and management of the integrated waste cycle, street cleaning and other essential services for the environment, sanitation and decorum of the city are particularly focused on the quality of services provided, also with a view to continuation of entrusting its activities in territories already served and in the awarding of public tenders for the same services in new areas; to maintain and develop the positioning of said services on the market and thus maintain and expand the Company's business, the organizational structures dedicated to constant monitoring of opportunities and effective and efficient management of tenders were enhanced.

An element of uncertainty that must be considered for a proper analysis of the economic and social context is represented by the "Brexit": on June 23, 2016, the UK expressed itself through a referendum to decide whether to stay in the European Union. More than 30 million people have voted, and 51.9% opted for "leave". The consequences of the "Brexit" are uncertain, also considering the fact that negotiations between the UK and the EU on exit conditions are still ongoing and that there could be an exit without agreement in October. The possible economic effects of the Brexit on the European Union could result in a significant decrease in growth for the United Kingdom, greater volatility in financial markets, lower exports to the UK due to the weakening of the pound on the euro but also in re-addressing investments expected in Great Britain to other EU countries.

Accordingly, in consideration of the business operated by the A2A Group in the country and in other EU and non-EU countries, it is not believed that the Group is particularly exposed to the "Brexit" in the achievement of the corporate objectives it intends to pursue.

Country risk

The A2A Group also operates in foreign countries characterized, for historical and cultural reasons, by a lower degree of political, social and economic stability than the OECD countries. A2A is exposed to the risks of possible negative developments in the political, social and macroeconomic framework that can produce situations such as decline in economic activity, financial difficulties of local governments, high levels of inflation, sharp devaluation of local currency, unpredictable changes in legislative and regulatory scenarios up to the potential risks of nationalization and/or expropriation of local assets or of non-convertibility and/or non-transferability of local currency that may temporarily or permanently affect the ability of the Group to operate under satisfactory economic conditions and/or the value of A2A assets.

With reference to the shareholding held in the Montenegro-based electricity company EPCG, on July 1, 2017, the A2A Group exercised the sale put option on all of the A2A S.p.A. shares, equal to 41.75% of the share capital of EPCG. The sale of portions, based on the latest agreements with the Government of Montenegro, is expected to end with payment of the last instalment by July 2019. The Government of Montenegro, a contractual counterparty to the exercise of the put option, has creditworthiness, as published by major rating agencies, equal or equivalent to B+.

Business interruption risk

The Group operates production sites and operationally and technologically complex services (power plants, waste recovery and disposal plants, cogeneration plants, distribution networks, waste collection and sanitation services, delivery services of drinking water, etc.), the malfunction, accidental damage or suspension of which could determine the unavailability and, consequently, result in economic losses and possible reputational damage due to the interruption of services provided.

These risks are linked to a variety of factors which, in the case of certain plants, could what is more be accentuated by changes in the competitive context and in the reference markets. Although the risk of unavailability of the plants and infrastructures may be considered an inherent part of the business and a risk that is impossible to eliminate entirely, the Group sets up preventive management strategies at all of the Business Units concerned to reduce the probability of such risks occurring and/or aimed at limiting any impact.

Safeguarding the Group's plants and infrastructure involves adopting and continuously updating procedures for maintenance, aimed at identifying and preventing potential critical situations, also amongst other things on the basis of specific engineering analyses carried out by dedicated technical staff, all in line with best practices. It also provides for periodic review of plants and networks, redesign of plant parts that over time have highlighted structural problems, sharing of operational experiences between production sites in order to spread the best and most innovative practices in the Group in terms of maintenance, as well as the provision of specific training courses for technical personnel. In addition, the A2A Group makes widespread use of instruments for the control and remote control of technical parameters for the monitoring and timely detection of any anomalies as well as having a back-up of the components needed to guarantee operational continuity, where possible. The integration process between the specialist engineering teams in the A2A Group has led to a strengthening of the skills relating to plant performance analyses.

As part of the Generation and Trading Business Unit, the progressive adoption of advanced software and systems is planned at all of the Group's production plants for detecting incipient technical issues and calculating the actual yield thereof, aimed at enabling an approach to be taken that is even more preventive compared to the past as far as the planning and performance of maintenance is concerned.

The gradual adoption of the above controls is also envisaged in the case of the acquisition of new production sites, to facilitate their alignment to the Group's standards.

With reference to the Waste Business Unit, it should be noted that recent developments in the context, including regulatory changes, constitute a significant element of risk with regard to the operating methods of the plants. In particular, the recent regulation introduced on the subject of End of Waste, pending the issue of specific European or national decrees, could put the operation of waste-to-energy plants at serious risk due to the eventual impossibility of continuing with the usual methods of delivery of boiler bottom slag. In fact, the permits for waste recovery plants could be considered illegitimate in light of the law converting the so-called D. L. "Unblock Sites" which refers to the Ministerial Decree of February 5, 1998 now outdated and obsolete. Uncertainties and opportunities are also related to the future transposition of European waste directives, known as the "circular economy package".

Regarding actions to ensure the smooth operation of the plants, specific activities are in place and monitoring and prevention tools have been installed for any possible risk of interruption to the waste transport, treatment and disposal services. In particular, specific procedures and controls are put in place to ensure conformity of waste entering the plants and the adoption of a unified protocol for the acceptance of waste entering the waste-to-energy plants, at site level. Furthermore, a dedicated software supports the carrying out of checks and, in general, the correct handling of waste. In addition, there are plants, systems and specific operating procedures for loading and exiting of the materials deposited at the waste storage and treatment sites aimed at limiting the risk of fire. The Business Unit is additionally introducing steps to optimize the management of certain sites in order to make the disposal process more efficient. Lastly, it is noted that structural interventions were planned and partly concluded on all plants of the Group, and in particular on the large waste-to-energy plants, designed to ensure a higher reliability and perspective of operability over time, such as the realization of electrical backup lines, replacing thermomechanical components that have reached the end of their technical life, renovation of structures designed to reduce deteriorations, extraordinary maintenance aimed at increasing the reliability of machinery and the thermal potential of these plants, upgrades of control systems of the plants that are technologically obsolete. To mitigate any repercussions on the Group's reputation due to a temporary impossibility to transport waste, mutual assistance

exists between the Group's plants and there is centralized coordination of planned stoppages for maintenance.

With reference to the eventual interruption issue of waste collection and urban sanitation services due to possible strikes by staff or exceptional weather events in the territories of the municipalities served by the Group Companies, the company has specific management and planning procedures for the recovery of collection activities or sweeping aimed at restoring the standards of service quality in the days immediately following. Means are also available to deal with situations of emergency, control and monitoring of vehicles in service at the areas served (even in online mode through the control room equipped with the latest technical equipment), spare parts warehouses managed and structured to deal with the statistically most recurrent faults.

Within the transport and distribution networks of energy and gas, it is noted that works were planned and started designed to increase the reliability of services and to ensure the ongoing appropriateness of the infrastructure with the evolution and expansion of urban areas and territories served by the various Group companies, such as the implementation and expansion of automation systems and remote control of stations and cabins, and the construction of new cabins for electricity and gas. As part of the operating activities of the electricity grids, the issue of continuity of service during periods of special climatic conditions with potential reputational risks arising from possible interruptions of service delivery is confirmed as particularly relevant. In order to deal with these situations, in addition to the usual maintenance activities, the Group has planned and started to upgrade its electricity transformation plants with specific reference to the construction of new primary cabins, the extension of remote control systems for cabins also aimed at reducing the time needed to restore the distribution service, rationalisation of the meshing of electrical networks and extraordinary plans for the reclamation of components considered critical for the continuity of operations. There are also and currently the subject of unification and optimization, in view of the recent organizational developments, remote operational controls, advanced technical safety tools, emergency intervention teams as well as specific safeguards for infrastructure which, during exceptional phenomena difficult to predict in terms of location of the same and assessment of their effects, are more exposed to risks of interruption in the delivery of services.

With reference to Linea Group Holding, the main issue of risk concern any faults on energy production plants, as well as on primary and secondary transformation stations or on the electricity distribution network, which could lead to significant discontinuities with consequent impacts in terms of corporate image. To address these risks, the Company has identified the situations of greatest technical obsolescence and is currently investing for the complete renovation of lines and metering equipment and a number of receiver stations on the network of the city of Cremona.

The A2A Group takes an active part in projects for the development of the electricity network from a "smart grid" standpoint, meaning by this a network with which it is possible to exchange information on energy flows and manage demand peaks more efficiently, thus reducing the risk of interruption. In particular, the Networks & District Heating Business Unit is engaged in the development of new solutions for the so-called smart grids, where through the introduction of digital technology new features are realized to address the increasing complexity resulting from the deployment of distributed generation sources connected to the LV networks and to better meet the demands of the Regulator and the expectations of customers. Also within the context of innovative business, the Group is committed to developing the offer, for private and institutional customers, of smart services such as remote metering, video surveillance, LED public lighting, parking, sharing and power supply services of electric vehicles as well as energy efficiency services. The risks associated with the provision and development of said services relate to the quality of the same, with consequent repercussions on the level of customer satisfaction. To oversee said issues, we highlight remote monitoring of plants consisting of receiving signals and alarms from equipment and systems, maintenance procedures to ensure efficiency and safety of users, procedural body for handling complaints and other Quality Management System procedures.

Operative means of regulating the customer's consumption during specific time bands have been successfully tested in the district heating sector; these are designed to avoid excessive peaks in the use of installed power with consequent improvement of working of the networks. In addition, studies are underway for the construction of new plants is being (electric boilers to be kept in reserve, construction of thermal accumulations at some of the Company's sites) and new heat transport networks, aimed at covering peak energy demand and improving the structure of the network and revamping of existing networks. These operations are supplemented, as part of network maintenance, by constant engineering analysis to support repair work; innovative techniques are also being evaluated for the

detection of leaks from networks that involve the use of drones or dyes of the water used to transport heat. Measures were also carried out to ensure the continuity of the district heating service are also underway for situations in which there is a temporary interruption of the supply of heat to the network by the waste-to-energy plants of the Group.

A significant risk issue, which is transversal to all business areas required to manage plants and infrastructures, is that related to unauthorized physical access of personnel outside the Group at the premises, facilities or ICT infrastructures, with potential repercussions on the correct performance of the operating activities and on the safety of operating personnel, unauthorized third parties, the sites and the surrounding environment. To mitigate these possible events, we note the implementation of signal convergence activities from the sites and infrastructures of the Group Companies at the A2A Security Control Room. In addition, the Security Policy has recently been issued, and procedures are in place to regulate control of access to plants and surveillance services. Further interventions are being evaluated and have already been partly realized such as projects for the standardisation of access registration systems at offices and plants, studies on the situation of gas plants to increase the their safety level, strengthening of anti-intrusion alarm system and the installation of control systems for badge access, infra-red cameras and systems. As regards access to the Data Processing Centers (CED - Centro Elaborazione Dati), checks have been carried out on the effectiveness of the current control systems and the authorization procedures have been reviewed. The initiatives listed above are coordinated by the organizational structure Group Security, which is responsible for the coordination of all security aspects in order to ensure the protection of human and material resources, industrial assets and information managed by the A2A Group.

Finally, the Group takes out insurance cover against any direct and indirect damage which may arise from other types of risk. As part of the insurance contract periodically (every 3 years), inspections are carried out on the plants and measures to improve the safety of assets and loss prevention are recommended/verified. The contractual conditions that characterize the insurance policies were revised to align them to the way in which the plants work and to energy market conditions.

Climate change risk

Risks related to climate change refer to the possibility that the production and consumption of products (electricity, gas for heating) and services (district heating, heat management) provided by the Group may be negatively affected by unfavourable conditions, such as the scarcity of rainfall or particularly mild temperatures in the hot season, with consequent negative effects on expected profitability.

With reference to the Generation and Trading Business Unit, low rainfall would result in a lower availability of water resources compared to expected values (based on statistical estimates). To ensure optimum exploitation of available water resources, even in the presence of periods characterized by particular deficiency, we note organizational monitoring structure consisting of business units dedicated to the development of analyses and engineering models to support the programming, both medium and short-term, of hydroelectric plants. We also note that the hydroelectric plants of the Group have different characteristics in terms of water resource exploitation and are distributed on the Italian territory.

As regards the Networks & District Heating and Market Business Units, milder winter temperatures than expected would result in lower demand on the part of end users, of gas and heat used for heating. The structure consists of company business units devoted to the constant updating of demand forecasts in relation to the expected trend of temperatures as well as the consequent management and optimization of the production/supply of heat; it is also highlighted that new initiatives are being studied to provide heat power to be allocated to district heating users at more economical conditions than gas utilization, by recovering heat from plants and infrastructures of the Group and third parties, such as treatment facilities, aqueducts and steel mills. Finally, there was the use of innovative forecasting systems and the launch of pilot projects to cover climate risk (weather derivatives) for the district heating sector.

Particularly high temperatures in the summer periods give rise to risks of disruption of the electricity distribution service, the management of which is described in the chapter on business interruption in this report.

With reference to the Integrated Water Service, there is also the risk linked to the scarcity of the water resource destined to the distribution of drinking water in the event of particularly drought seasons, with consequent negative repercussions of a mainly reputational nature; to guarantee the continuity of the service, the A2A Group monitors and maps leaks from the aqueducts to identify the priority of

the interventions, has commissioned studies to improve the interconnection of the aqueducts and is collaborating with the University of Brescia for the study and application of the Water Safety Plan, a project to systematically guarantee the safety of a drinking water system, the quality of the water supplied and the protection of consumer health.

The A2A Group also monitors the risk resulting from the lack of specific and adequate contingency plans to manage in a timely manner the consequences of extreme phenomena such as landslides, floods or other unforeseeable natural events; the issue is mitigated by the presence of emergency procedures at plant level which, for hydroelectric plants, are also drawn up in compliance with civil protection documents issued by the Prefectures. Lastly, it must be considered that these extreme natural phenomena may not directly affect the Group's plants but, in any case, interfere with further infrastructures of hydraulic systems (channels, dams, ducts) or electrical systems (Terna's high voltage lines).

In 2019, the A2A Group launched a specific analysis of risks related to climate change as part of its adherence to the recommendations of the Task Force on Climate Related Financial Disclosure.

Interest rate risk

Interest rate risk is related to the uncertainty associated with the trend in interest rates, changes in which can result in, given a certain amount and composition of debt, an increase in net financial expenses. The volatility of financial expenses associated to the performance of interest rates is therefore monitored and mitigated through a policy of interest rate risk management aimed at identifying a balanced mix of fixed-rate and floating rate loans and the use of derivatives that limit the effects of fluctuations in interest rates.

To provide a better understanding of the risks of interest rate fluctuations to which the Group is subjected every six months at December 31 and June 30, a sensitivity analysis was conducted of net financial expenses and valuation items of derivative financial contracts as a result of interest rate fluctuations. The section "Other Information/Interest Rate Risk" of the consolidated Financial Report illustrates the effects on the change in the fair value of derivatives resulting from a change in the forward curve of interest rates of +/- 50 bps.

Credit risk

Credit risk relates to the possibility that a counterparty, commercial or trading, may be in default, or fail to respect its commitment in the manner and timing provided by contract. This type of risk is managed by the Group through specific procedures and appropriate mitigation actions.

This risk is overseen by both the Credit Management function allocated centrally (and the corresponding functions of the operating companies) and the Group Risk Management Organizational Unit responsible for supporting the Group companies with reference to both commercial and trading activities.

Specifically, with regard to trading activities and in compliance with the procedures in place (Energy Risk Policy, Risk Management, Deal Life Cycle), Group Risk Management, based on proprietary systems, assesses the Rating of Counterparties, defines the Probability of Default and attributes the Maximum Exposure to Risk, systematically verifying compliance with the limits of Counterparty Risk.

A further parameter monitored, which helps to limit the risk of concentration on the individual counterparty, is represented by the Credit VaR, namely the assessment of risk in terms of potential loss, with a certain confidence level, associated to the entire loan portfolio.

In relation to commercial counterparties and in compliance with the procedures in place (Credit Risk Policy), risk is mitigated through preventive assessment, attainment of guarantees and collateral, compensation management, optimization of credit reminders and recovery processes as well as the use of monitoring and reporting tools. Group Risk Management intervenes in the management of commercial credit both directly and indirectly, through a specific proprietary model, in defining the creditworthiness and credit limit of business customers, for which derogation to guarantee release is required.

Liquidity risk

Liquidity risk regards the Group's timely ability to meet its payment commitments. To hedge this risk, the Group ensures the maintenance of adequate financial resources, as well as a liquidity buffer sufficient to meet unexpected commitments. At June 30, 2019, the Group contracted revolving committed credit lines for 740 million euro, unused. It also has unused long-term bank financing for a

total of 40 million euro and cash and cash equivalents totalling 553 million euro. The management of liquidity risk is pursued by the Group also by maintaining a Bond Issue Program (Euro Medium Term Note Programme) sufficiently large and partially unused as to enable the Company to timely resort to the Capital market. At June 30, 2019, this program amounts to 4 billion euro, of which 1,438 million euro still available.

Covenants compliance risk on debt

This risk exists if the loan agreements provide for the option by the lender, upon the occurrence of certain events, to request early repayment of the loan, thus entailing a potential liquidity risk for the Group. The section “Other Information/Covenants Compliance Risk” of the consolidated Financial Report illustrates in detail these risks related to the A2A Group. The same section also lists the loans that contain financial covenants. In any case, at June 30, 2019, there was no situation of non-compliance with the covenants of the A2A Group companies.

Environmental risk

The risks associated with events that impact the environment or the health of the population living in the areas affected by the Group’s activities are the object of increasingly close attention by public regulators and ever more stringent legislation. This type of risk covers all activities of the Group, with particular reference to the disposal of production waste, emissions resulting from the production processes, the management of the collection, storage, treatment and disposal of waste, the supply of basic goods such as drinking water, waste water treatment, the management of emptying and maintenance of the reservoirs for the collection of water resources for the production of electricity.

To monitor these potential risk events, the Group has implemented various actions: procedures for design and construction of deposit and storage sites of waste materials to prevent pollution phenomena, monitoring systems and the presence of static and dynamic barriers enabling to detect pollution phenomena attributable to the same sites, systems for prevention and/or abatement of polluting concentrations in gaseous emissions, purification plants for waste water of energy production and waste treatment plants, systems for continuous/period measurement of polluting concentrations in emissions. With regard to the issue concerning the management of reservoirs, with specific reference to maintenance/removal of the sediments and the corresponding possible negative effects on water and on the local area, it is noted that there are controlled and specific arrangements for the execution of drainage operations to minimize the effects on the environment. Lastly, it is noted that the Group pays particular attention, as part of the acquisition of new assets, to the possible presence of “environmental liabilities”, i.e. situations of risk or latent non-compliance related to the operation of establishments and connected to the previous management, in order to implement all measures aimed at their removal.

The Group directly oversees the risk issues concerned also through the Environment, Health and Safety Organizational Structures of the company and site, which provide the necessary support to employees, officers and management in the oversight of significant environmental aspects, in implementing developments in regulations and in the HSE (Health Safety Environment) management system.

The Environment, Health and Safety Organizational Structure also supports senior management in establishing company policy in these areas, checking that this is implemented properly in compliance with the rules applicable in all areas and internal processes. The main activities of the structure consist in the definition of guidelines, oversight of Environment and Safety regulations and dissemination thereof within the Group and in conducting regular audits, both in terms of regulatory compliance and compliance with company procedures. The organisational structure responsible for carrying out environmental and safety audits since 2019 also reports functionally to the Internal Audit function.

The Group has adopted a document entitled “Policy for the Quality, Environment and Safety of the A2A Group”. This policy is the tool which now sets out the Group’s approach to such questions. This document, which is widely distributed both internally and externally, explains the values which underlie the Group’s operations and which the Environment, Health and Safety Organizational Structure is committed to disseminating and sharing as guidance for the day-to-day work of all concerned.

The operational implementation of the policy is carried out through the use of an Environmental Management System (EMAS) by those operating entities of the Group with significant environmental aspects. This system provides for a program of progressive extension and upgrading to the standards of ISO14001 certification for the Group’s main activities having a greater impact on the environment, as well as for obtaining EMAS certification for the Group’s main plants.

In addition, the organizational structure Enterprise Risk Management, in coordination with the organizational structures Environment, Health and Safety, dialogues with the Business Unit managers to support the identification and study of possible environmental risks even in the implementation of the new standard ISO14001:2015. As mentioned above, the environmental management systems in place, thus allow identifying and overseeing the environmental aspects related to the activities and processes while minimizing risk on the environment due to the activities of the Group.

The Group is active in the prevention of anomalous situations or particular external events, such as, for example, risk issues related to the transfer of off-spec materials to plants; as prevention, the Group carries out strict control on the materials entering the plants and has adopted internal guidelines for the control of waste, which are then implemented with specific procedures at plant level. In addition, research, testing and selection of continuous monitoring systems for micro-pollutant emissions, in line with the best available technologies, is in the final phase. To ensure compliance with the prescribed limits, materials and techniques are used for the flue gas purification system that can also absorb any presence of greater quantities of micro-pollutants than expected. Finally, a collaboration is underway with the Politecnico di Milano in a research activity aimed at further improving the efficiency of emission abatement systems.

Other possible external events concern the anomalous discharges of pollutants in public sewage systems that convey to the Group's purification plants; to timely intercept and manage any peaks of pollutant concentration, a program has been launched to upgrade analysis stations of waste water that transits through public sewers before entering the purification plants. With reference to the issue of urban waste water treatment, actions are being evaluated, planned and started for the upgrading and enhancement of existing infrastructure.

Particular attention is paid to the risk of fire at waste storage and treatment sites, such as ecological platforms (recycling plants) and recovery plants: the issue is managed both in the context of security and prevention of unauthorised access and through the implementation of prevention measures at the main sites, in addition to those indicated in the fire prevention certificate. To this end, a transversal working group was also set up with the aim of managing the issue in a homogeneous manner among the various companies and sites of the Waste Business Unit, in line with internal best practices.

In the area of gas and electricity distribution, there is a procedural body focused on controls concerning the management of excavated material deriving from construction sites on the networks, the definition of check lists on environmental aspects, the monitoring of the activities of contractors in compliance with the provisions of the company guidelines, specific training programmes for operating personnel at sites equipped with temporary storage to guard against potential risks resulting from the non-optimal management of waste produced directly by the company's own activities and indirectly by the activities of its contractors.

Another risk area concerns the possible exploitation of environmental data and information which, although without foundation, may damage the image of the Group or hinder the smooth operation of the plants. To monitor these risks, the Group carries out constant monitoring of the environmental parameters of both the quality of water distributed and their emissions, and manages the publication of specific reports. The Group is also involved at various levels in constant and transparent dialogue in dealings with entities, with the communities of reference and with stakeholders, also through tools such as Environmental declarations (published for sites participating in the EMAS regulation).

In particular, in order to always be in line with the best techniques available in the environmental field and to efficiently plan any new Capex that may be necessary, the Group participated and participates in working groups to define and apply BREF (Best Available Techniques Reference Document) such as those for Waste Treatment and Waste Incineration.

The Group also monitors regulations in the environmental field in order to adopt a preventive and precautionary approach for areas in which environmental legislation is not univocally defined. In this context, the possible direct and indirect consequences on business were assessed as regards the recent law converting the so-called Decree Law "Unblock Sites" in the End of Waste part.

The process of updating the Organizational and Management Model as per Legislative Decree no. 231/2001 with reference to the introduction of environmental offences following the enactment of Law 68/2015 was completed for the parent company and for the main companies and is being progressively extended to the other Group companies as well as those recently incorporated and/or acquired.

The A2A Group has taken out insurance cover against damage arising from both accidental and gradual pollution in order to cover any residual environmental risk, i.e. against events caused by a sudden and unpredictable fact, and against the environmental damage inherent in continuing operations.

Information technology risks

The activities of the A2A Group are managed through ICT systems which support the main business processes: operational, administrative and commercial. Potential risk factors include the inadequacy, fragmentation of existing platforms of such systems compared to business needs or the failure to keep these updated, possible “downtime” making the systems unavailable and the inadequate handling of the aspects linked to the integrity and confidentiality of information. These risk factors are mitigated by controls governed by the Group Information & Communication Technology (ICT) Organizational Structure.

The process within the Group of integrating and consolidating its ICT systems, also determined on the basis of past and present changes in corporate structures, has led to a number of important objectives being reached. Following the integration of distribution support systems on a single platform, the program for the convergence of the main systems supporting commercial activities has also been completed. In areas where there are still inadequacy and fragmentation of systems and platforms used, in consequence of which there may be inefficiencies in the implementation of business processes such as Customer Relationship Management - CRM, billing and credit management, it is noted that activities have been planned and started for the definition and subsequent implementation of activities to rationalize and renew existing platforms. The Group will continue to develop its information system structure and improve its efficiency by progressive implementation of long-term architectural strategic plan that is periodically updated.

In addition to defining outsourcing contracts for ICT services that envisage pre-defined service level agreements, the Group has developed a process to ensure operating continuity, even in the event of unavailability of one of the two Data Processing Centers (CED - Centro Elaborazione Dati), of some systems of particular relevance for the business. Furthermore, the transportation activities of the Milan Data Center were completed at the infrastructure of an external supplier, thus making a significant step forward in achieving higher levels of security in terms of service continuity. It is also underlined that there is currently the availability of suppliers and resources within the Group to cope with logical attacks, viral attacks and system failures and that the assessment of vulnerabilities and the related remediation plan for the most critical applications is underway. Lastly, the Business Continuity Plan structuring activities were started, aimed at prospectively establishing the instrument through which the Group will be able to deal with further scenarios of unavailability of services for the areas considered most critical; as part of this project, the evaluation and subsequent implementation of alternative solutions for infrastructural improvement of the Brescia DPC is particularly important, with the aim of further increasing the levels of reliability and continuity in the provision of ICT services.

Data confidentiality and security are subject to specific controls by the Group, through internal policies, tools to segregate access to information, as well as through specific contractual agreements with any third parties who may have to access sensitive information. To further improve the oversight in place, the alignment is being performed between the model of organizational roles and model of technical roles of Segregation of Duties implemented in the systems; said verification will be followed by the implementation of profiles designed to strengthen security aspects for critical information systems. Network Access Control (NAC) measures have been introduced to the elements of the corporate network (computers, servers, firewalls and routers) and Cyberark tools, which represent a specific approach to network management and security and which aim to strengthen network security, monitoring all access based on the security policy. An agreement has been signed with CNAIPIC (National IT Anti-Crime Center for the Protection of Critical Infrastructures), in order to establish forms of direct collaboration and management of possible incidents. Lastly, the activities related to the organic ICT security masterplan for the three-year period 2018/2020 are being implemented. In this regard, specific policies have been prepared on the use of mobile devices, which are increasingly used today for carrying out business activities. Also with reference to the issue of data confidentiality and security, we highlight the Group's commitment to the definition and implementation of organizational and technological measures relating to the provisions of EU Regulation 2016/679 alias “GDPR”; the coordination of the issue is guaranteed through the “Group Compliance” organizational structure. In addition, an audit was completed in the ICT area of the Group, aimed at identifying the main characteristics and potential critical points of the current industrial process management systems (such as, for example, SCADA systems) which, due to an ever-increasing integration with IT (Information Technology) systems, are potentially exposed to security and integrity risks; the

evidence of this study led to the definition of a development plan for a new model of governance of these systems, as well as to the planning of the activities for the creation of a SOC (Security Operation Center) for the monitoring of the process control systems of the plants and infrastructures of the network.

With reference to Linea Group Holding, starting from the previous year, the company implemented a series of activities aimed at embarking on the operational path of integration with the A2A Group; in this regard, it is worth highlighting the issue of risk associated with convergence, on the broader A2A application map, of the company systems and platforms. To oversee this issue, we highlight that the necessary measures will be implemented to minimize the risk deriving from data conversions and transfer on different application maps. With the conferral of the subsidiary Linea Com S.r.l. into A2A Smart City S.p.A., a common and integrated approach at the level of the Group's ICT services was shared.

Health and safety risk

The Group operates in a heterogeneous business environment characterized by a strong technology element and the presence of personnel at its plants and throughout its territory.

Certain Group activities are, by their nature, more exposed to the risk of “typically work-related” accidents linked to the operational services in the territory and the performance of technical services and activities at the plants.

Through the Quality, Environment and Safety Policy (also issued as part of the personnel health and safety management system to comply with ISO45001 and OHSAS 18001), the prevention measures adopted aim for a “zero risk” objective, encouraging a constant rise in the level of safety in the workplace. In particular, in this respect, the adoption of additional models for measuring the Health and Safety risk at the level of single plant is underway.

A central Prevention and Protection Service has been set up as part of the Quality, Environment and Safety Organizational Structure in order to harmonize the objectives of safety and protection in Group companies and to monitor that these standards are also being followed by contractors at both the prequalification stage and the execution stage at worksites. In this sense, the model for managing contracts from a health and safety standpoint has been recently updated.

The organizational control structure, among other activities, carries out specific audits aimed at monitoring compliance with legislation as well as personnel update training. In this regard, specific obligatory training plans are defined and implemented for each company role and task. In addition, the Leadership in Health and Safety – LiHS training programs have been implemented and are being progressively extended to all Business Units, which envisage at all levels emotional involvement on the issue of security and the dissemination of security culture through leaders identified within the operating areas.

A project to revise the present organizational model is ongoing based on the establishment of guidelines, methodologies, instruments and controls provided by the Environment, Health and Safety Organizational Structure and assisted by the support of specific Environment, Health and Safety functions in each Business Unit and by the active involvement of the operating structures.

Finally, the employee health surveillance management system is active, conducted with the aid of a team of doctors located in the various areas who carry out periodic assessments on the state of health of personnel. As part of this system, there are specific analysis and reporting tools regarding the results of the health supervision process.

In support of the process of continuous improvement of health and safety, it should be noted that i) studies are underway to identify ever better and innovative procedural, technological, ergonomic and cultural solutions to be applied to operational activities in the field of waste collection and sanitation and ii) a system for the analysis and control of accidents and injuries has been developed. This system is active at the main Group Companies and provides for periodic reporting, which by means of increasingly detailed specific indices and information will provide support for identifying the causes of accidents and injuries and taking corrective and mitigating action. Regarding safety, a further issue is connected to the safety risks for employees working in direct contact with the public and/or citizens, for example in activities related to the recovery of arrears, checks on the correctness of recycling, substitutions/removal of meters. To manage these risks, the Group carries out specific training activities for its staff.

In addition, the health and safety risks for the A2A Group take on an extensive connotation with the possible involvement of third parties (contractors' personnel, users, citizens, etc.) in connection with the nature and methods of carrying out various businesses operated by Group companies; reference is made, for example, to any accidents in the management of traffic lights and public lighting systems, the management of electricity and gas distribution networks, also with reference to aspects of interference of the relative work sites with the urban fabric of reference, the collection of waste and street sweeping, which involves the use of road vehicles, including large ones.

To mitigate this risk issue, activities have been planned for replacement of the most outdated electrical circuits, test campaigns and, if necessary, replacement of older supports, and implementation was completed of new systems for remote control of lighting points. With regard to road safety for vehicles carrying out urban waste collection and sanitation activities, training and awareness-raising activities have been carried out for vehicle drivers, and the adoption of technological systems for remote control and limiting vehicle speed is being considered.

The organizational structure Enterprise Risk Management, in coordination with the organizational structures Environment, Health and Safety, dialogues with the Business Unit managers to support the identification and study of possible risks for the health and safety management system also in implementation of the new standard ISO45001:2018.



10

Sustainability
responsible
management

Sustainability responsible management

For over twenty years, sustainability issues have been a focal point in the political agendas of countries, given the widespread, and ever increasing awareness by governments, companies and civil society of the need to activate concrete actions to ensure sustainable development. A further role in this trend is being played by the UN 2030 Agenda, with its 17 Sustainable Development Goals.

In April 2016, A2A redesigned its sustainability strategy in light of the UN Agenda priorities, defining a Sustainability Policy through hinged on four cornerstones: circular economy, decarbonisation, smartness in networks and services and people innovation. Also this year, our commitments and improvement actions have been defined in the Sustainability Plan, updated with the new time horizon 2019-2023 and integrated into the Group's Business Plan.

On May 13, 2019, the third Group Integrated Report was presented to the A2A Shareholders' Meeting, which as of the previous year, is also the Non-Financial Statement pursuant to Legislative Decree 254/16. Over time, this document has taken on different forms and names, but continues to be drawn up according to rigorous and internationally shared standards and methodologies, in particular the Integrated Reporting Framework (IR Framework) and the international standards of the Global Reporting Initiative (GRI).

This year too, the monitoring of the Sustainability Plan was reported in the document, which showed that most of the 77 indicators are making significant progress, giving reason for the work that the Group is carrying out.

Also thanks to this performance, in the first few months of 2019, A2A obtained a better evaluation of its rating by Standard Ethics: from EE- (Adequate) to EE (Strong). The rating is linked to the credit line entered into in August 2018, which sees the interest rate linked to the achievement of specific environmental KPIs combined with the annual ESG rating of Standard Ethics.

Sustainability performance reporting is also continuing at local level. In particular, in the first part of 2019, the 2018 Sustainability Reports of Valtellina-Valchiavenna, of Piedmont and of Milan were published and presented in public events. Also for this year, the documents contain a description of the contribution to the achievement of the UN's sustainable development objectives with reference to the territory and provide a paper summary version and an in-depth version on the web. Inside the platform www.forumascolto2a.eu a dedicated section has been created, in which it is possible to obtain more information on the Group's performance in the various territories, as well as retrace the information and projects that A2A carried out in 2018.

As part of the stakeholder listening programme, called forumAscolto, A2A's commitment to supporting the projects selected through the "creiAMO FVG" call to action continued. "Albergo diffuso Sauris", which won for the province of Udine, inaugurated on June 30 "Sailing Sauris", a program of services that stimulate active tourism, giving visitors the opportunity to rent sail boats, canoes, etc.

Also in the context of the involvement of territories on sustainability issues, on February 1, 2019, following the forumAscolto Piedmont, which was held in Asti on November 22, 2018, the "call for ideas" "creiAMO PIEMONTE" was launched with the aim of supporting initiatives that can create shared value focused on two thematic areas: 1) the development of the use of renewable sources and local resources for energy production; 2) the implementation of initiatives to promote environmental and social sustainability, focusing on young people. In the event for the presentation of Piedmont's 2018 Sustainability Report, the winners were the "Circular Market" project and the "Bremen Musicians" project, which will be guaranteed, as in the case of Friuli Venezia Giulia, in addition to a total financial support of 25 thousand euro each, a path of light incubation for the development of their project idea, in collaboration with a local incubator.

The Banco dell'energia – the social responsibility project that emerged from the Brescia forum – promoted by A2A with the AEM Foundation and the ASM Foundation has relaunched again, in collaboration with the Cariplo Foundation, the "Doniamo Energia2" call for proposals to identify further actions aimed at supporting economic and social vulnerability throughout Lombardy. In December 2018, the ranking of the winning projects was published: 16 projects with a total of 205 organizations working in a network. And, thanks to a partnership with UBI Comunità, UBI Banca has issued the Social Bond "UBI Comunità per Banco dell'energia Onlus", the proceeds of which, amounting to 100,000 euro, will contribute to supporting 200 struggling families through economic support and work orientation.

As far as educational activities are concerned, the “Missione Terra Global Goal Protocol” competition, launched for the 2018-2019 school year and dedicated to Italian primary and secondary schools and focused on the 17 Global Goals promoted by the UN, has closed. 210 classes from 127 Italian schools participated.

Also, the new website for schools will be launched, a single innovative digital platform, where it is possible to find a lot of information on the initiatives dedicated by A2A to schools, all free of charge, on issues such as energy and the environment, new technologies applied to services for cities, sustainability and the objectives of sustainable development.

Finally, in the first half of 2019 the sustainability section of the website www.a2a.eu was completely redesigned, with the aim of simplifying browsing and accompanying users, stakeholders, students or just curious people in three directions of discovery of the world of sustainability of A2A: through the 10 SDGs that inspire our Policy or starting from the 4 PILLARS that characterize it or discovering the MATERIAL THEMES, which describe in concrete terms what A2A does for the communities in which it operates. These three browsing keys are linked together and each action of the Plan is measurable and represented by graphs that allow monitoring the progress of the Sustainability Policy year by year.

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Sustainability
responsible
management

Sustainability
responsible
management



11

Certification of the
condensed half-yearly
financial statements
pursuant to art. 154-bis,
paragraph 5 of Legislative
Decree no. 58/98

Certification of the condensed half-yearly financial statements pursuant to art. 154-bis, paragraph 5 of Legislative Decree no. 58/98

1. The undersigned Luca Camerano, in the name and on behalf of the entire Board of Directors of A2A S.p.A., and Andrea Crenna, as manager in charge of preparing the corporate accounting documents of A2A S.p.A., certify, also taking into account the contents of article 154-bis, paragraphs 3 and 4, of Legislative Decree no. 58 of February 24, 1998:
 - the adequacy in relation to the characteristics of the company and
 - the effective applicationof administrative and accounting procedures for the preparation of the condensed half-year financial statements in the first half-year of 2019.
2. It is also certified that:
 - 2.1 The condensed half-year financial statements:
 - a) are prepared in accordance with International Financial Reporting Standards as endorsed by the European Community pursuant to Regulation (EC) no. 1606/2002 of the European Parliament and of the Council of July 19, 2002;
 - b) correspond to the information contained in the accounting ledgers and records;
 - c) provide a true and fair representation of the equity, economic and financial situation of the issuer and the whole of the companies included in the scope of consolidation.
 - 2.2 The half-year report on operations includes a reliable analysis of the references to the significant events occurred in the first six months of the year and their incidence on the condensed half-year financial statements, as well as a description of the main risks and uncertainties for the remaining six months of the year. The half-year report on operations also includes a reliable analysis of the information regarding transactions with related parties.

Milan, August 2, 2019

Luca Camerano
(for the Board of Directors)

Andrea Crenna
(Manager in charge of
preparing the corporate
accounting documents)

Independent Auditor's Report



A2A S.p.A.

Review report on the interim condensed consolidated financial statements as at 30 June 2019

(Translation from the original Italian text)



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Review report on the interim condensed consolidated financial statements (Translation from the original Italian text)

To the Shareholders of
A2A S.p.A.

Introduction

We have reviewed the interim condensed consolidated financial statements, comprising the consolidated balance sheet, the consolidated income statement, the consolidated statement of comprehensive income, the statement of changes in Group equity and consolidated cash flow statement and the related explanatory notes of A2A S.p.A. and its subsidiaries (the "A2A Group") as of 30 June 2019. The Directors of A2A S.p.A. are responsible for the preparation of the interim condensed consolidated financial statements in conformity with the International Financial Reporting Standard applicable to interim financial reporting (IAS 34) as adopted by the European Union. Our responsibility is to express a conclusion on these interim condensed consolidated financial statements based on our review.

Scope of Review

We conducted our review in accordance with review standards recommended by Consob (the Italian Stock Exchange Regulatory Agency) in its Resolution no. 10867 of 31 July 1997. A review of interim condensed consolidated financial statements consists of making inquiries, primarily of persons responsible for financial and accounting matters, and applying analytical and other review procedures. A review is substantially less in scope than an audit conducted in accordance with International Standards on Auditing (ISA Italia) and consequently does not enable us to obtain assurance that we would become aware of all significant matters that might be identified in an audit. Accordingly, we do not express an audit opinion on the interim condensed consolidated financial statements.

Conclusion

Based on our review, nothing has come to our attention that causes us to believe that the interim condensed consolidated financial statements of A2A Group as of June 30, 2019 are not prepared, in all material respects, in conformity with the International Financial Reporting Standard applicable to interim financial reporting (IAS 34) as adopted by the European Union.

Milan, 5 August 2019

EY S.p.A.
Signed by: Paolo Zocchi, Partner

This report has been translated into the English language solely for the convenience of international readers

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