a2a
LIFE COMPANY

2022
Half-yearly financial report

June 30, 2022

a2a
LIFE COMPANY

Half-yearly financial report at June 30, 2022

these Financial Statements are available at the website
www.a2a.eu

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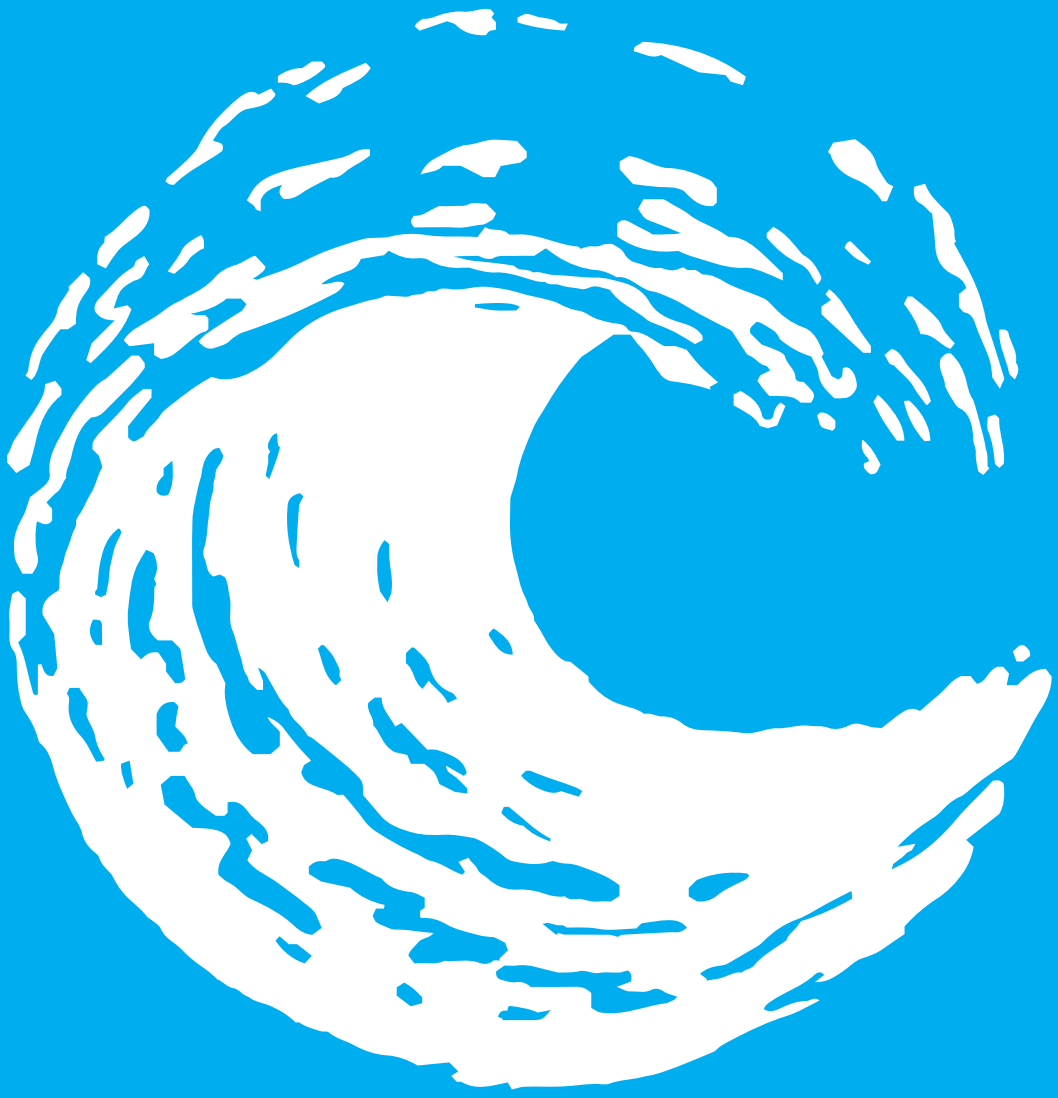
This is a translation of the Italian original "Relazione finanziaria semestrale al 30 giugno 2022" and has been prepared solely for the convenience of international readers. In the event of any ambiguity the Italian text will prevail. The Italian original is available at the website www.a2a.eu.



Corporate boards

Board of Directors

CHAIRMAN
Marco Emilio Angelo Patuano

DEPUTY CHAIRMAN
Giovanni Comboni

CEO AND GENERAL MANAGER
Renato Mazzoncini

DIRECTORS
Stefania Bariatti
Vincenzo Cariello
Federico Maurizio d'Andrea
Luigi De Paoli
Gaudiana Giusti
Fabio Lavini
Christine Perrotti
Secondina Giulia Ravera
Maria Grazia Speranza

Board of Statutory Auditors

CHAIRMAN
Giacinto Gaetano Sarubbi

STANDING AUDITORS
Maurizio Leonardo Lombardi
Chiara Segala

ALTERNATE AUDITORS
Antonio Passantino
Patrizia Tettamanzi

Independent Auditors
EY S.p.A.

1

Key figures of the A2A Group

1.1 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, hydroelectric and other renewable plants
- Energy Management

Market
- Sale of Electricity and Gas
- Energy efficiency
- Electric mobility

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

Smart Infrastructures
- Electricity networks
- Gas networks
- Integrated water cycle
- District Heating services
- Heat management services
- Development and management of technological infrastructures for integrated digital services
- Public lighting

Corporate
- Corporate 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.

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Business Units

Geographical areas of activity

Group structure

Financial highlights at June 30, 2022

Shareholdings

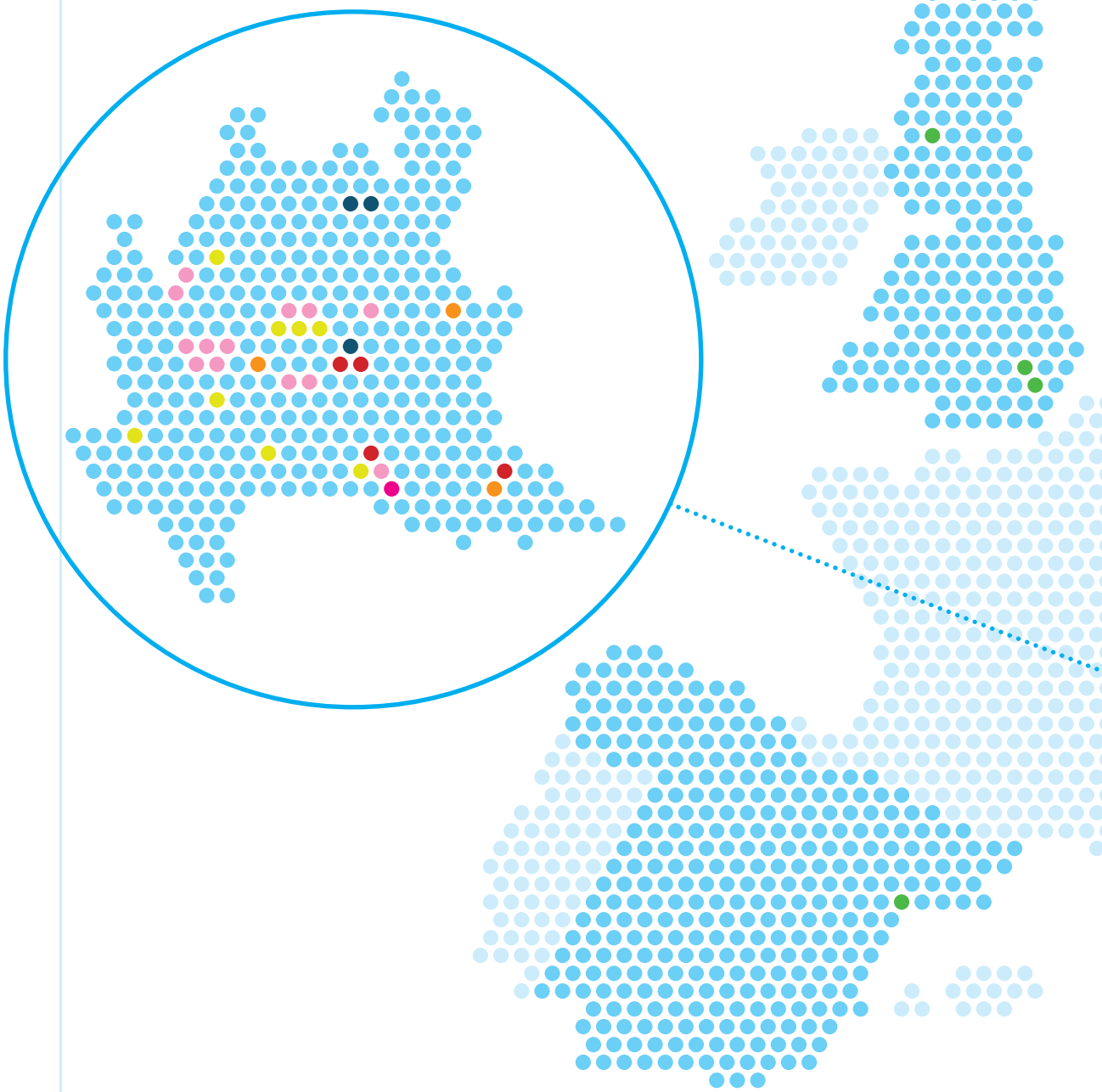
A2A S.p.A. on the Stock Exchange

Alternative Performance Indicators (APM)

1.2 Geographical areas of activity

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

Updated to June 30, 2022



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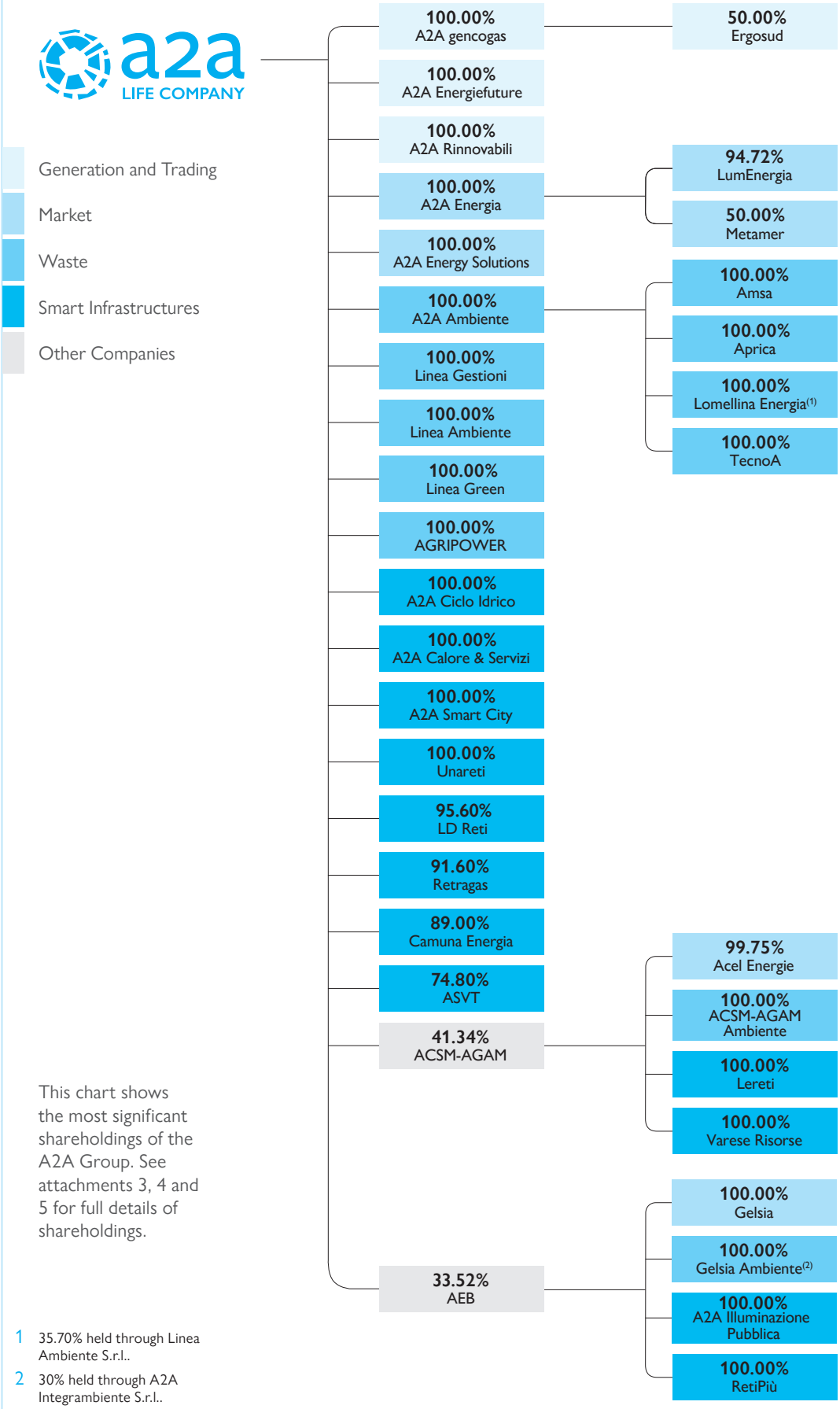
1.3 Group structure



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

1 35.70% held through Linea Ambiente S.r.l..

2 30% held through A2A Integrambiente S.r.l..

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Alternative Performance Indicators (APM)

1.4 Financial highlights at June 30, 2022 (**)

9,788
mln €
REVENUES

708
mln €
GROSS OPERATING INCOME

328
mln €
RESULT OF THE PERIOD

Income statement figures

millions of euro	01 01 2022 06 30 2022	01 01 2021 06 30 2021 Restated
Revenues	9,788	4,053
Operating expenses	(8,699)	(2,987)
Labour costs	(381)	(378)
Gross operating income - EBITDA	**708**	**688**
Depreciation, amortization, provisions and write-downs	(373)	(332)
Net operating income - EBIT	**335**	**356**
Result from non-recurring transactions	157	(1)
Financial balance	(30)	(26)
Result before taxes	**462**	**329**
Income taxes	(143)	41
Net result from discontinued operations	36	-
Minorities	(27)	(30)
Group result of the period	**328**	**340**
Gross operating income / Revenues	**7.2%**	**17.0%**

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

Balance sheet figures

millions of euro	06 30 2022	12 31 2021
Net capital employed	9,082	8,416
Equity attributable to the Group and minorities	4,495	4,303
Consolidated net financial position	(4,587)	(4,113)
Consolidated net financial position/Equity attributable to the Group and minorities	1.02	0.96
Consolidated net financial position/EBITDA	6.5	2.9

Financial data

millions of euro	01 01 2022 06 30 2022	01 01 2021 06 30 2021
Net cash flows from operating activities	188	508
Net cash used in investing activities	(505)	(626)
Free cash flow (Cash Flow Statement figure)	(317)	(118)

Energy scenario

	06 30 2022	06 30 2021
Average of the PUN (Single Nationwide Price) Base load (Euro/MWh)	248.6	66.9
Average of the PUN (Single Nationwide Price) Peak load (Euro/MWh)	267.4	73.9
Average price of gas to the PSV (*) (Euro/MWh)	97.8	21.8
Average price of emission certificates EU ETS (**) (Euro/tonne)	83.7	43.8

(*) Price of gas of reference for the Italian market
(**) EU Emissions Trading System

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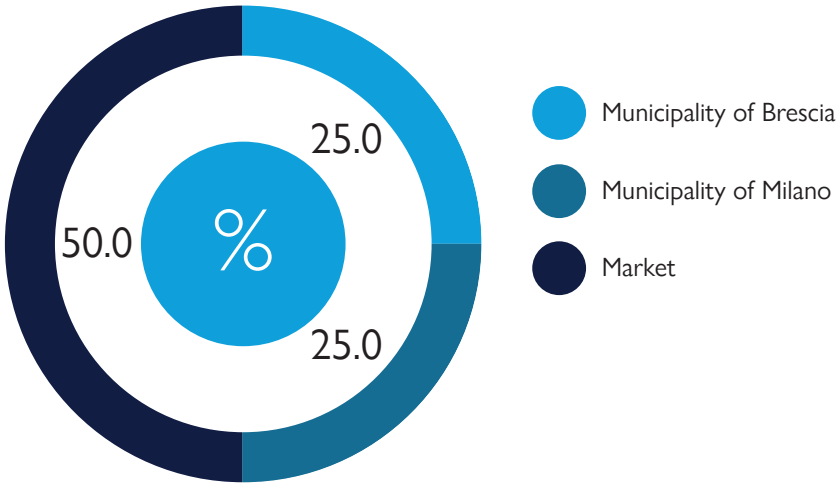
Alternative Performance Indicators (APM)

Group's key operational indicators

	06 30 2022	06 30 2021
Generation and Trading		
Thermoelectric production (GWh)	6,477	6,126
Hydroelectric production (GWh)	1,369	2,135
Electricity sold to wholesale customers (GWh)	7,018	7,072
Electricity sold on the Power Exchange (GWh)	8,468	7,933
Market		
Electricity sold to retail customers (GWh)	10,456	8,594
POD Electricity (#/1000)	1,428	1,275
of which POD Electricity Free Market	*1,080*	*861*
Gas sold to retail customers (Mcm)	1,526	1,479
PDR Gas (#/1000)	1,573	1,586
of which PDR Gas Free Market	*992*	*894*
Waste		
Waste collected (Kton)	919	928
Residents served (#/1000)	3,972	4,172
Waste disposed of (Kton)	1,708	1,754
Electricity sold by waste-to-energy (GWh)	1,068	1,057
Smart Infrastructures		
Electricity distributed (GWh)	5,656	5,632
Gas distributed (Mcm)	1,732	1,856
Water distributed (Mcm)	36	36
RAB Electricity (M€)	827	753
RAB Gas (M€)	1,485	1,466
Heat sales (GWht)	1,766	1,823
Cogeneration production (GWh)	199	189

1.5 Shareholdings (*)



(*) Source CONSOB for stakes higher than 3% (update at June 30, 2022).

Key figures of A2A S.p.A.

	06 30 2022	12 31 2021
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)	-	-

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

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

Market capitalisation at June 30, 2022 (millions of euro)	3,797
Share capital at June 30, 2022 (shares)	3,132,905,277

	First six months of 2022	Last 4 quarters
Average market cap (millions of euro)	4,899	5,278
Average daily volumes (shares)	11,509,540	9,607,197
Average price (€/share)	1.56	1.68
Maximum price (€/share)	1.74	1.95
Minimum price (€/share)	1.21	1.21

Source: Bloomberg

A2A stock is also traded on the following platforms: Aquis, BlockMatch, CBOE, Equiduct, ITG Posit, Sigma-X, Turquoise, UBS MTF.

On May 25, 2022 A2A distributed a dividend equal to 0.0904 euro per share.

A2A forms part of the following indices

FTSE MIB
STOXX Europe 600
STOXX Europe 600 Utilities
EURO STOXX
EURO STOXX Utilities
MSCI Europe Small Cap
WisdomTree International Equity
S&P Global Mid Small Cap

ESG Indices

MIB ESG
FTSE4Good
ECPI Indices
Ethibel Sustainability Index Excellence Europe
EURO STOXX Sustainability Index
Euronext Vigeo Index: Eurozone 120
Standard Ethics Italian Index
Bloomberg Gender Equality Index

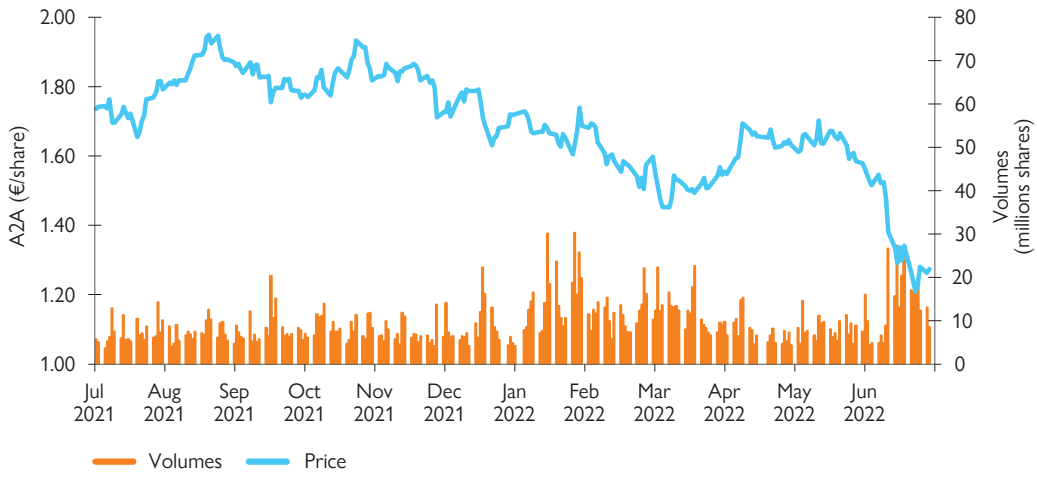
Source: Bloomberg and company information

A2A obtained the following ESG ratings:

Assessment	Rating
CDP Climate Change	A-
CDP Water	B-
ISS ESG	B-
MSCI	BBB
Refinitiv	A-
Standard Ethics	EE+
Sustainalytics	21.1/40
Vigeo	63/100

Moreover, A2A has been included in the Ethibel Excellence Investment Register, in the Ethibel Pioneer Investment Register and in the CDP Supplier Engagement Leaderboard.

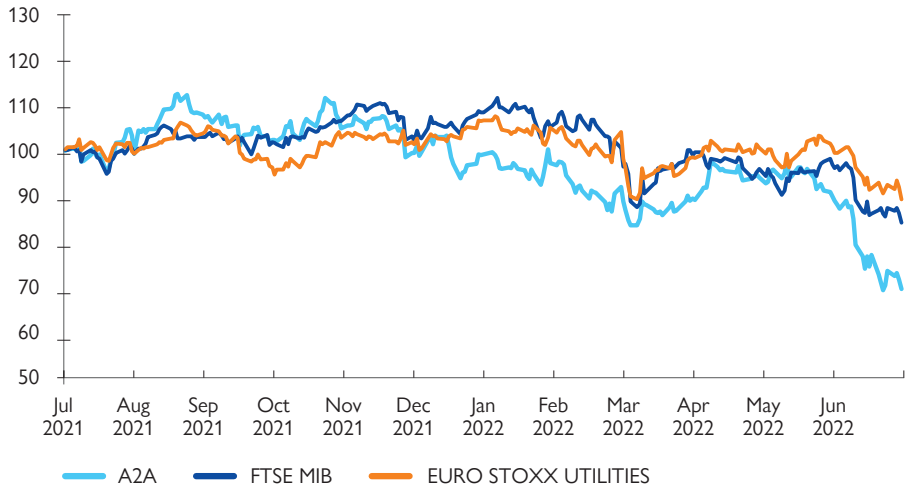
A2A: price and volumes



A2A vs FTSE MIB and EURO STOXX UTILITIES

(Price June 30, 2021 = 100)

Historical volatility in the last 4 quarters:
A2A: 24.6%
FTSE MIB: 21.3%



Source: Bloomberg

Rating

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

Source: Rating agencies

1.7 Alternative Performance Indicators (APM)

In this Half-yearly financial report, a number of alternative performance indicators (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 measures 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, 2021 while for the Balance Sheet, the comparative values refer to December 31, 2021.
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 Performance Measures 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 Performance Measures (CESR/05 - 178b) - are intended to promote the usefulness and transparency of alternative indicators to improve their comparability, reliability and understanding.
On July 15, 2020, ESMA also published a new version of its Guidelines on disclosure requirements pursuant to the prospectus regulation (ESMA/31621426), applicable from May 5, 2021 and updating the previous CESR Recommendations (ESMA/2013/319), with the aim of providing issuers with indications relating to the assessment of relevant information to be included in the financial disclosure.
In accordance with the Guidelines, the descriptions, content and bases of calculation used for the construction of the Alternative Performance Measures 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 measure 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 measure 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.

Net fixed capital

Net fixed capital 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.

Net Working Capital

Net 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 target 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, Net 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 "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 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; Pursuant to the new ESMA recommendations, this item should also include the non-current portion of trade payables and other non-interest-bearing payables with a significant implicit financing component (payables with maturities of over 12 months);
- Total medium and long-term financial receivables: this item includes Non-current financial assets (including those with related parties) and Other non-current assets.

The net financial position within one year 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 target 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 A2A Group's net financial position is calculated in accordance with Recommendations ESMA/31621426 of July 15, 2020.

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Capex 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 measure provided by IFRS.
These Alternative Performance Measures 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.

2

Responsible sustainability management and sustainable finance

2.1 Responsible sustainability management and sustainable finance

On January 27, 2022, A2A approved the update of its 2021-2030 Business Plan, which laid the foundations for achieving zero direct and indirect (both Scope 1 and Scope 2) emissions generated by the Group by 2040 and strengthened the businesses that can contribute to the country's ecological transition. Circular economy and Energy Transition are the two pillars of the Plan that encapsulate the Group's concrete actions. Thanks to the further development of renewable energies, carbon capture solutions and phase-down of carbon intensive businesses, the Group will be able to achieve the decarbonization targets set. This virtuous path envisages the improvement of the Group's emission factor to 2030 with respect to the target approved by the Science Based Targets initiative (SBTi), resulting in a 49% reduction in A2A's specific emissions compared to 2017.

On April 28, 2022, the sixth Group Integrated Report was presented to the A2A Shareholders' Meeting, which for the fifth year, is also the Non-Financial Statement pursuant to Legislative Decree 254/16. This document 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 Standards). In this edition, in line with the new Strategy, the long-term Sustainability Plan - 2021-2030 - was updated, which, in addition to incorporating the sustainability objectives contained in the new Strategic Plan, includes more specific objectives linked to its "enabling levers", i.e.: Digital, People and Governance. In addition, for the second year, a new section has been included dedicated to the management of financial risks connected with climate change, in line with the recommendations of the Task Force on Climate-Related Financial Disclosure (TCFD), with the aim of providing the world of finance with all the information it needs to properly assess A2A's strategy for managing climate-related risks and opportunities.

Thanks to the new long-term strategy and A2A's continuous drive to align its reporting to the highest international standards, in June 2022, Standard Ethics, an independent rating agency that measures the sustainability of companies, announced that it has raised A2A's Corporate Rating to "EE+" from the previous "EE" with "Positive" Outlook. With this rating, A2A becomes the Italian company with the highest rating in its sector. According to Standard Ethics, A2A has long adopted ESG (Environmental, Social and Governance) reporting aligned with international best practice. Sustainability issues are continuously addressed through corporate policies that are updated to UN, OECD and EU guidelines and recently reinforced by the reorganization of some corporate functions. Throughout 2021 and the first half of this year, A2A maintained a high level of attention and scrupulous care in its initiatives. This can be seen in the 2030 Business Plan, which is strongly geared towards the containment of emissions and the growth of renewable energy production.

The company has also been confirmed in nine ESG ethical indices (MIB ESG, FTSE4Good Index, ECPI Indices, Ethibel Sustainability Index Excellence Europe, EURO STOXX Sustainability Index, Euronext Vigeo Index, Eurozone 120, Standard Ethics Italian Index, Solactive Climate Change Index, Bloomberg Gender Equality Index).

In the first half of 2022, A2A gave further impetus to the development of Sustainable Finance products. In February, the updated Sustainable Finance Framework was published, incorporating the more ambitious sustainability targets of the 2021-2030 Strategic Plan.

The Sustainable Finance Framework represents the set of guidelines that strengthen the link between the Group's financial strategy and sustainable strategy and combines two approaches: the Green Use of Proceeds, which allows utmost transparency regarding the use of proceeds for specific projects, and the Sustainability-Linked component, which allows an overall reading of the Group strategy.

The Sustainable Finance Framework, which covers any type of financial instrument, has been prepared in compliance with the Green Bond Principles (2021) and Sustainability-Linked Bond Principles (2020) published by the International Capital Market Association (ICMA), and the Green Loan Principles (2021) and Sustainability-Linked Loan Principles (2021) published by the Loan Market Association (LMA).

Vigeo Eiris, one of the leading international ESG rating agencies, issued a Second Party Opinion confirming the robustness of the Sustainable Finance Framework and attesting its alignment with ICMA and LMA principles. The agency also highlighted A2A's commitment to the development of sustainable finance and its "Advance" position as an issuer.

As part of the new Sustainable Finance Framework, two important funding transactions were concluded for the Group:

- a new Sustainability-Linked Bond (amount of 500 million euro and duration of 6 years), linked to the achievement of the target for installed capacity from renewable sources. A2A, in line with the update of the Group's Strategic Plan presented in January 2022, aims to reach a share of 3.0 GWh or more by 2024. This important goal contributes to the achievement of UN SDGs 7 and 13;
- a new Green Bond (amount of 600 million euro and duration of 4 years) the net proceeds of which will go to finance strategic circular economy and energy transition projects aligned with the European Taxonomy (in particular the "climate change mitigation" objective).

In addition, on June 30, 2022, A2A entered into a new revolving credit facility (RCF) Sustainability-Linked, amounting to 410 million euro and with a duration of 3 years, linked to the achievement of three objectives in the areas of Social and Governance (reduction of the accident frequency index, increase in the percentage of the order to suppliers assessed with ESG indicators and reduction of the wage gap between men and women). The line provides for a mechanism for adjusting the interest margin both if A2A reaches the set targets (step down) and if A2A does not reach said targets (step up). The amounts related to the potential savings or higher costs will be donated by A2A to the Banco dell'Energia Onlus and will therefore benefit the community.

Finally, A2A has further expanded its range of sustainable tools, also extending it to the insurance world, by signing an agreement with Generali Global Corporate and Commercial (GC&C) and Aon for the creation of a Civil and General Liability insurance solution linked to the achievement of five sustainability objectives - which concern workplace health and safety - and built around the "Social factor" of ESG criteria (Environmental, Social, Governance). Among these: inspection visits to the A2A Group's construction sites; access to the health training initiatives proposed by A2A and to the safety training aimed at its employees; percentage of orders placed to suppliers evaluated with ESG indicators; verification of the maintenance of the number of ISO45001 certified Group companies.

As far as territorial sustainability is concerned, on the other hand, the 2022 plan for listening to and involving territories has been launched. This year's program aims, through the identification of obstacles and opportunities for ecological transition, to identify proposals for shared solutions to be implemented together with stakeholders in order to promote alliances for sustainable transition in territories. To do this, together with The European House Ambrosetti, territorial KPIs were analyzed using national and European indicators, in particular the ISTAT Report on Fair and Sustainable Well-being (Bes) relating to individual territories. Said data helps to identify, for each territorial reality, some obstacles to the ecological transition that A2A will submit to stakeholders in the coming months, on the occasion of dedicated forums. The final results will then be publicly presented in the territories together with the sustainability reports. This year, the path is enriched with 3 new territories (Apulia, Sicily and Calabria) along with the 6 "historical" ones (Bergamo, Brescia, Sondrio, Milan, Friuli Venezia-Giulia and Piedmont).

In addition, A2A's first Sustainability Report dedicated to Generation Z will be presented at the Giffoni Film Fest.

Generation Z, as well as Generation Alpha, is crucial for the ecological transition: young people are the real experts in environmental issues and are the ones who influence behavior within families. Moreover, these are the generations that will have to live with the results of what is being done today to combat climate change. A2A's business plan has been defined with them in mind to define what needs to be made concrete in the immediate future. For this reason, A2A decided to give Gen Z a voice, making it the protagonist of its new integrated communication campaign. The symbol and icon of the operation will be Azzurra, a lively toon character, ready to give useful advice on energy, water, the environment and sustainable mobility. A2A has chosen to implement the project by involving young people, creating the travelling editorial team Fonti Attendibili together with them. A space to share advice, foster reflection, show and encourage virtuous behavior. A2A will provide young people with places of expression and opportunities to meet, helping to support a more authentic environmental culture and awareness.

During the first months of 2022, as far as educational activities are concerned, schools were provided with a content-rich educational offer with the aim of also meeting the new digital needs of the school world. April and May saw the completion of two educational projects aimed at schools throughout Italy: "Sustainability Olympics" and "Ecogame A2A - Energy Transition". The first, aimed at secondary schools and realized in collaboration with the Elis consortium and Scuolazoo, saw the participation of 611 classes from 228 schools who, after being trained with podcasts and videos on their favorite social channels, developed 387 video briefs to tell their peers about their idea of sustainability. In the second, aimed at all primary and lower secondary classes in Italy, classes had the opportunity to challenge each other to a quiz video game, and then put themselves to the test by redesigning a video game environment or writing new questions on energy transition. As many as 280 entries were submitted by the 246 participating classes.

For both projects, prizes were awarded to the three best classes from all school orders nationwide. Webinars for teachers also continued of the cycle "Towards 2050. With schools for a sustainable and circular future" for over 6,000 participants.

New this year are the collaboration with Fondazione Feltrinelli in the production of a digital kit on the ecological transition and the creation of the first virtual tour of a plastic sorting plant; both projects will be published and promoted in September with the start of the new school year. In addition, a 40-hour certified PCTO (Percorsi per Competenze Trasversali e per l'Orientamento) was launched, dedicated to about 5,000 high school students to learn the new skills needed for professions in the energy sector.

At the territorial level, ad hoc environmental education initiatives were developed in collaboration with administrations, group foundations and other local partnerships involving some 27,000 students and teachers.

Lastly, as far as the Banco dell'Energia is concerned - the social responsibility project promoted by A2A with Fondazione AEM, ASM and LGH - the phase has been concluded of selecting the winners from the third edition of the "Doniamo Energia" call for tenders promoted in collaboration with Fondazione Cariplo and reserved for the networks supported under the two previous editions. These associations have already promoted projects capable of intercepting fragile families at an early stage and are able to give a rapid and immediate response to that segment of the population that has found itself in need due to the economic and social repercussions of the COVID-19 health emergency. 17 projects have been awarded resources and are currently being implemented.

In December 2021, Banco dell'Energia Onlus also launched the manifesto "Together to combat energy poverty" to make actions in support of energy poverty more widespread and effective, involving a wide network of signatories. To date there are 35 companies including companies such as A2A, Acea, Acquedotto Pugliese, Comunità Valdostana delle acque, Edison, Fondazione Cdp, Fondazione Fiera Milano, Fondazione Francesca Rava, Hera, Iren, Lenergia, Leroy Merlin, Metropolitana milanese, Next Energy Foudation, Signify, Fondazione Snam, Terna, Wit, associations such as Adiconsum, Adoc, Aidi, Banco alimentare, Comunità di Sant'Egidio, Italian Red Cross, Federconsumatori, Fratello Sole, Lega Consumatori, Legambiente, (Ri)generiamo, Utilitalia and research institutes such as Aisfor, Enea, Fondazione Utilitatis, Oipe, Rse and Ircaf.

Among the objectives that Banco dell'Energia aims to achieve in the coming years is the promotion of territorial projects dedicated to energy-saving education and concrete help for families in difficulty. It is precisely in this direction that "Energy in the suburbs" goes, an initiative promoted to give support to energy vulnerable households living in the suburbs of cities (50/100 households per project). In addition to direct help to the households involved through the payment of utilities, it also provides an important path of education and awareness of energy use through meetings with the households involved, making an analytical report of the social fabric and providing tools to reduce the consumption of the participants in the training.

3

Consolidated results and report on operations

3.1 Summary of results, assets and liabilities and financial position

Results

It is noted that the consolidation scope at June 30, 2022 changed compared to December 31, 2021 for to the following operations:

- acquisition by A2A Rinnovabili S.p.A. of 100% of Volta Green Energy S.r.l. and 60% of R2R S.r.l., companies operating in the photovoltaic and wind power sectors, resulting in the line-by-line consolidation of seven companies;
- sale of the shareholding in Seasm S.r.l., previously consolidated on a line-by-line basis;
- acquisition by A2A Rinnovabili S.p.A. of 100% of 4New S.r.l. and 3 New & Partners S.r.l., companies operating in the photovoltaic and wind power sectors, resulting in the line-by-line consolidation of eleven companies and the consolidation at equity of one company. A2A Rinnovabili S.p.A. also acquired directly and consolidated at equity 49% of Daunia Calvello S.r.l. and 30% of Daunia Serracapriola S.r.l., companies that hold a portfolio of wind farms in Italy. In transparency, the Group holds 74.5% of Daunia Calvello S.r.l. and 65% of Daunia Serracapriola S.r.l., through the associated company Daunia Wind S.r.l.. However, it does not fully consolidate the two companies as the conditions of control, as set forth in IFRS 10, do not exist.

Moreover, the economic figures at June 30, 2022 are not consistent with the corresponding period of the previous year due to the following extraordinary transactions in the second half of 2021:

- acquisition by A2A Ambiente S.p.A. and line-by-line consolidation of 100% of TecnoA S.r.l., a company operating in the treatment of special waste.

It should be noted that some income statement items, referring to the sale of three buildings located in Milan sold in February 2022 and assets concerning gas distribution referring to ATEMs considered non-strategic for the Group, in compliance with the provisions of IFRS 5, were reclassified, respectively, to the items “Result from non-recurring transactions” and “Net result from discontinued operations”. As a result, the values as at June 30, 2021 have been restated.

The results of the A2A Group for the period ended June 30, 2022 are set out below together with comparative figures for the corresponding period of the previous year.

millions of euro	01 01 2022 06 30 2022	01 01 2021 06 30 2021 Restated	Changes
Revenues	**9,788**	**4,053**	**5,735**
of which:			
- Revenues from the sale of goods and services	*9,691*	*3,948*	*5,743*
- Other operating income	*97*	*105*	*(8)*
Operating expenses	(8,699)	(2,987)	(5,712)
Labour costs	(381)	(378)	(3)
Gross Operating Income - EBITDA	**708**	**688**	**20**
Depreciation, amortization and write-downs	(351)	(320)	(31)
Provisions	(22)	(12)	(10)
Net Operating Income - EBIT	**335**	**356**	**(21)**
Result from non-recurring transactions	**157**	**(1)**	**158**
Net financial charges	(32)	(29)	(3)
Affiliates	2	3	(1)
Result before taxes	**462**	**329**	**133**
Income taxes	(143)	41	(184)
Result after taxes from operating activities	**319**	**370**	**(51)**
Net result from discontinued operations	36	-	36
Minorities	(27)	(30)	3
Group result of the period	**328**	**340**	**(12)**

In the first half of 2022, the A2A Group's **Revenues** amounted to 9,788 million euro, up 141.5% compared to the previous year. The increase is mainly related to the generalized increase in the energy scenario and is attributable to:

- approximately 57% to the wholesale energy markets, in particular electricity due to price increases; the contribution related to the growth of sold and intermediated market volumes is residual;
- more than 40% to retail markets mainly due to higher electricity, gas and heat unit prices.

EBITDA equalled 708 million euro, an increase of 20 million compared to the first half of 2021 (+3%). Net of non-recurring items (+5 million in the first half of 2022, +4 in the first half of 2021), Ordinary EBITDA increased by 19 million euro (+3%): the significant decline in margins recorded in the Market Business Unit, in fact, it was more than offset by the excellent results of the other businesses, especially the Generation and Trading Business Unit and the Waste Business Unit.

The following table highlights the composition by Business Unit:

millions of euro	06 30 2022	06 30 2021	Delta	Delta%
Generation and Trading	221	150	71	47.3%
Market	8	120	(112)	(93.3%)
Waste	207	164	43	26.2%
Smart Infrastructures	285	264	21	8.0%
Corporate	(13)	(10)	(3)	30.0%
Total	**708**	**688**	**20**	**2.9%**

The Gross Operating Margin of the Generation and Trading Business Unit amounted to 221 million euro, an increase of 71 million euro compared to June 30, 2021 (+47%). Net of the non-recurring items recorded in the two comparison periods, equal to -12 million euro in the first half of 2022 relating to the Sostegni Decree and +2 million euro in the corresponding period of 2021, ordinary Gross Operating Margin increased by 85 million euro.

The positive change is mainly attributable to:
- the extraordinary results achieved in the ancillary services market ("MSD"), thanks to the opportunities that emerged as a result of Terna's requests for critical grid conditions in the first half of the year;
- remuneration of the capacity market, thanks to the award of production capacity in auctions held by Terna to ensure the security of the system with resources that are always available;
- excellent performance of the trading portfolio;
- positive effects of the scenario on the industrial electricity portfolio, although considerably mitigated compared to those that the price surge could have produced, by the hedging policies adopted by the Group;
- contribution of photovoltaic and wind plants.

The positive impacts were partly offset by:
- lower hydroelectric production;
- negative effects of the energy scenario on the gas portfolio;
- higher charges for hydroelectric fees due to both the variable and free energy to be paid and the fixed component for some plants.

The Gross Operating Margin of the Market Business Unit in the first half of 2022 amounted to 8 million euro (120 million euro at June 30, 2021).
Net of the non-recurring items recorded in the two comparison periods (1 million in euro the first half of 2022, zero impact in the corresponding period of the previous year), Ordinary EBITDA decreased by -113 million euro, of which -116 million euro related to the retail segment and +3 million euro related to the Energy Solution segment.
Approximately 80% of the reduction, concentrated in the first quarter of the year, is attributable to the decline in unit margins in the energy retail segment, both electricity and gas, due to:
- different distribution over time of the margins of fixed-price contracts compared to the previous year, with the same overall contractual margin, particularly penalising in the first quarter of the year and recovering in the course of the year under review (for contracts with a duration coinciding with the calendar year) or in future years (for contracts providing for supply beyond the current year);
- negative impacts linked to consumption by end customers that in part differ from the contractual profiles, due to the effect of an extraordinarily high and highly volatile price context;
- imbalance charges, also emphasised by the current year's energy price level,

Operating expenses increased compared to the first six months of the previous year, consistent with the increased commercial activity in the period.

These effects were partly offset by the positive contribution of commercial development, both in terms of the increase in the mass-market customer base and volumes sold to large customers, and in terms of commercial unit margins, which in the period under review showed a positive trend net of the impacts described above.

In the first half of 2022, the Waste Business Unit recorded revenue of 714 million euro, up 16.7% compared to the same period in 2021 (612 million euro as at June 30, 2021) mainly due to higher revenue from the sale of electricity and the sale of heat. Higher revenues from waste disposal and material recovery and the contribution of the companies acquired during 2021 also contributed to the increase.

The Gross Operating Margin of the EPCG Business Unit equalled 207 million euro (164 million euro at June 30, 2022), up 43 million euro compared to the first half of the previous year.
Net of the non-recurring items recorded in the two comparison periods (2 million euro in the first half of 2022 and +1 million euro in the first half of 2021), ordinary Gross Operating Margin increased by 42 million euro.

The municipal waste treatment segment mainly contributed to the excellent result for the period (+44 million euro compared to the first six months of 2021), thanks to the following:
- very positive trend in electricity and heat transfer prices of waste-to-energy plants due to the current scenario;
- increase in the price of delivering waste similar to municipal waste;
- contribution of biomass-fuelled plants, due to both the incremental contribution of Agripower-consolidated from April 2021 - and the effect of the energy scenario.

The industrial waste treatment segment recorded an increase of approximately 1 million euro over the corresponding period of the previous year, mainly due to the larger quantities treated.
On the other hand, the waste collection sector made a negative contribution to the result (-3 million euro), primarily penalized by the increase in the cost of fuel consumed by the vehicles used and the loss of the concession in the Municipality of Varese.

The Gross Operating Margin of the Smart Infrastructures Business Unit in the first half of 2022 was 285 million euro (264 million euro at June 30, 2021).
Net of non-recurring items (+16 million euro in the first half of 2022; +4 million euro in the corresponding period of the previous year), the Ordinary EBITDA of the Business Unit reached 269 million euro, up 9 million euro (+4%) with respect to the first six months of 2021.
It should be noted that non-recurring items in the current year include 15.3 million euro for past tariff items related to the 2010/2011 years of the water cycle of the ACSM/AGAM Group.

The change in margins is distributed as follows:
- electricity and gas distribution networks (-16 million euro): decrease related to lower revenues allowed for regulatory purposes following the resolutions of the sector authority (ARERA) concerning the remuneration of capital, electricity loss equalisation, lower revenues from connection fees, and higher operating costs (mainly charges for updating the gas fee related to ATEM Milan 1 and energy costs);
- district heating: +23 million euro, primarily due to an increase in unit margins as a result of the scenario effect;
- water cycle: -3 million euro for higher operating costs (reimbursements water losses and electricity costs);
- public lighting: +5 million euro for the update of the fee to the Municipality of Milan and higher revenues from TEE (Energy Efficiency Certificates).

"**Depreciation, amortization, provisions and write-downs**" totalled 373 million euro (332 million euro at June 30, 2021), representing an increase of 41 million euro.

"Depreciation, amortization and write-downs" amounted to 351 million euro (320 million euro for the six months ended June 30, 2021).
Amortization of intangible assets amounted to 109 million euro (95 million euro at June 30, 2021). Depreciation and amortization increased by 14 million euro, of which 7 million euro related to the implementation of information systems, 3 million euro to the integrated water service and gas distribution and metering, 3 million euro related to the new customer lists of the companies Yada Energia and A2A Energia, and 1 million euro to changes in the scope of consolidation.

Depreciation of tangible assets show an increase of 17 million euro compared to June 30, 2021 and includes:
- higher depreciation and amortization of 1 million euro resulting from the consolidation of the companies 3New and 4New acquired in the first half of 2022;
- higher depreciation and amortization of 4 million euro relating to the consolidation, from 2021, of Agripower, Octopus and TecnoA;
- higher depreciation and amortization of 1 million euro for rights of use;
- higher depreciation and amortization of 1 million euro as a result of the increased amount of waste transferred to A2A Ambiente S.p.A.'s landfills;
- higher depreciation and amortization of 3 million euro related to the photovoltaic panel divestment plan of the Sermide and Chivasso plants;
- higher depreciation and amortization of 1 million euro related to the disinvestment plan for the assets of the Linea 1 waste-to-energy treatment and storage plant in Parona;
- higher depreciation of 6 million euro mainly relating to the investments which went into production after June 30, 2021.

"Provisions for risks" had a net positive effect of 24 million euro (net effect of 2 million euro at June 30, 2021) due to surpluses of 46 million euro, following the termination of certain outstanding disputes and the release of provisions for closure and post-closure expenses on landfills and decommissioning, adjusted by provisions for the period of 22 million euro.
Surpluses in provisions for risks amounted to 46 million euro and included for 41 million euro the release of provisions for closure and post-closure expenses on landfills and decommissioning due to the increase in discount rates, for 3 million euro the release of provisions for legal disputes and personnel disputes, for 1 million euro to the release of funds for additional charges of hydroelectric derivation and to other releases for 1 million euro.
Provisions for the period, which amounted to 22 million euro, included 19 million euro in provisions for public water derivation fees, 1 million euro in provisions for tax contingencies, and 2 million euro in other provisions for pending litigation.

The "Bad debt provision" amounted to 46 million euro (10 million euro at June 30, 2021), consisting of the accrual for the period.

As a result of these changes "**Net operating income**" amounted to 335 million euro (356 million euro as at June 30, 2021).

The "**Result from non-recurring transactions**" amounted to 157 million euro (negative for 1 million euro at June 30, 2021) and refers to the gain from the sale of three properties located in Milan in February 2022.

"**Net financial charges**" amounted to 32 million euro (29 million euro at June 30, 2021), representing an increase of 3 million euro. This increase is mainly attributable to higher discounting charges, partly offset by lower interest on bonds due to the refinancing of maturing bonds with the issuance of new bonds at lower rates.

The "**Affiliates**" was 2 million euro (3 million euro at June 30, 2021), and is mainly attributable to the positive valuation of the shareholdings held in some associated companies.

"**Income taxes**" in the period in question equalled 143 million euro (-41 million euro at June 30, 2021) and include:

- 143 million euro taxes of the period;
- 9 million euro taxes as per LD 21/2022 "Decree taglia prezzi");
- reimbursement taxes previous years for 9 million euro.

It is highlighted that on the occasion of the closing of the 2022 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.

It is noted that the corresponding period of the previous year, in which the item for income taxes was -41 million euro, reflected the release of deferred tax liabilities as a result of the realignment option pursuant to LD 104/2020, exercised by some Group companies, which allowed the realignment of the differences between higher statutory values and lower values for tax purposes on tangible assets and the consequent deduction of higher tax amortization starting from the current year, as well as the release of a part of deferred IRAP tax assets as the Group considered their recoverability to be unreasonable; the impact of the release of deferred tax assets/liabilities amounted to 168 million euro, while the recognition of a substitute tax following the realignment option pursuant to LD 104/2020 was equal to 23 million euro.

The "**Net result from discontinued operations**" is equal to 36 million euro (no value as at June 30, 2021) and refers mainly to the gain related to the sale of some assets concerning gas distribution referring to ATEMs considered non-strategic for the Group.

The "**Group result of the period**", after the minorities of 27 million euro were deducted, was positive and amounted to 328 million euro (positive for 340 million euro at June 30, 2021).

Balance sheet and financial position

For changes in the scope of consolidation at June 30, 2022, reference should be made to the section "Income statement" in this Summary of the financial position, results of operations and cash flows.

Sources/Uses statement millions of euro	06 30 2022	12 31 2021	Changes
CAPITAL EMPLOYED			
Net fixed capital	**8,713**	**8,026**	**687**
- Tangible assets	5,769	5,588	181
- Intangible assets	3,265	3,125	140
- Shareholdings and other non-current financial assets (*)	316	73	243
- Other non-current assets/liabilities (*)	(75)	(93)	18
- Deferred tax assets/liabilities	**381**	**424**	**(43)**
- Provisions for risks, charges and liabilities for landfills	(703)	(797)	94
- Employee benefits	(240)	(294)	54
of which with counter-entry to equity	*(158)*	*(134)*	
Net Working Capital and Other current assets/liabilities	**369**	**243**	**126**
Net Working Capital:	**493**	**601**	**(108)**
- Inventories	432	204	228
- Trade receivables	3,390	3,291	99
- Trade payables	(3,329)	(2,894)	(435)
Other current assets/liabilities:	**(124)**	**(358)**	**(234)**
- Other current assets/liabilities (*)	25	(405)	430
- Current tax assets/tax liabilities	(149)	47	(196)
of which with counter-entry to equity	*195*	*55*	
Assets/liabilities held for sale (*)	**-**	**147**	**(147)**
of which with counter-entry to equity	-	-	
TOTAL CAPITAL EMPLOYED	**9,082**	**8,416**	**666**
SOURCES OF FUNDS			
Equity	**4,495**	**4,303**	**192**
Total financial position beyond one year	5,696	4,309	1,387
Total financial position within one year	(1,109)	(196)	(913)
Total Net Financial Position	**4,587**	**4,113**	**474**
of which with counter-entry to equity	*(6)*	*20*	
TOTAL SOURCES	**9,082**	**8,416**	**666**

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

Net fixed capital

The "**Net fixed capital**" amounted to 8,713 million euro, up 687 million euro compared to December 31, 2021.
Changes are detailed below:

- Tangible assets increased by 181 million euro due to:
  - investments made for 304 million euro due to interventions on waste treatment and waste-to-energy plants, on thermoelectric and hydroelectric plants and on renewable source energy plants for 151 million euro, to the development and maintenance of electricity distribution plants, the expansion and reconstruction of the medium and low voltage network, and the installation of new electronic meters for 93 million euro, the development of district heating networks for 30 million euro, the purchase of movable means to collect waste and other equipment for 9 million euro, investments focussed on developing the energy efficiency plan for 5 million euro, interventions on the optic fibre and gas transport network for 3 million euro, for 5 million euro for the plan to increase efficiency with new LED light sources and for 1 million euro to investments on the network of electric vehicle charging stations and interventions on buildings for 7 million euro;
  - first-time consolidation of acquisitions in the year, accounting for an increase of 155 million euro;
  - a net decrease for other changes of 35 million euro due to decreases in the provision for decommissioning and landfill closure and post-closure expenses of 57 million euro, increases in usage rights in accordance with IFRS16 of 23 million euro, and other decreases of 1 million euro;
  - decrease of 1 million euro arising from disposals in the period, net of accumulated depreciation;
  - decrease of 242 million euro for the depreciation charge for the year;
- Intangible assets increased by 140 million euro on December 31, 2021, due to:
  - capex for 159 million euro related to the implementation of computer systems for 56 million euro, development and maintenance work in gas distribution plants and the replacement of medium and low-pressure underground pipes for 52 million euro; works on the water transport and distribution network, sewers and purification plants for 36 million euro; new acquisitions and maintenance of the customer portfolio for 12 million euro and other residual investments for 3 million euro;
  - first-time consolidation of acquisitions in the year, accounting for an increase of 108 million euro;
  - net decrease of 17 million euro for other changes, due to the decrease in environmental certificates of the industrial portfolio for 14 million euro, as well as the reclassification to assets held for sale of certain assets related to gas distribution networks considered non-strategic for the Group for 3 million euro, the sale of which was completed during the second quarter;
  - decrease of 1 million euro arising from disposals in the year, net of accumulated depreciation;
  - decrease of 109 million euro for the depreciation charge for the year;
- Equity investments and other non-current financial assets, at 316 million euro, up by 243 million euro compared to December 31, 2021; The change is mainly due to the effects of first-time consolidation, for 235 million euro, following the purchase of 100% of the investment in 3 New & Partner S.r.l., which holds 50% of the investment in Daunia Wind S.r.l., and for the purchase of 74.5% of Daunia Calvello S.r.l. and 65% of Daunia Serracapriola S.r.l. (of which 49% and 30% directly held by A2A Rinnovabili and the remainder through Daunia Wind. These companies are not fully consolidated since they do not meet the control requirements of IFRS10). Other changes include the increase in equity-accounted investees in the amount of 4 million euro, increases of 2 million euro for investments in innovative start-ups through Corporate Venture Capital projects, and 1 million euro for the payment to the Court of Taranto, following the request to deposit in a specific account, the residual amounts seized as part of the proceedings ongoing against the subsidiary Linea Ambiente S.r.l.. The effect on other non-current financial assets deriving from the first consolidations of the period is equal to 1 million euro;
- Other non-current assets and liabilities show a net increase of 26 million euro, net of the effects of first-time consolidation for the period of 8 million euro, due to higher receivables from the tax authorities for building bonus tax benefits due after one year in the amount of 13 million euro, higher receivables in the amount of 12 million euro for the recognition of prior-period items related to water service revenues, and other decreases in non-current assets in the amount of 1 million euro;
- Deferred tax assets amounted to 381 million euro (424 million euro at December 31, 2021) and showed a net decrease of 43 million euro as a result of the change in cash flow hedge reserves and reserves arising from the application of IAS 19, partially offset by the effects of the first-time consolidation of 19 million euro;
- at June 30, 2022, Provision for risks, charges and liabilities for landfills amounted to 703 million euro and showed a decrease of 94 million euro. The change for the period was due to uses of 20 million euro, of which 10 million euro related to the incurrence of decommissioning and landfill costs and 10 million euro to the settlement of certain disputes; other decreases and releases of 97 million euro due mainly to an increase in the discount rates used to estimate future decommissioning and remediation costs. In addition, provisions for the period totalled 22 million euro and the contribution of the first-time consolidation amounted to 1 million euro;

- Employee benefits decreased by 54 million euro, due to disbursements during the half-year and payments to pension funds and actuarial valuations, net of allocations during the period.

Net Working Capital and Other current assets/liabilities

The "**Net Working Capital**", defined as the algebraic sum of trade receivables, closing inventories and trade payables, amounted to 493 million euro, down by 108 million euro compared to December 31, 2021. Comments on the main items are given below:

- "Inventories" amounted to 432 million euro (204 million euro at December 31, 2021), net of the related obsolescence provision for 23 million euro, up 228 million euro compared to December 31, 2021. The increase is attributable to higher inventories of fuels for electricity generation and gas inventories for sales and storage activities for 195 million euro as a result of higher market prices, higher coal inventories with third parties of 28 million euro, and an increase in material inventories of 7 million euro.
- "Trade receivables" amounted to 3,390 million euro (3,291 million euro at December 31, 2021), with an increase of 99 million euro, of which 11 million euro due to the first-time consolidation effects of the period.
- the change in trade receivables is primarily due to the increase in tariffs for the sale of electricity and gas in the half-year, which in turn was caused by the rise in commodity prices and the instalments granted to electricity, gas and district heating customers, which more than offset the reduction due to seasonality;
- the "Bad debt provision", calculated in compliance with IFRS 9, of 170 million euro increased by a net 37 million euro with respect to December 31, 2021, due to net provisions for 45 million euro and period uses for 8 million euro;
- "Trade payables" amounted to 3,329 million euro, with an increase of 435 million euro, of which 6 million euro due to the first-time consolidation effects of the period. This change is mainly attributable to the rising dynamics of commodity market prices;
- "Other current assets/liabilities" evidenced a net decrease of 234 million euro due to:
  - net increase in receivables from Cassa per i Servizi Energetici e Ambientali for 97 million euro;
  - net increase of 235 million euro in derivative assets, reflecting a change in fair value at the end of the period and in the quantities hedged;
  - increase in receivables for security deposits for 16 million euro;
  - increase in receivables for works to upgrade and improve energy efficiency in condominiums and third parties, for which tax benefits will be available under the building bonus scheme for 23 million euro;
  - decrease of 102 million euro in payables due to early collection of electricity and gas futures contracts, which will take place in the following period;
  - increase in deferred expenses of 61 million euro;
  - decrease in payables to personnel for 13 million euro;
  - net increase in current tax payables for 196 million euro;
  - 112 million euro net increase in tax payables for VAT, excise duties and other indirect taxes;
  - increase in other current liabilities for 5 million euro.

"**Assets/liabilities held for sale**" were zeroed as a result of the sale of the three buildings located in Milan (classified under this item at December 31, 2021 for a net value of 45 million euro) in February and the sale, on April 1, of the assets related to ATEMs considered non-strategic for the Group concerning gas distribution (classified under this item at December 31, 2021 for a net value of 102 million euro);

Consolidated "**Invested capital**" at June 30, 2022 amounted to 9,082 million euro and was financed by Equity for 4,495 million euro and the Net Financial Position for 4,587 million euro.

Equity

"**Equity**" amounted to 4,495 million euro and shows a positive change for a total of 192 million euro. The positive change was partly due to the period result for 355 million euro (328 million euro pertaining to the Group and 27 million euro to minorities), offset by dividends approved for 302 million euro (of which 283 million euro already distributed by the parent company A2A S.p.A.). Lastly, there was a positive net change of cash flow hedge derivatives and IAS 19 reserves for a total of 142 million euro and other reductions for 3 million euro.

The "**Consolidated Net Financial Position**" at June 30, 2022 was 4,587 million euro (4,113 million euro at the end of 2021). Excluding the changes in the perimeter that took place during the year, the Net Financial Position stood at 4,178 million euro, recording, after investments for 463 million euro, dividends of 283 million euro and collections for the sale of properties for 221 million euro, a cash absorption of 65 million euro.

millions of euro	01 01 2022 06 30 2022	01 01 2021 06 30 2021
NET FINANCIAL POSITION AT THE BEGINNING OF THE PERIOD	**(4,113)**	**(3,472)**
First-time consolidation contribution	**(146)**	**(182)**
New contracts IFRS 16	**(36)**	**(3)**
Net result	355	370
Taxes for the period	143	(41)
Net interest for the period	32	29
Gains/losses for the period	(191)	-
Amortization	351	323
Write-downs/disposals of tangible and intangible assets	2	2
Net allocations for the period	22	12
Result from shareholdings measured at equity	(2)	(3)
Net interest paid	(34)	(51)
Net taxes paid	(12)	(14)
Dividends paid	(295)	(258)
Change in receivables from customers	(134)	222
Change in payables to suppliers	429	(111)
Change in inventories	(228)	(15)
Other changes in net working capital	(250)	43
Cash flow from operating activities	**188**	**508**
Investments in tangible and intangible assets	(463)	(413)
Investments in shareholdings and securities	(465)	(136)
Contribution of cash and cash equivalents first-time consolidations	74	27
Disposals of fixed assets and shareholdings	349	5
Dividends received from shareholdings	-	-
Purchase of treasury shares	-	(109)
Net cash flows from investment activities	**(505)**	**(626)**
Free cash flow	(317)	(118)
Other changes	**2**	**22**
Changes in financial assets/liabilities with counter-entry to equity	23	8
NET FINANCIAL POSITION AT THE END OF THE PERIOD	**(4,587)**	**(3,745)**

3.2 Significant events during the period

A2A and Ardian sign binding agreements for the acquisition of wind and photovoltaic portfolios

On January 22, 2022, A2A and Ardian, the world's leading private investment company, signed a binding agreement pursuant to which A2A will acquire interests in 3New&Partners, Daunia Calvello and Daunia Serracapriola, companies that comprise a portfolio of wind farms in Italy with a total capacity of 335 MW (195 MW pro-rata with respect to the interest held by Ardian in this portfolio), for an equity value of 265 million euro. The two parties have also signed a second binding agreement for a further portfolio, 4New, wholly owned by a fund managed by Ardian, consisting of wind and photovoltaic plants for a total of 157 MW of which 117 MW located in Italy and the remaining 40 MW in Spain: the acquisition by A2A provides for an equity value of 187 million euro.

On June 7, 2022, A2A's acquisition of Ardian's wind and photovoltaic portfolios was finalized in accordance with the contracts signed and announced on January 22, 2022.

Business plan update

On January 27, 2022, the Board of Directors of A2A, chaired by Marco Patuano, examined and approved the update of the 2021-2030 Business Plan, which reinforces the commitment to decarbonization, ahead of the targets set by COP26, with a further two billion euro of investment.

Circular economy and energy transition are confirmed as the two pillars of the Plan that encapsulate the Group's concrete actions, to which all Business Units contribute.
The main new elements of the Plan Update are in line with global carbon footprint reduction goals. To encourage the adoption of this model of sustainable mobility, A2A has quadrupled the installation of planned infrastructure compared with the last Plan: 24 thousand electric recharging points by 2030 with a focus on low power (up to 7 kW) and high power (over 50 kW), to encourage both a slow (e.g. overnight) and fast (similar to traditional refuelling stations) delivery mode. For mobility segments the evolution of which is not foreseen towards electricity, A2A wants to make available green solutions such as green hydrogen and bio-LNG. The Group plans to develop more than 60 biomethane plants, at least 5 of which with liquefaction to obtain bio-LNG, while for the production of hydrogen it will be possible to exploit continuously produced energy sources such as waste-to-energy plants, with a decentralized business model based on local ecosystems serving industry and heavy transport.

A2A awarded 5.4 GW in the third capacity market auction called by Terna

On February 23, 2022, A2A, in the third capacity market auction called by Terna for the delivery year 2024, was awarded a total of 5.4 GW of capacity at national level which, with a mix of technological solutions including gas-fired plants, electrochemical storage and renewable source plants (hydroelectric and photovoltaic), contributes to ensuring the flexibility and decarbonization of the Italian electricity system, in line with the objectives of the A2A Business Plan.
For existing capacity, the annual contract has an award price of 33,000 euro/MW/year. The new capacity provides for a 15-year contract with an award price of 70,000 euro/MW/year for capacity already authorized, of 48,110 euro/MW/year for that yet to be authorized.

A new Sustainability-Linked Bond and a new Green Bond issued

Although in a complex context, dictated by the serious crisis unleashed on financial markets by the war in Ukraine, on March 9, 2022, the company placed a senior unsecured bond maturing in March 2028.
A maximum amount of 500 million euro has been set for the bond, which has an expected rating of Baa2 from Moody's and BBB from S&P. This is a sustainable bond tied to installed capacity from renewable sources. Orders received reached 3.5 billion, which is seven times the supply. The securities, intended for institutional investors, were issued at a price of 99.30% of nominal value and will have an annual yield of 1.622% and a coupon of 1.5% with a spread of 100 basis points over mid-swap.

On June 8, 2022, A2A successfully placed a new Green Bond for 600 million euro with a duration of 4 years, with the aim of financing Green Projects aligned to the EU Taxonomy. The bond, intended for institutional investors and issued under the Euro Medium Term Notes Program, is based on the Group's Sustainable Finance Framework, the set of guidelines that reinforce the link between financial strategy and sustainable strategy.

The bond was placed at an issue price of 99.580% and will have an annual yield of 2.612% and a coupon of 2.500%, with a spread of 93 basis points over the mid-swap reference rate.
The net proceeds from the issue will go to finance the Eligible Green Projects: strategic projects of circular economy and energy transition related to the development of renewables and to the environmental sector, defined within the Sustainable Finance Framework of A2A. The Group verified the alignment between these green projects and the European Taxonomy - the EU regulation that lists the economic activities that can be considered sustainable - in particular the one related to the "climate change mitigation" objective.
A2A undertakes to indicate, as part of the reporting of the allocation of the proceeds of the Green Bond prepared in accordance with the Sustainable Finance Framework, also the actual amount of investments aligned to the European Taxonomy that will be financed.
The issue recorded orders for over 1.7 billion euro, about 3 times the amount.

A2A announces the termination of negotiations with Ardian on the creation of the energy generation and supply partnership

On June 8, 2021, A2A and Ardian signed a non-binding termsheet concerning the creation of a partnership in the power generation and supply sectors in Italy. The termsheet stipulated that the parties would negotiate the terms of the partnership and related agreements until the end of 2021, a deadline later extended to March 31, 2022.
On March 17, 2022, negotiations with Ardian were interrupted, partly due to the escalation of international tensions and the significant consequences on the volatility of energy markets in Europe.

2021 results approved

On March 17, 2022, 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, 2021.
Gross operating margin stood at 1,428 million euro, an increase of 19% over 2020 (1,200 million euro). The net profit amounted to 504 million euro (364 million euro at December 31, 2020).
Capex rose sharply to 1,074 million euro, up 46% from the previous year. The Net Financial Position amounted to 4,113 million euro (3,472 million euro at December 31, 2020).
The Board of Directors proposed to the Shareholders' Meeting a dividend of 0.09 euro per share.

Energy efficiency: A2A and Assimpredil Ance sign memorandum of understanding to provide incentives for upgrading buildings

On March 31, 2022 A2A, through its subsidiary A2A Energy Solutions, and Assimpredil Ance, the Association of Building Constructors of Milan, Lodi and Monza Brianza, renewed the memorandum of understanding, which updates the one already signed in 2019, to promote energy efficiency measures on buildings.
The objective of the agreement is to promote the upgrading and energy efficiency of homes in the Metropolitan City of Milan by intervening on buildings to ensure their better thermal insulation. In addition to the benefits, in terms of energy savings and avoided emissions, these activities also ensure a reduction in heating costs, an important objective also in light of the heavy repercussions on gas prices caused by the ongoing international tensions.

Sale of non-strategic natural gas distribution assets finalized

On April 1, 2022, A2A and ACSM-AGAM, together with other companies controlled by them, finalized the closing of the sale of certain assets deemed non-strategic to the sellers.
The perimeter of activities covered by the operation, overall for both Groups, includes approximately 157 thousand users, distributed in 8 Italian Regions, belonging to 24 ATEMs, for about 2,800 km of network. The economic value of the sale in terms of Enterprise Value is 125.4 million euro (of which ACSM-AGAM Group 40.6 million euro) against a total RAB of 102 million euro (of which ACSM-AGAM Group 25.5 million euro).

A2A with EcoVadis for a sustainable supply chain

On April 13, 2022, A2A started a collaboration with EcoVadis - a leading company in corporate sustainability assessments - to promote the improvement of the sustainability performance of its suppliers.
Through this agreement, A2A continues on the path to increase a sustainable supply chain and foster social and environmental responsibility practices among supplier companies, which stimulate the improvement of ESG performance throughout the supply chain. This new platform will also help promote eco-innovations within the Group's procurement process and improve the reliability of information.
For A2A, this partnership is in line with the ESG objectives integrated in the Group's strategy: in the

recent update of the 2030 Business Plan, in fact, challenging goals were also implemented in the social and governance area in which the A2A Group operates.

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

On April 28, 2022, the Ordinary Shareholders' Meeting of A2A S.p.A. was held to approve the company's financial statements for the year 2021 and the distribution of the dividend proposed by the Board of Directors of 0.09 euro per share.
The shareholders also voted in favour with a binding vote on the first section of the 2022 Report on Remuneration and with an advisory, non-binding vote on the second section of the 2022 Report on Remuneration.
The Shareholders' Meeting also authorized and defined the terms within which the Board of Directors may purchase and dispose of treasury shares.

Ratings Assessment and Outlook

On May 13, 2022, S&P confirmed A2A's long-term and short-term rating at BBB/A-2 and revised the Outlook from "Stable" to "Negative". The Outlook revision reflects the expectation of a natural dilution over the next 18 to 24 months of the pure regulated share in A2A's business mix.
For the purposes of this assessment, S&P considers electricity grids, gas grids, water cycle, urban collection and treatment plants subject to ARERA regulation as pure regulated businesses. The share of regulated, quasi-regulated and contracted business in each case remains above 50% of Group EBITDA.
A2A confirms its commitment to maintaining its current rating, if necessary also reshaping its future investment plans, relying on its sound financial policy that has allowed the Group to grow steadily over the years while respecting its economic and equity balance, with a strong focus on sustainable finance (currently the share of sustainable debt is 49% of the total).

On June 13, 2022, Standard Ethics, an independent rating agency that measures corporate sustainability, raised A2A's Corporate Rating to "EE+" from the previous "EE" with a "Positive" Outlook. With this rating, A2A becomes the Italian company with the highest rating in its sector.
According to Standard Ethics, A2A has long adopted ESG (Environmental, Social and Governance) reporting aligned with international best practice. Sustainability issues are continuously addressed through corporate policies that are updated to UN, OECD and EU guidelines and recently reinforced by the reorganization of some corporate functions.

New Sustainability-Linked credit line with ESG objectives

A2A signed a new 410 million euro three-year Sustainability-Linked revolving credit line, linked to the achievement of three objectives in the areas of Social and Governance, which the group defined in the strategic plan update presented last January. The first target concerns the issue of health and safety and in particular the reduction of the accident frequency index; the second is related to Sustainable Procurement policies, specifically the increase in the percentage of orders to suppliers assessed with ESG indicator; finally, the third target concerns equal opportunities with the reduction of the gender pay gap.
The line provides for a mechanism for adjusting the margin both if A2A reaches the set targets (step down) and if the Group does not reach said sustainability targets (step up).
The savings due to the achievement of the targets or the potential penalty caused by non-achievement will benefit the community: the amount will be donated to the Banco dell'Energia Onlus, a non-profit organization promoted by A2A and the AEM, ASM and LGH Foundations, set up to support those who find themselves in situations of economic and social fragility, with particular attention to energy poverty. This donation will not replace but will be in addition to the Group's traditional support of Banco dell'Energia.

3.3 Significant events after June 30, 2022

A2A and BTS Biogas together for the development of new plants for the circular economy and decarbonization

On July 15, 2022, A2A and BTS Biogas, technological leader in the construction of biogas and biomethane plants, signed a letter of intent aimed at defining a joint venture with the objective of building new plants and converting existing infrastructures that will be fuelled by animal and vegetable waste.
For A2A, the initiative is in line with the 2030 Business Plan, focused on energy transition and circular economy: biomethane is in fact one of the key factors for growth in the bioenergy sector, strategic for the contribution that the A2A Group wants to make to the sustainable development and decarbonization of the country.

3.4 Impacts of the Russia-Ukraine conflict

The ongoing conflict between Russia and Ukraine has exacerbated an energy market crisis that had already been ongoing since 2021, linked to the post-pandemic recovery and the severe shortage of raw materials, leading to a further increase in energy commodity prices and their volatility. In addition to the direct impacts on the production and sale of electricity and gas, such a price increase has led to a general increase in inflation with particular reference to the prices of oil derivatives and foodstuffs, as well as tensions on financial markets, on the solvency of certain counterparts and the security of the computer infrastructure to address a possible increase in cyber-attacks.

The average value of the PUN Base Load in the first half of 2022 in fact shows an increase of +271.6% compared to the first half of 2021, reaching € 249/MWh. The dynamic is mainly driven by a significant rise in gas costs exacerbated by the conflict. The PUN in January 2022 stood at €225/MWh, peaked at €308/MWh in March, dropped slightly in the following months, and then rose again in June to €271/MWh.

As far as gas prices are concerned, the upward trend of the average price of gas at the PSV continues, which, after peaking in March at €127/MWh, and a fall back in April and May, rose again in June to €103/MWh. Specifically, the average price of gas to the PSV for the first half of 2022 amounted to 98 €/MWh, up 348.4% compared to the first half of 2021.

In addition, recent government measures have introduced extraordinary contributions on the economic performance of energy companies (e.g. Support Ter, Price-Cutting Decree Law, Aid Law Decree) allocating them, in particular, to the financing of measures to protect national companies and households. This context is constantly evolving, with impacts on the A2A Group's margins as well, and further levies cannot be ruled out during 2022.

Economic Impacts in Business Units

The extraordinary increase in energy prices had a positive impact on the margins of the industrial and trading portfolios of the Generation BU, contributed to the increase in the margins of the Waste BU in relation to the sale of electricity and heat from waste-to-energy plants, and of the Smart Infrastructures BU in the Heat segment.
On the other hand, volatility and rising prices contributed negatively to the Market BU's margins, both for gas and electricity, and to the Generation BU's gas portfolio. In addition to this, there are indirect impacts and, essentially, related to the potential reduction in GDP and the rise in inflation.

Risks and uncertainties related to commodities and scenario developments

The A2A Group, as part of its industrial activity of generating energy carriers and marketing them on a wholesale basis, is managing the growing volatility of the price of gas both by monitoring the limits of exposure to commodity risk and by optimising its buying and selling strategies. The Group pursues a prudent hedging policy and at 30 June the hedge ratio for the remaining six months was 81% for fixed-price production (Renewables and WtE) and 51% for CCGT thermoelectric production. It should also be noted that the Group, in its procurement activities, mainly operates on platforms.
Should the national supply situation become critical and an emergency be declared, which is the highest level of crisis foreseen, in line with national emergency procedures, network operators could determine the interruption of gas and energy supply to specific industrial entities with certain characteristics, addressing interruptible customers first. Extraordinary measures would also be triggered, ranging from the use of strategic storage to new temperature thresholds. Supply rationing would, however, have a strong impact on the system, on the one hand aggravating the already critical situation of rising energy prices and on the other hand risking the loss of the contribution of programmable thermoelectric generation needed to meet demand at times when other sources, such as renewables, are not sufficient to do so.
A2A has, however, equipped itself with gas storage space, which it is promptly filling (currently 435 Mm3, about 70% of the space) in order to hold forms of flexibility to reduce the impact of any stress on gas imports into Italy and guarantee winter supplies to users.
A2A's gas portfolio is currently balanced: gas volumes used by thermoelectric power plants that have not already been purchased in advance by hedging the spark spread are purchased daily on the market. The remaining part of the year is expected to require the purchase of approximately 1,423 Mm3 (with reference to both thermoelectric power plants and energy retail customers), with no assumption of a forced reduction in consumption.

Should there not be sufficient liquidity on the market to buy gas on a daily basis, recourse would have to be made to the balancing market operated by the GME and/or in some cases, failing to fully cover requirements, to the Unbalancing market.
The expected effects of this situation are mainly of a financial nature as they would lead to an increase in the guarantees to be provided to Snam and GME.
The stipulated contracts do not provide for a force majeure clause on the part of suppliers in the event of an interruption of Russian supplies, but the possibility that parties in difficulty, today considered reliable both financially and in terms of assets, might not make the planned deliveries is not excluded. In such an event, A2A would find itself buying more volumes every day on the balancing market, with the need to pay further attention to the financial resources required to meet the payments and the consequent request to increase the related guarantees.
The Group has initiated joint analyses with the electricity grid operator to define possible ways to maximise electricity production from fuels other than natural gas.

Impact on Net Working Capital

With reference to the solvency of certain counterparties, the increase in commodity prices determines - as noted in the first six months of 2022 - an increase in credit exposures to customers (even assuming constant volumes): prudently and consistently with this increase, the provision for bad debts was adjusted by 45 million euro. Credit risk is managed by means of a Credit Policy with the aim of managing counterparty risk by means of preliminary checks, requests for collateral, waivers, as well as managing payment terms, interest and repayment plans.
As at June 30, 2022, for example, A2A Energia showed an increase in corporate credit of 97% compared to the same month of 2021 strongly influenced by the increase in issued credit (+92% compared to June 2021).
This increased exposure generates a higher risk due to both the possible default of more energy-intensive counterparties and payment delays. It should be noted, however, that it is mainly overdue credit (59%) that is increasing, while the increase in overdue credit (41%) is more limited, which can also be attributed to the increase in instalment requests, which in terms of amount have reached values five times higher than in 2021 and seven times higher than in the pre-pandemic period.
At the end of the first half of 2022, 91% of the still open credit subject to instalment was related to contracts with active supplies.

Impacts on the Net Financial Position

The Net Financial Position felt the effects of the crisis in the energy markets: the increase in commodity prices combined with higher demand for instalment plans from customers led to a higher cash absorption. This growth was calmed by proactive management. To date, no significant deterioration related to the increase in credit delinquency has been reported.
In particular, at a Group level, of the overall change in the Net Financial Position of 474 million euro, about 269 million euro of cash absorption was deemed to be temporary as it was essentially due to: i) government measures for 130 million euro (instalment payments granted to customers of electricity and gas sales companies or district heating companies) and ii) the increase in the reference scenario for 139 million euro.

With reference to possible tensions in the financial markets, it should be noted that the Group's solid liquidity position, also supported by both committed and uncommitted back-up lines (at June 30, 2022 equal to 2.1 billion euro), is allowing it to manage positions in the commodities market in addition to temporary increases in working capital due to price growth and installment plans granted to customers. During the first half of the year, which was characterised by a complex and volatile market environment, A2A successfully issued two bonds for a total of 1.1 billion euro, thus anticipating the funding needs of the coming months. In addition, medium-term bilateral credit lines were signed, as well as a 410 million euro revolving credit line for back-up purposes, all confirming the Group's ability to access capital and banking markets.

Other Information

With reference to the generalised increase in inflation, the A2A Group is experiencing cost increases in the performance of operating activities (for example, the cost of asphalting in excavation activities rather than the generalised cost of transporting waste to destination plants, the cost of reagents in waste treatment processes) and difficulties in obtaining certain materials within the ordinary time frame. In order to cope with this situation, automatic price list adjustments are being made where possible, stocks of materials that are more difficult to obtain are being increased and the supplier portfolio is being expanded. In addition to these measures, the A2A Group, also in relation to the increased difficulties in finding materials, revised the timing of planned investments.

Exposure to cyber attacks

In relation to the high level of alertness for cyber attacks, the Group activated a channel with the top management of National Security to exchange information, accelerating the programme to secure endpoints with advanced malware protection tools; an analysis of the main hacker attack techniques was also conducted and an IT Security assessment was carried out to determine the degree of vulnerability of A2A's services; this activity, which was completed in March, led to the preparation of a detailed technical report and the identification of specific actions to strengthen IT security levels, which were taken up by Information Technology and A2A Smartcity.

Impacts on strategy

Finally, as far as future impacts are concerned, there are no significant changes with respect to the growth strategy outlined in the 2021-2030 Strategic Plan, although the Group is monitoring the profitability and cost-effectiveness of planned investments in light of recent changes in the scenario, confirming its commitment to maintaining its current rating.

3.5 Outlook for operations

After the health emergency of 2020 and 2021, both the geopolitical tensions following the Russia-Ukraine conflict and the recent news about the reduction of gas flows from Russia and the exceptionally low hydraulics are affecting the macroeconomic environment, leading to significant effects on the energy scenario. The escalation and prolongation of hostilities have accentuated the volatility of commodity prices, especially energy prices, leading to strong inflationary pressures with repercussions on household and corporate spending. Finally, government actions aimed at containing prices for end consumers or offering financial support have impacted on companies operating in the electricity and gas sales sector.

The financial results in the first half of the year showed good resilience of the Group: Growing EBITDA thanks to strong business diversification and solid financial structure, despite generalised tensions.

The Group confirms the expectations set out in past announcements (presentation of the 2021-2030 Strategic Plan on January 27, 2022 and presentation of the quarterly results on May 12, 2022): EBITDA is expected in a range between 1.40 and 1.45 billion euro, and Group Net Profit, net of non-recurring items is expected between 330 and 370 million euro.

A2A constantly monitors the evolution of events, the macroeconomic context and the related impacts on margins and cash flows and, as it has done in other crisis situations (for example in the case of the recent COVID-19 pandemic), identifies possible mitigation actions aimed at greater protection of the economic and financial situation. In this sense, to date approximately 81% of fixed-price production (Renewables and WTE), and 51% of thermoelectric production (CCGT) have been covered for the next six months of the year, thus reducing the possible negative effects of a fall in prices.

The Group can also rely on a solid liquidity position to cope with further volatility in the commodities market in addition to temporary and reabsorbable increases in working capital due to price growth and instalment plans granted to customers.

4

Consolidated financial statements

4.1 Consolidated balance sheet (1-2)
Assets

millions of euro	Note	06 30 2022	12 31 2021
NON-CURRENT ASSETS			
Tangible assets	1	5,769	5,588
Intangible assets	2	3,265	3,125
Shareholdings carried according to equity method	3	272	33
Other non-current financial assets	3	71	64
Deferred tax assets	4	381	424
Other non-current assets	5	72	25
Total non-current assets		**9,830**	**9,259**
CURRENT ASSETS			
Inventories	6	432	204
Trade receivables	7	3,390	3,291
Other current assets	8	7,987	4,051
Current financial assets	9	12	9
Current tax assets	10	29	68
Cash and cash equivalents	11	1,571	964
Total current assets		**13,421**	**8,587**
NON-CURRENT ASSETS HELD FOR SALE	12	**-**	**162**
TOTAL ASSETS		**23,251**	**18,008**

(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.

4 Consolidated financial statements

Consolidated balance sheet

Consolidated income statement

Consolidated statement of comprehensive income

Consolidated cash-flow statement

Statement of changes in Group equity

Breakdown of the balance sheet with evidence of the effect of the first consolidation of the 2022 acquisitions

Breakdown of the economic effect of the consolidation of new acquisitions 2022

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

Equity and liabilities

millions of euro	Note	06 30 2022	12 31 2021
EQUITY			
Share capital	13	1,629	1,629
(Treasury shares)		-	-
Reserves	14	1,990	1,627
Result of the year	15	-	504
Result of the period	15	328	-
Equity pertaining to the Group		**3,947**	**3,760**
Minority interests	16	548	543
Total equity		**4,495**	**4,303**
LIABILITIES			
Non-current liabilities			
Non-current financial liabilities	17	5,730	4,322
Employee benefits	18	240	294
Provisions for risks, charges and liabilities for landfills	19	703	797
Other non-current liabilities	20	140	129
Total non-current liabilities		**6,813**	**5,542**
Current liabilities			
Trade payables	21	3,329	2,894
Other current liabilities	21	7,993	4,487
Current financial liabilities	22	443	746
Tax liabilities	23	178	21
Total current liabilities		**11,943**	**8,148**
Total liabilities		**18,756**	**13,690**
LIABILITIES DIRECTLY ASSOCIATED WITH NON-CURRENT ASSETS HELD FOR SALE	24	**-**	**15**
TOTAL EQUITY AND LIABILITIES		**23,251**	**18,008**

4.2 Consolidated income statement (1-2)

millions of euro	Note	01 01 2022 06 30 2022	01 01 2021 06 30 2021 Restated (*)
Revenues			
Revenues from the sale of goods and services		9,691	3,948
Other operating income		97	105
Total revenues	26	**9,788**	**4,053**
Operating expenses			
Expenses for raw materials and services		8,543	2,843
Other operating expenses		156	144
Total operating expenses	27	**8,699**	**2,987**
Labour costs	28	**381**	**378**
Gross operating income - EBITDA	29	**708**	**688**
Depreciation, amortization, provisions and write-downs	30	**373**	**332**
Net operating income - EBIT	31	**335**	**356**
Result from non-recurring transactions	32	**157**	**(1)**
Financial balance			
Financial income		16	10
Financial expenses		48	39
Affiliates		2	3
Result from disposal of other shareholdings		-	-
Total financial balance	33	**(30)**	**(26)**
Result before taxes		**462**	**329**
Income taxes	34	**143**	**(41)**
Result after taxes from operating activities		**319**	**370**
Net result from discontinued operations	35	**36**	**-**
Net result		**355**	**370**
Minorities	36	**(27)**	**(30)**
Group result of the period	37	**328**	**340**
Result per share (in euro):			
- basic		0.1049	0.1097
- basic from continuing operations		0.0934	0.1097
- basic from assets held for sale		0.0115	-
- diluted		0.1049	0.1097
- diluted from continuing operations		0.0934	0.1097
- diluted from assets held for sale		0.0115	-

((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.

(*) The values as at June 30, 2021 have been restated to make them homogeneous with the values as at June 30, 2022 by reclassifying under the item "Net result from discontinued operations" the revenues, operating costs and depreciation referring to gas distribution assets and under the item "Result from non-recurring transactions" the depreciation relating to buildings subject to sale.

4.3 Consolidated statement of comprehensive income

millions of euro	06 30 2022	06 30 2021
Net result of the period (A)	**355**	**370**
Actuarial gains/(losses) on Employee's Benefits booked in the Net equity	40	5
Tax effect of other actuarial gains/(losses)	(13)	(1)
Total actuarial gains/(losses) net of the tax effect (B)	**27**	**4**
Effective part of gains/(losses) on cash flow hedge	166	91
Tax effect of other gains/(losses)	(51)	(27)
Total other gains/(losses) net of the tax effect of companies consolidated on a line-by-line basis (C)	**115**	**64**
Other gains/(losses) of companies valued at equity net of the tax effect (D)	**-**	**-**
Total comprehensive result (A)+(B)+(C) +(D)	**497**	**438**
Total comprehensive result attributable to:		
- Shareholders of the parent company	**470**	**408**
- Minority interests	**(27)**	**(30)**

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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4.4 Consolidated cash-flow statement

millions of euro	06 30 2022	06 30 2021
CASH AND CASH EQUIVALENTS AT THE BEGINNING OF THE PERIOD	**964**	**1,012**
Operating activities		
Net Result	355	370
Net income taxes	143	(41)
Net financial interests	32	29
Capital gains/expenses	(191)	-
Tangible assets depreciation	242	226
Intangible assets amortization	109	97
Fixed assets write-downs/disposals	2	2
Net provisions	22	12
Result from affiliates	(2)	(3)
Net financial interests paid	(34)	(51)
Net taxes paid	(12)	(14)
Dividends paid	(295)	(258)
Change in trade receivables	(134)	222
Change in trade payables	429	(111)
Change in inventories	(228)	(15)
Other changes in net working capital	(250)	43
Cash flow from operating activities	**188**	**508**
Investment activities		
Investments in tangible assets	(304)	(258)
Investments in intangible assets and goodwill	(159)	(155)
Investments in shareholdings and securities (*)	(465)	(136)
Contribution of first consolidation of acquisitions on cash and cash equivalents	74	27
Disposals of fixed assets and shareholdings	349	5
Purchase of treasury shares	-	(109)
Cash flow from investment activities	**(505)**	**(626)**
FREE CASH FLOW	**(317)**	**(118)**
Financing activities		
Changes in financial assets		
Issuance of loans	-	-
Proceeds from loans	(2)	-
Other changes	(3)	3
Total changes in financial assets (*)	**(5)**	**3**
Changes in financial liabilities		
Borrowings/bonds issued	1,844	140
Repayment of borrowings/bond	(890)	(738)
Lease payments	(8)	0
Other changes	(17)	25
Total changes in financial liabilities (*)	**929**	**(573)**
Cash flow from financing activities	**924**	**(570)**
CHANGE IN CASH AND CASH EQUIVALENTS	**607**	**(688)**
CASH AND CASH EQUIVALENTS AT THE END OF THE PERIOD	**1,571**	**324**

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

4.5 Statement of changes in Group equity

Changes from January 1, 2021 to June 30, 2021 millions of euro	Share capital	Treasury shares	Cash Flow Hedge	Other Reserves and retained earnings	Group Result of the period	Total Equity pertaining to the Group	Minority interests	Total Net shareholders equity
Net equity at December 31, 2020	**1,629**	**(54)**	**(6)**	**1,604**	**364**	**3,537**	**579**	**4,116**
2020 Result allocation				364	(364)	-		-
Distribution of dividends				(248)		(248)	(10)	(258)
Purchase of treasury shares		(109)				(109)		(109)
IAS 19 reserves (*)				4		4		4
Cash flow hedge reserves (*)			64			64		64
Other changes				(3)		(3)	(5)	(8)
Group and minorities result of the period					340	340	30	370
Net equity at June 30, 2021	**1,629**	**(163)**	**58**	**1,721**	**340**	**3,585**	**594**	**4,179**

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

Changes from July 1, 2021 to December 31, 2021 millions of euro	Share capital	Treasury shares	Cash Flow Hedge	Other Reserves and retained earnings	Group Result of the period	Total Equity pertaining to the Group	Minority interests	Total Net shareholders equity
Net equity at June 30, 2021	**1,629**	**(163)**	**58**	**1,721**	**340**	**3,585**	**594**	**4,179**
Distribution of dividends						-	(5)	(5)
IAS 19 reserves (*)				(31)		(31)		(31)
Cash flow hedge reserves (*)			(30)			(30)		(30)
Other changes		163		(91)		72	(62)	10
Group and minorities result of the period					164	164	16	180
Net equity at December 31, 2021	**1,629**	**-**	**28**	**1,599**	**504**	**3,760**	**543**	**4,303**

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

Changes from January 1, 2022 to June 30, 2022 millions of euro	Share capital	Treasury shares	Cash Flow Hedge	Other Reserves and retained earnings	Group Result of the period	Total Equity pertaining to the Group	Minority interests	Total Net shareholders equity
Net equity at December 31, 2021	**1,629**	**-**	**28**	**1,599**	**504**	**3,760**	**543**	**4,303**
2021 Result allocation				504	(504)	-		-
Distribution of dividends				(283)		(283)	(19)	(302)
IAS 19 reserves (*)				27		27		27
Cash flow hedge reserves (*)			115			115		115
Other changes						-	(3)	(3)
Group and minorities result of the period					328	328	27	355
Net equity at June 30, 2022	**1,629**	**-**	**143**	**1,847**	**328**	**3,947**	**548**	**4,495**

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

4.6 Breakdown of the balance sheet with evidence of the effect of the first consolidation of the 2022 acquisitions
(NO GAAP MEASURES)

millions of euro	Note	Consolidated at 12 31 2021
ASSETS		
NON-CURRENT ASSETS		
Tangible assets	1	5,588
Intangible assets	2	3,125
Shareholdings carried according to equity method	3	33
Other non-current financial assets	3	64
Deferred tax assets	4	424
Other non-current assets	5	25
TOTAL NON-CURRENT ASSETS		**9,259**
CURRENT ASSETS		
Inventories	6	204
Trade receivables	7	3,291
Other current assets	8	4,051
Current financial assets	9	9
Current tax assets	10	68
Cash and cash equivalents	11	964
TOTAL CURRENT ASSETS		**8,587**
NON-CURRENT ASSETS HELD FOR SALE	12	**162**
TOTAL ASSETS		**18,008**
LIABILITIES		
NON-CURRENT LIABILITIES		
Non-current financial liabilities	17	4,322
Deferred tax liabilities		-
Employee benefits	18	294
Provisions for risks, charges and liabilities for landfills	19	797
Other non-current liabilities	20	129
TOTAL NON-CURRENT LIABILITIES		**5,542**
CURRENT LIABILITIES		
Trade payables	21	2,894
Other current liabilities	21	4,487
Current financial liabilities	22	746
Tax liabilities	23	21
TOTAL CURRENT LIABILITIES		**8,148**
TOTAL LIABILITIES		**13,690**
LIABILITIES DIRECTLY ASSOCIATED WITH NON-CURRENT ASSETS HELD FOR SALE	24	**15**
LIABILITIES		**13,705**

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A2A Rinnovabili Group	Total effect first consolidation acquisitions 2022	Changes during the period	Consolidated at 06 30 2022
155	155	26	5,769
108	108	32	3,265
235	235	4	272
1	1	31	96
22	22	(65)	381
4	4	18	47
525	**525**	**46**	**9,830**
-	-	228	432
11	11	75	3,377
17	17	3,932	8,000
-	-	3	12
5	5	(44)	29
74	74	533	1,571
107	**107**	**4,727**	**13,421**
-	**-**	**(162)**	**-**
632	**632**	**4,611**	**23,251**
127	127	1,281	5,730
3	3	(3)	-
-	-	(54)	240
1	1	(95)	703
9	9	2	140
140	**140**	**1,131**	**6,813**
6	6	429	3,329
21	21	3,485	7,993
23	23	(326)	443
5	5	152	178
55	**55**	**3,740**	**11,943**
195	**195**	**4,871**	**18,756**
-	**-**	**(15)**	**-**
195	**195**	**4,856**	**18,756**

4.7 Breakdown of the economic effect of the consolidation of new acquisitions 2022 (NO GAAP MEASURES)

millions of euro	Note	A2A Rinnovabili Group
REVENUES		
Revenues from the sale of goods and services		6
Other operating income		1
TOTAL REVENUES	26	**7**
OPERATING EXPENSES		
Expenses for raw materials and services		2
Other operating expenses		1
TOTAL OPERATING EXPENSES	27	**3**
LABOUR COSTS	28	**1**
GROSS OPERATING INCOME - EBITDA	29	**3**
DEPRECIATION, AMORTIZATION AND WRITE-DOWNS	30	**1**
NET OPERATING INCOME - EBIT	31	**2**
RESULT FROM NON-RECURRING TRANSACTIONS	32	**-**
FINANCIAL BALANCE		
Financial income		2
Financial expenses		2
Affiliates		-
Result from disposal of other shareholdings		-
TOTAL FINANCIAL BALANCE	33	**-**
RESULT BEFORE TAXES		**2**
INCOME TAXES	34	**1**
RESULT AFTER TAXES FROM OPERATING ACTIVITIES		**1**
NET RESULT FROM DISCONTINUED OPERATIONS	35	**-**
NET RESULT		**1**
MINORITIES	36	**-**
GROUP RESULT OF THE PERIOD	37	**1**

Total effect consolidation new acquisitions 2022	Old perimeter 06 30 2022	Consolidated at 06 30 2022	Consolidated at 06 30 2021 Restated
6	9,685	9,691	3,948
1	96	97	105
7	**9,781**	**9,788**	**4,053**
2	8,541	8,543	2,843
1	155	156	144
3	**8,696**	**8,699**	**2,987**
1	**380**	**381**	**378**
3	**705**	**708**	**688**
1	**372**	**373**	**332**
2	**333**	**335**	**356**
-	**157**	**157**	**(1)**
2	14	16	10
2	46	48	39
-	2	2	3
-	-	-	-
-	**(30)**	**(30)**	**(26)**
2	**460**	**462**	**329**
1	**142**	**143**	**(41)**
1	**318**	**319**	**370**
-	**36**	**36**	**-**
1	**354**	**355**	**370**
-	**(27)**	**(27)**	**(30)**
1	**327**	**328**	**340**

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

Assets

millions of euro	06 30 2022	of which Related Parties (note 39)	12 31 2021	of which Related Parties (note 39)
NON-CURRENT ASSETS				
Tangible assets	5,769		5,588	
Intangible assets	3,265		3,125	
Shareholdings carried according to equity method	272	268	33	33
Other non-current financial assets	71	16	64	14
Deferred tax assets	381		424	
Other non-current assets	72		25	
Total non-current assets	**9,830**		**9,259**	
CURRENT ASSETS				
Inventories	432		204	
Trade receivables	3,390	116	3,291	142
Other current assets	7,987	13	4,051	1
Current financial assets	12	1	9	1
Current tax assets	29		68	
Cash and cash equivalents	1,571		964	
Total current assets	**13,421**		**8,587**	
NON-CURRENT ASSETS HELD FOR SALE	**-**		**162**	
TOTAL ASSETS	**23,251**		**18,008**	

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Equity and liabilities

millions of euro	06 30 2022	of which Related Parties (note 39)	12 31 2021	of which Related Parties (note 39)
EQUITY				
Share capital	1,629		1,629	
(Treasury shares)	-		-	
Reserves	1,990		1,627	
Result of the year	-		504	
Result of the period	328		-	
Equity pertaining to the Group	**3,947**		**3,760**	
Minority interests	548		543	
Total equity	**4,495**		**4,303**	
LIABILITIES				
Non-current liabilities				
Non-current financial liabilities	5,730		4,322	
Employee benefits	240		294	
Provisions for risks, charges and liabilities for landfills	703		797	
Other non-current liabilities	140		129	
Total non-current liabilities	**6,813**		**5,542**	
Current liabilities				
Trade payables	3,329	48	2,894	76
Other current liabilities	7,993	5	4,487	7
Current financial liabilities	443		746	
Tax liabilities	178		21	
Total current liabilities	**11,943**		**8,148**	
Total liabilities	**18,756**		**13,690**	
LIABILITIES DIRECTLY ASSOCIATED WITH NON-CURRENT ASSETS HELD FOR SALE	**-**		**15**	
TOTAL EQUITY AND LIABILITIES	**23,251**		**18,008**	

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

millions of euro	01 01 2022 06 30 2022	of which Related Parties (note 39)	01 01 2021 06 30 2021 Restated	of which Related Parties (note 39)
Revenues				
Revenues from the sale of goods and services	9,691	277	3,948	232
Other operating income	97		105	
Total revenues	**9,788**		**4,053**	
Operating expenses				
Expenses for raw materials and services	8,543	10	2,843	6
Other operating expenses	156	34	144	36
Total operating expenses	**8,699**		**2,987**	
Labour costs	**381**	**1**	**378**	**1**
Gross operating income - EBITDA	**708**		**688**	
Depreciation, amortization, provisions and write-downs	**373**		**332**	
Net operating income - EBIT	**335**		**356**	
Result from non-recurring transactions	**157**		**(1)**	
Financial balance				
Financial income	16	5	10	3
Financial expenses	48		39	
Affiliates	2	2	3	3
Result from disposal of other shareholdings	-		-	
Total financial balance	**(30)**		**(26)**	
Result before taxes	**462**		**329**	
Income taxes	**143**		**(41)**	
Result after taxes from operating activities	**319**		**370**	
Net result from discontinued operations	**36**		**-**	
Net result	**355**		**370**	
Minorities	**(27)**		**(30)**	
Group result of the period	**328**		**340**	

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Notes to the Half-yearly financial report

5.1 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 even from renewable resources;
- 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;
- technical consultancy relating to energy efficiency certificates.

The form and content of the Half-Year Report comply with the disclosure requirements of IAS 34 - Interim Financial Reporting for Condensed Half-Year Financial Statements. Therefore, it does not include all the information required by the annual financial statements and shall be read together with the consolidated financial statements for the year ended December 31, 2021. In fact, its purpose is to provide an update since the last annual consolidated financial statements, focusing on new activities, events and circumstances that occurred during the period between December 31, 2021 and June 30, 2022 and providing an explanation of transactions and events that are significant for an understanding of the changes in financial position and result for the period.

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5.2 Half-yearly financial report

The Half-year financial report (hereinafter the "**Half-year report**") of the A2A Group at June 30, 2022 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, 2022 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. 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, 2021 were applied, other than the interpretations described in detail in the paragraph below "Changes in international accounting standards" adopted for the first time on January 1, 2022.

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, 2022 was approved on July 29, 2022 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.

5.3 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 paragraphs 60 and following 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" 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 should be noted that the item "Result from non-recurring transactions" is intended to include the results from the sale of investments in subsidiaries and associates 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 is prepared using the indirect method, as permitted by "IAS 7" and includes the disclosure amendments introduced by the integration to "IAS 7" approved on November 9, 2017.

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, 2021.

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5.4 Basis of preparation

The Half-year report at June 30, 2022 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 standards, the accounting policies and the methods of measurement used in the preparation of the Half-yearly financial report are consistent with those used to prepare the consolidated annual financial report at December 31, 2021, except as specified below regarding newly enacted standards.

5.5 Changes in international accounting standards

Pursuant to IAS 8, the subsequent paragraph "Accounting standards, amendments and interpretations applicable by the company as of the current year" indicates and briefly illustrates the amendments in force as of January 1, 2022.

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

As from January 1, 2022, applicable to the Group are the following additions to specific paragraphs of the international accounting standards already adopted by the Group companies in previous years:

- IFRS 3 "Business Combination": issued by the IASB on May 14, 2020 and approved on July 2, 2021, the integration introduces an exception to the standard to avoid the risk of potential "day-after" losses or gains arising from liabilities and contingent liabilities that would fall within the scope of IAS 37 or IFRIC 21, if contracted separately. The integration did not have any impact on the Group's economic and financial situation;
- IAS 16 "Property, plant and equipment": issued by the IASB on May 14, 2020 and approved on July 2, 2021, the integration prohibits the deduction from the carrying amount of a fixed asset of any revenue from the sale achieved during the preparation of the fixed asset. These revenues must be recognized in the income statement. The integration did not have any impact on the Group's economic and financial situation;
- IAS 37 "Provisions, liabilities and contingent liabilities": issued by the IASB on May 14, 2020 and endorsed on July 2, 2021, the integration further specifies which costs should be considered in the definition of an onerous contract. General and administrative expenses are excluded unless explicitly included in the contract. The integration did not have any impact on the Group's economic and financial situation;
- IFRS 1 "First-time Adoption of International Financial Reporting Standards": issued by the IASB on May 14, 2020 and endorsed on July 2, 2021, this amendment allows a subsidiary that elects to apply paragraph D16(a) of IFRS 1 to account for cumulative translation differences based on the amounts recognized by the parent company, considering the date of transition to IFRSs by the parent company. This amendment also applies to associates or joint ventures that elect to apply paragraph D16(a) of IFRS 1. The integration did not have any impact on the Group's economic and financial situation as the Group is not a first-time adopter;
- IFRS 9 "Financial Instruments": issued by the IASB on May 14, 2020 and endorsed on July 2, 2021, this amendment clarifies what fees an entity includes in determining whether the terms and conditions of a new or amended financial liability are materially different from the terms and conditions of the original financial liability. These fees include only those paid or received between the borrower and the lender, including fees paid or received by the borrower or lender on behalf of others. No such amendment has been proposed with regard to IAS 39 Financial Instruments: Recognition and Measurement. The integration did not have any impact on the Group's economic and financial situation;
- IAS 41 "Agriculture": issued by the IASB on May 14, 2020 and endorsed on July 2, 2021, this amendment removes the requirements in paragraph 22 of IAS 41 relating to the exclusion of cash flows for taxes when measuring the fair value of an asset within the scope of IAS 41. The integration did not have any impact on the Group's economic and financial position as the Group did not have any assets within the scope of IAS 41 at the reporting date.

5.6 Scope of consolidation

The Half-year report of the A2A Group at June 30, 2022 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 by A2A Rinnovabili S.p.A. of 100% of Volta Green Energy S.r.l. and 60% of R2R S.r.l., companies operating in the photovoltaic and wind power sectors, resulting in the line-by-line consolidation of seven companies;
- disposal of the equity investment in Seasm S.r.l., previously consolidated on a line-by-line basis;
- acquisition by A2A Rinnovabili S.p.A. of 100% of 4New S.r.l. and 3 New & Partners S.r.l., companies operating in the photovoltaic and wind power sectors, resulting in the line-by-line consolidation of eleven companies and the consolidation at equity of one company. A2A Rinnovabili S.p.A. also acquired directly and consolidated at equity 49% of Daunia Calvello S.r.l. and 30% of Daunia Serracapriola S.r.l., companies that hold a portfolio of wind farms in Italy. In transparency, the Group holds 74.5% of Daunia Calvello S.r.l. and 65% of Daunia Serracapriola S.r.l., through the associated company Daunia Wind S.r.l.. However, it does not fully consolidate the two companies as the conditions of control, as set forth in IFRS 10, do not exist.

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5.7 Consolidation policies and procedures

Consolidation policies

Subsidiaries

Subsidiaries are those companies over which the parent company, A2A S.p.A., exercises control, also by virtue of shareholders' agreements, 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 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).

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-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.

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b) Earn-out on the purchase of the equity investments made by A2A Rinnovabili S.p.A

With reference to the acquisitions of equity investments made by A2A Rinnovabili S.p.A. between 2017 and 2021, by contract, there are price and earn-out adjustments of non-significant amounts both in favour of the seller and in favour of the buyer upon the occurrence of certain conditions. Given the uncertainty and insignificance of the amounts, the Group has not recorded the corresponding payables.

There are also contractual earn-out clauses for the acquisitions made during the first half of 2022, for which the conditions for their recognition do not currently exist and therefore the corresponding payables have not been recognized.

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

On April 16, 2019, the incorporation of 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 4.9 million euro which it will not be able to avoid if the option is exercised.

d) Options on the shares of Electrometal S.p.A.

On December 20, 2019, A2A Ambiente S.p.A. acquired 90% of Electrometal S.r.l..
As a result of point 9) of the shareholding purchase agreement, a call option is provided on the part of A2A Ambiente S.p.A. and a put option on the part of GAE S.r.l. (the seller) of the remaining 10%, exercisable from January 1, 2025 until December 31, 2025.
In 2020, a payment of 0.5 million euro was made as price adjustment on the net financial position.
The valuation of this option is proportional to the final value of 90% of the shares of Electrometal S.r.l..
Therefore, in accordance with paragraph 23 of IAS 32, the Group has recognized as a liability the present value of the estimated outlay of 2.1 million euro which it will not be able to avoid if the option is exercised.

e) Options on the shares of Saxa Gres S.p.A.

On April 15, 2021, A2A Ambiente S.p.A. acquired 27.7% of Saxa Gres S.p.A.. The agreement was reached for 7.1 million euro. There are contractual earn-out clauses and options on the value of the investment for which there are no amounts recorded in the financial statements.

f) F.lli Omini price adjustment

On October 28, 2021, A2A Ambiente S.p.A. acquired 30% of F.lli Omini S.p.A.. The agreement was reached on the basis of 4.5 million euro plus a price adjustment linked to the value of the Net Financial Position and the Net Working Capital at the date of acquisition; paid in 2022 and equal to 0.6 million euro.
There are no earn-in/out clauses on the value of the shares.

g) TecnoA price adjustment

On December 12, 2021, A2A Ambiente S.p.A. acquired 100% of TecnoA S.p.A.. The agreement was reached for a transaction value of 276 million euro. A price adjustment linked to the value of the Net Financial Position and the Net Working Capital at the date of acquisition is expected to be defined during 2022.
For further information on the Purchase Price Allocation process, please refer to the "Other information" section of this disclosure.
There are no earn-in/out clauses on the value of the shares.

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. Any items recognized by using different accounting standards are adjusted during the consolidation process to bring them into line with Group accounting policies. All intra-group balances and transactions, including any unrealized profits arising from transactions between Group companies, are fully eliminated.

In preparing the 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.
Transactions with minority interests which do not lead to the loss of control in consolidated companies are accounted for using the economic entity view approach.

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

With effect from 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)

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 two joint arrangements operating in the Generation and Trading Business Unit, 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.

In particular, as regards the shareholding in PremiumGas S.p.A., the Group has rights exclusively linked to the results achieved by the company.
On September 26, 2018, PremiumGas S.p.A. was placed in voluntary liquidation.

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.

At June 30, 2022, the shareholding in Daunia Wind S.r.l. also fell under the category of shareholdings in joint ventures.

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.

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

Key figures at December 31, 2021 millions of euro	Bergamo Pulita 50%	PremiumGas 50%	Metamer 50%	Ergosud 50%	Daunia Wind 50%
INCOME STATEMENT					
Revenues	0.04	0.06	24.0	40.9	1.0
Gross Operating Income	**0.00**	**0.02**	**1.0**	**7.7**	**0.6**
% of net revenues	*n.s.*	*n.s.*	*4.2%*	*18.8%*	*55.0%*
Depreciation, amortization and write-downs	-	-	0.3	10.4	0.4
Net Operating Income	**0.00**	**0.02**	**0.7**	**(2.7)**	**0.2**
Result for the year	**0.00**	**0.03**	**0.5**	**(2.5)**	**6.0**
BALANCE SHEET					
Total assets	**2.55**	**4.2**	**10.4**	**155.0**	**53.0**
Net equity	**0.09**	**1.5**	**2.8**	**68.0**	**38.0**
Net (debt)	**1.20**	**0.7**	**0.5**	**(39.7)**	**2.5**

Key figures at December 31, 2020 millions of euro	Bergamo Pulita 50%	PremiumGas 50%	Metamer 50%	Ergosud 50%	Daunia Wind 50%
INCOME STATEMENT					
Revenues	0.04	0.06	20.0	30.0	0.4
Gross Operating Income	**(0.01)**	**0.01**	**0.9**	**11.0**	**0.2**
% of net revenues	*(25.0%)*	*16.7%*	*4.4%*	*36.7%*	*37.5%*
Depreciation, amortization and write-downs	-	-	0.3	10.5	0.4
Net Operating Income	**(0.01)**	**0.01**	**0.6**	**0.5**	**(0.2)**
Result for the year	**(0.01)**	**0.01**	**0.5**	**(0.3)**	**11.5**
BALANCE SHEET					
Total assets	**2.53**	**4.2**	**8.8**	**120.0**	**48.5**
Net equity	**0.09**	**1.5**	**2.5**	**71.0**	**43.5**
Net (debt)	**1.20**	**0.8**	**0.0**	**(48.6)**	**1.0**

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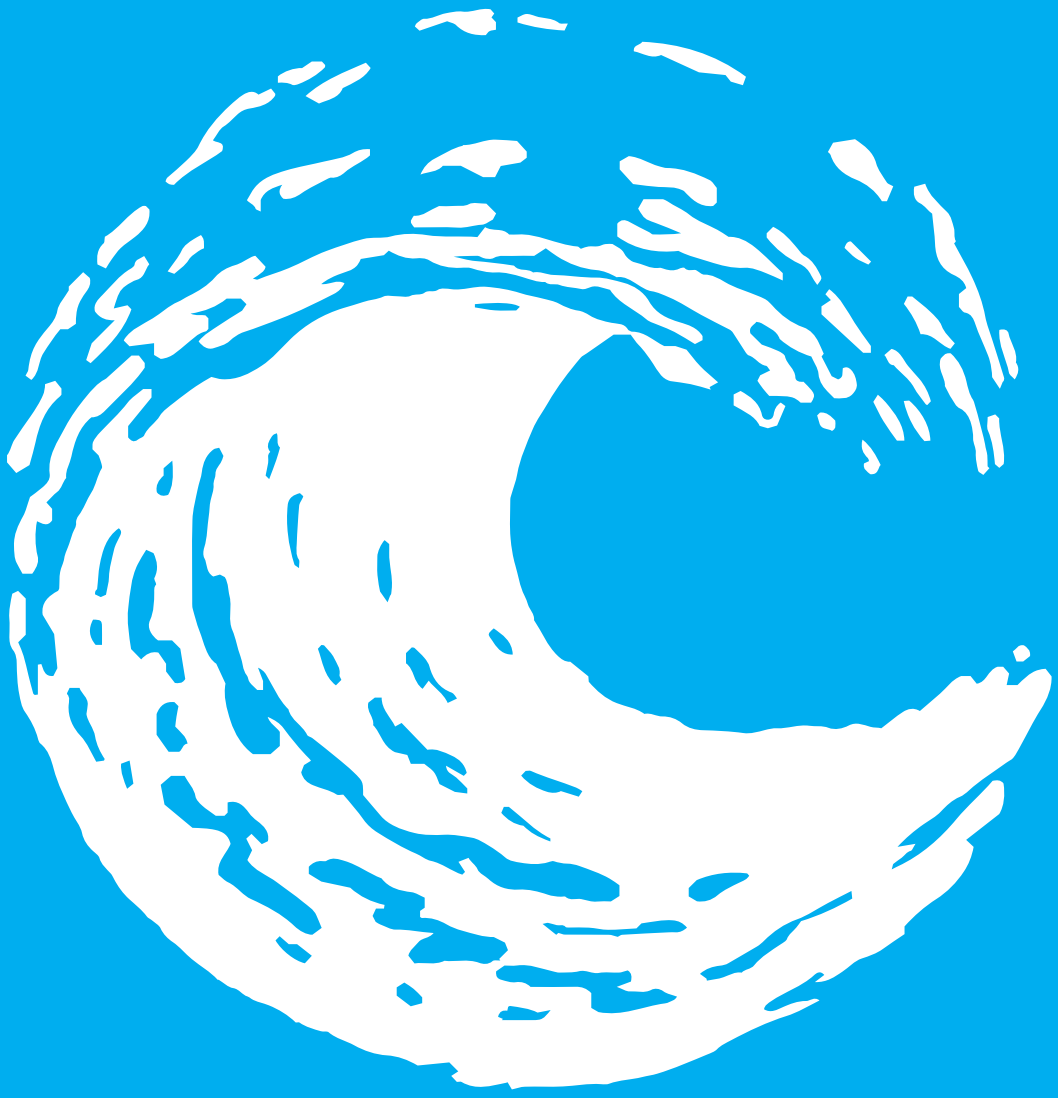

5.8 Seasonal nature of the business

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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5.9 Summary of results sector by sector

millions of euro	GENERATION AND TRADING		MARKET	
	01 01 2022 06 30 2022	01 01 2021 06 30 2021 Restated	01 01 2022 06 30 2022	01 01 2021 06 30 2021 Restated
Revenues	**7,890**	**2,378**	**3,822**	**1,503**
- of which inter-sector	*2,946*	*728*	*120*	*72*
Labour costs	**46**	**45**	**29**	**29**
Gross operating income - EBITDA	**221**	**150**	**8**	**120**
% of revenues	*2.8%*	*6.3%*	*0.2%*	*8.0%*
Depreciation, amortization, provisions and write-downs	**(114)**	**(98)**	**(68)**	**(24)**
Net operating income - EBIT	**107**	**52**	**(60)**	**96**
% of revenues	*1.4%*	*2.2%*	*(1.6%)*	*6.4%*
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)	**63**	**37**	**31**	**33**

(1) See the items "Capex" in the schedules on tangible and intangible assets presented in Notes 1 and 2 to the balance sheet.
It should be noted that the income statement data from January 1 to June 30, 2021 have been reallocated to make them homogeneous to the results by "Business Unit" from January 1 to June 30, 2022.
The values as at June 30, 2021 have been restated to make them homogeneous with the values as at June 30, 2022 by reclassifying under the item "Net result from discontinued operations" the revenues, operating costs and amortization/depreciation referring to gas distribution assets and under the item "Result from non-recurring transactions" the amortization/depreciation relating to buildings subject to sale.

WASTE		SMART INFRASTRUCTURES		CORPORATE		ELIMINATIONS		INCOME STATEMENT	
01 01 2022 06 30 2022	01 01 2021 06 30 2021 Restated	01 01 2022 06 30 2022	01 01 2021 06 30 2021 Restated	01 01 2022 06 30 2022	01 01 2021 06 30 2021 Restated	01 01 2022 06 30 2022	01 01 2021 06 30 2021 Restated	01 01 2022 06 30 2022	01 01 2021 06 30 2021 Restated
714	**612**	**786**	**618**	**159**	**147**	**(3,583)**	**(1,205)**	**9,788**	**4,053**
177	*85*	*194*	*183*	*146*	*137*	*(3,583)*	*(1,205)*		
177	**178**	**55**	**55**	**74**	**71**			**381**	**378**
207	**164**	**285**	**264**	**(13)**	**(10)**			**708**	**688**
29.0%	*26.8%*	*36.3%*	*42.7%*	*(8.2%)*	*(6.8%)*			*7.2%*	*17.0%*
(32)	**(59)**	**(133)**	**(127)**	**(26)**	**(24)**			**(373)**	**(332)**
175	**105**	**152**	**137**	**(39)**	**(34)**			**335**	**356**
24.5%	*17.2%*	*19.3%*	*22.2%*	*(24.5%)*	*(23.1%)*			*3.4%*	*8.8%*
								157	**(1)**
								(30)	**(26)**
								462	**329**
								(143)	**41**
								319	**370**
								36	**-**
								(27)	**(30)**
								328	**340**
104	**109**	**241**	**215**	**24**	**27**	**-**	**(8)**	**463**	**413**

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millions of euro	GENERATION AND TRADING		MARKET	
	06 30 2022	12 31 2021	06 30 2022	12 31 2021
Tangible assets	2,285	2,205	45	42
Intangible assets	262	154	307	286
Trade receivables and current financial assets	2,413	2,428	1,425	1,406
Trade payables and current financial liabilities	2,926	2,529	862	952

WASTE		SMART INFRASTRUCTURES		CORPORATE		ELIMINATIONS		INCOME STATEMENT	
06 30 2022	12 31 2021	06 30 2022	12 31 2021	06 30 2022	12 31 2021	06 30 2022	12 31 2021	06 30 2022	12 31 2021
1,158	1,132	2,209	2,146	198	196	(126)	(133)	**5,769**	**5,588**
117	125	2,275	2,205	88	125	216	230	**3,265**	**3,125**
365	384	379	490	71	75	(1,251)	(1,483)	**3,402**	**3,300**
362	373	336	397	521	864	(1,235)	(1,475)	**3,772**	**3,640**

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5.10 Notes to the balance sheet

It is noted that the consolidation scope at June 30, 2022 changed compared to December 31, 2021 for to the following operations:

- the acquisition by A2A Rinnovabili S.p.A. of 100% of Volta Green Energy S.r.l. and 60% of R2R S.r.l., companies operating in the photovoltaic and wind power sectors, resulting in the line-by-line consolidation of seven companies;
- sale of the shareholding in Seasm S.r.l., previously consolidated on a line-by-line basis;
- the acquisition by A2A Rinnovabili S.p.A. of 100% of 4New S.r.l. and 3 New & Partners S.r.l., companies operating in the photovoltaic and wind power sectors, resulting in the line-by-line consolidation of eleven companies and the consolidation at equity of one company. A2A Rinnovabili S.p.A. also acquired directly and consolidated at equity 49% of Daunia Calvello S.r.l. and 30% of Daunia Serracapriola S.r.l., companies that hold a portfolio of wind farms in Italy. In transparency, the Group holds 74.5% of Daunia Calvello S.r.l. and 65% of Daunia Serracapriola S.r.l., through the associated company Daunia Wind S.r.l.. However, it does not fully consolidate the two companies as the conditions of control, as set forth in IFRS 10, do not exist.

It should be noted in advance that these acquisitions are part of the provisions of IFRS 3 and at June 30, 2022, the Purchase Price Allocation has not yet been completed, which will be completed in the timing envisaged by the standard.

ASSETS

NON-CURRENT ASSETS

1) Tangible assets

millions of euro	Balance at 12 31 2021	First-time consolid. effect	Changes during the period						Balance at 06 30 2022
			Invest.	Other changes	Disposals and sales	Write-downs/ Reversal	Amort.	Total changes	
Land	141	2	4					4	147
Buildings	544	5	6	4			(15)	(5)	544
Plant and machinery	3,908	135	94	5	(1)		(176)	(78)	3,965
Industrial and commercial equipment	55		6				(5)	1	56
Other assets	132		16	3			(16)	3	135
Landfills	25			(7)			(4)	(11)	14
Construction in progress and advances	544		168	(63)				105	649
Leasehold improvements	124		10				(11)	(1)	123
Assets for rights of use	115	13		23			(15)	8	136
Total	**5,588**	**155**	**304**	**(35)**	**(1)**	**-**	**(242)**	**26**	**5,769**
of which:									
Historical cost	12,752	155	304	273	(23)			554	13,461
Accumulated amortization	(7,164)			(308)	22		(242)	(528)	(7,692)
Write-downs									-

"Tangible assets" amounted to 5,769 million euro at June 30, 2022 (5,588 million euro at December 31, 2021) and include the first-time consolidation effect of 155 million euro.

The changes in the period recorded an increase of 26 million euro as follows:
- increase of 304 million euro for Capex made in the period as further described below;
- net decrease for other changes equal to 35 million euro mainly due to decreases in the decommissioning provision for 48 million euro, mainly due to the effect of discounting following the increase in interest rates, landfill closure and post closure costs for 9 million euro, as well as increases in rights of use in application of the IFRS16 accounting standard for 23 million euro;
- decrease of 1 million euro arising from disposals in the period, net of accumulated depreciation;
- decrease of 242 million euro for the depreciation charge for the period.

Capex may be analyzed as follows:
- Capex in the Smart Infrastructures Business Unit totalled 132 million euro and concerned: 93 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; 30 million euro for the development of district heating networks; 2 million euro for work on the fiber optic network and equipment, 1 million euro for interventions on the gas transport network, 5 million euro for the efficiency plan with new LED technology light sources, as well as 1 million euro for interventions on the electric vehicle recharging network;
- Capex in the Waste Business Unit amounted to 103 million euro and refer to: 94 million euro for work on the Group's waste treatment and disposal plants; 4 million euro for the acquisition of mobile means for waste collection and 5 million euro for the acquisition of collection facilities;
- Capex in the Generation and Trading Business Unit increased 57 million euro and concerned: 43 million euro capex on thermoelectric plants, 6 million euro capex on hydroelectric plants, and 8 million euro capex on renewable energy plants;
- for the Market Business Unit, the increase was 5 million euro, mainly due to the energy efficiency plan at customers;
- for the Corporate Business Unit capex, amounting to 7 million euro, included 5 million euro for works on buildings in the Milan and Brescia areas, 1 million euro for the implementation of telecommunications equipment, and 1 million euro for works on the electric vehicle charging network.

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The Group is continuing to analyze the impact of regulatory amendments and confirms, to date, that the amounts recognized in the financial statements for dry and wet works related to hydroelectric concessions are prudent and recoverable also in accordance with the new regulations.

Tangible assets include "Assets for rights of use" totalling 136 million euro (115 million euro at December 31, 2021), recognized in accordance with IFRS16 and for which the outstanding payable to lessors at June 30, 2022 amounted to 145 million euro (106 million euro at December 31, 2021). Below is a breakdown of "Assets for rights of use" deriving from operating and financial leases at June 30, 2022:

Assets consisting of rights of use millions of euro	Balance at 12 31 2021	First-time consolid. effect 2022	Changes during the period			Balance at 06 30 2022
			Other changes	Amort.	Total changes	
Land	19	13	2	(2)	-	32
Buildings	49		4	(5)	(1)	48
Plant and machinery	8		(3)	(2)	(5)	3
Industrial, commercial equipment and other goods	27		3	(2)	1	28
Vehicles	12		17	(4)	13	25
Total	**115**	**13**	**23**	**(15)**	**8**	**136**

It is specified that 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.

2) Intangible assets

millions of euro	Balance at 12 31 2021	First-time consolid. effect	Changes during the period						Balance at 06 30 2022
			Invest.	Reclass. / Other changes	Disposals/ Sales	Write-downs	Amort.	Total changes	
Industrial patents and intellectual property rights	52		8	3			(13)	(2)	50
Concessions, licences, trademarks and similar rights	1,881	5	106	6	(1)		(76)	35	1,921
Goodwill	746	98						-	844
Assets in progress	119	3	33	(17)				16	138
Other intangible assets	327	2	12	(9)			(20)	(17)	312
Total	**3,125**	**108**	**159**	**(17)**	**(1)**	**-**	**(109)**	**32**	**3,265**

"Intangible assets" amounted to 3,265 million euro at June 30, 2022 (3,125 million euro at December 31, 2021) and include the first-time consolidation effect of 108 million euro.

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

The changes for the period, net of the above effect, recorded an overall increase of 32 million euro as follows:

- increase of 159 million euro for Capex made in the period as further described below;
- net decrease of 17 million euro for other changes, due to the decrease in environmental certificates of the industrial portfolio for 14 million euro, as well as the reclassification to assets held for sale of certain assets related to gas distribution networks considered non-strategic for the Group for 3 million euro, the sale of which was completed during the second quarter;
- decrease of 1 million euro arising from disposals in the period, net of accumulated depreciation;
- decrease of 109 million euro for the depreciation charge for the period.

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Capex of "Intangible assets" relate to the following:

- Capex in the Smart Infrastructures Business Unit of 109 million euro are for: development and maintenance work on the gas distribution plants and the replacement of low and medium pressure underground piping for 52 million euro; work on the water transport and distribution network, on the sewage networks and on the purification plants for 36 million euro; contracting costs for the Heat Plants of the Milan, Brescia and Bergamo areas for 1 million euro, concession fees for the use of optical fiber for 2 million euro, and the implementation of information systems for 18 million euro;
- Capex in the Market Business Unit increased 26 million euro due to the implementation of information systems for 14 million euro and 10 million euro for costs incurred for the new acquisitions and maintenance of the customer portfolio, 2 million euro for the acquisition of the customer portfolio registered in the company Yada Energia S.r.l.;
- for the Corporate Business Unit, the increase was 17 million euro mainly due to the implementation of information systems;
- for the Generation and Trading Business Unit, the increase was 6 million euro and concerned the implementation of information systems;
- for the Waste Business Unit, capex amounted to 1 million euro and refer to the implementation of information systems.

The item "Other intangible assets" amounted to 312 million euro at June 30, 2022 (327 million euro at December 31, 2021) and includes:

- 222 million euro for customer lists related to the acquisition of customer portfolios by Group companies. These values are amortized based on an estimate of the benefits that will arise in future years, taking into account indicators such as the retention rate and churn rate relating to specific types of customers. In particular, the amount in the financial statements is attributable as follows: 94 million euro to the ACSM-AGAM Group, 39 million euro to the AEB Group, 48 million euro to A2A Energia S.p.A., 13 million euro to A2A Recycling S.r.l., 10 million euro to Electrometal S.r.l., 9 million euro to Asm Energia S.p.A., 6 million euro to Yada Energia S.r.l. and 3 million euro to A2A S.p.A., Aprica S.p.A. and LumEnergia S.p.A.;
- 48 million euro for PPA Società Rinnovabili: the increase in value is linked to the existing agreement with the Energy Services Manager, which allows the affiliated companies to benefit from incentive tariffs for a period of 20 years, which are considerably higher than those existing on the market;
- 1 million euro for Environmental Certificates: emission quotas and White Certificates (Industrial portfolio);
- 11 million euro for PPA of the Agripower Group: the increase in value is linked to the existing agreement with the Energy Services Manager, which allows the affiliated companies to benefit from incentive tariffs, which are considerably higher than those existing on the market;
- 30 million euro relating mainly to deferred charges and costs and surface rights and/or easements.

Goodwill

At June 30, 2022, goodwill amounted to 844 million euro:

millions of euro	Balance at 12 31 2021	Changes during the period					Balance at 06 30 2022
		Reclassific.	First-time consolid. acquis. 2022	PPA Effect	Write-downs	Total changes	
CGU:							
A2A Ambiente	269	267				267	536
A2A Reti Gas	41					-	41
A2A Gas	74					-	74
A2A Calore	22					-	22
A2A Vendita Energia Elettrica	7					-	7
A2A Generazione Rinnovabili	66					-	66
Total	**479**	**267**	**-**	**-**	**-**	**267**	**746**
First-time consolidation effect							
Volta Green Energy S.r.l. e R2R S.r.l.			20			20	20
3 New & Partners S.r.l.			4			4	4
4NEW S.r.l.			74			74	74
TecnoA	267	(267)				(267)	-
Total	**267**	**(267)**	**98**	**-**	**-**	**(169)**	**98**
Total Goodwill	**746**	**-**	**98**	**-**	**-**	**98**	**844**

During the first half of 2022, the A2A Group completed the following transactions:

- acquisition of Volta Green Energy S.r.l. and R2R S.r.l., companies operating in the photovoltaic and wind power sectors with 7 companies consolidated on a line-by-line basis, which also own projects (amounting to 800 MW) for the construction of new wind power and photovoltaic plants with different authorization status, which resulted in the recognition of goodwill of 20 million euro;
- acquisition of 4NEW S.r.l. and 3 New & Partners S.r.l., companies operating in the photovoltaic and wind power sectors with 11 fully consolidated companies and 6 plants, which resulted in the recognition of goodwill in the amount of 78 million euro.

These acquisition are part of the provisions of IFRS 3 and at June 30, 2022, the Purchase Price Allocation has not yet been completed, which will be completed in the timing envisaged by the standard.

During the year, the Group will complete the Purchase Price Allocation for the acquisition of TecnoA (which took place in December 2021), which resulted in the provisional recognition of goodwill in the amount of 267 million euro.

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

During the first half of 2022, management, for the purposes of applying IAS 36, in light of the trend of the energy scenario, exacerbated by the effects of the Russia-Ukraine conflict, as well as the trend of the Group's market capitalization value, carried out a careful analysis of the results achieved with respect to the 2021-2030 plan, updated by the Board of Directors on January 19, 2022, also considering the assumptions and results of the impairment process previously carried out for the 2021 financial statements, as well as the effects of the trend of the aforementioned energy scenario. In light of the analyses conducted on the basis of the evidence available at June 30, 2022 and their foreseeable evolution, no critical issues have emerged and there are no elements that constitute a loss indicator such as to require specific verifications on the recoverability of assets.

3) Shareholdings and other non-current financial assets

millions of euro	Balance at 12 31 2021	First-time consolid. effect acquisitions 2022	Changes during the period	Balance at 06 30 2022	of which included in the NFP	
					12 31 2021	06 30 2022
Shareholdings carried according to equity method	33	235	4	272	-	-
Other non-current financial assets	64	1	6	71	-	-
Total shareholdings and other non-current financial assets	**97**	**236**	**10**	**343**	**-**	**-**

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, 2021	**33**
First-time consolidation effect acquisitions 2022	**235**
Changes during the period:	
- acquisitions and capital increases	-
- valuations at equity	2
- write-downs	-
- reversals	-
- dividends received from shareholdings in companies carried at equity	(2)
- sales and decreases	-
- other changes	4
- reclassifications	-
Total changes during the period	**239**
Balance at June 30, 2022	**272**

The increase in "Investments in companies accounted for using the equity method" amounted to 239 million euro and was mainly due to the effects of first-time consolidation, for 235 million euro, following the purchase of 100% of the investment in 3 New & Partner S.r.l., which holds 50% of the investment in Daunia Wind S.r.l., and for the purchase of 74.5% of Daunia Calvello S.r.l. and 65% of Daunia Serracapriola S.r.l. (of which 49% and 30% directly held by A2A Rinnovabili and the remainder through Daunia Wind. These companies are not fully consolidated since they do not meet the control requirements of IFRS 10). Other changes include the increase in equity-accounted investments of 4 million euro.

The details of the shareholdings are provided in annex no. 4 "List of shareholdings in companies carried at equity".
At June 30, 2022, "Other non-current financial assets" showed a balance of 71 million euro, an increase of 7 million euro compared to the figure at December 31, 2021, of which 1 million euro related to the effects arising from the first consolidations, 2 million euro to investments made in innovative start-ups through Corporate Venture Capital projects, 1 million euro to the payment to the Court of Taranto, following the request to deposit in a specific current account, of the amounts seized as part of the proceedings underway against the subsidiary Linea Ambiente S.r.l, and 3 million euro to a loan disbursed in favour of an associated company.

At June 30, 2022, "Other non-current financial assets" refer, in addition to the case mentioned above, for 24 million euro to medium/long-term financial receivables, of which 12 million euro relating to loans to others (of which 6.5 million euro to non-consolidated investee companies), 4 million euro to the Municipality of Brescia, for the management of public lighting in application of IFRIC 12, 7 million euro deriving from the management of the biocube plant of Cedrasco by the subsidiary Bioase in application of IFRIC 12 and for 1 million to other financial assets. This item also includes
7 million euro for equity investments in other companies, details of which are provided in Annex 5 "List of equity investments in other companies".

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4) Deferred tax assets

millions of euro	Balance at 12 31 2021	First-time consolidation effect acquisitions 2022	Changes net during the period	Balance at 06 30 2022
Deferred tax assets	**424**	**19**	**(62)**	**381**

"Deferred tax assets" amounted to 381 million euro (424 million euro at December 31, 2021) and decreased by 43 million euro as a result of the effects of first-time consolidation in the amount of 19 million euro and negative changes for the period of 62 million euro mainly due to the tax effect on the change in equity reserves on the fair values of derivatives and IAS 19 reserves for employee benefits.
The item includes the net effect, as detailed in the table below to which reference is made, of deferred tax liabilities and deferred tax assets for IRES and IRAP on changes and provisions made solely for tax 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, 2022, the amounts relative to deferred tax assets/deferred tax liabilities have been expressed as net ("offsetting") as per IAS 12 standards.

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

	Consolidated financial statements 12 31 2021	First-time consolid. effect	Accruals (A)	Uses (B)	Adjust. Rates (C)	Total (A+B+C)	IFRS 9 at Equity Net	IAS 19 Revised at Equity Net	Consolidated financial statements 06 30 2022
Detail of deferred tax assets/liabilities									
Deferred tax liabilities									
Measurement differences for tangible assets	310	-	-	-	-	-	-	-	310
Adoption of the finance lease standard (IFRS 16)	-	-	-	-	-	-	-	-	-
Application of the financial instrument standard (IFRS 9)	-	-	-	-	-	-	-	-	-
Measurement differences for intangible assets	63	-	-	(3)	-	(3)	-	-	60
Deferred capital gains	-	-	-	-	-	-	-	-	-
Employee leaving entitlement (TFR)	2	-	-	-	-	-	-	-	2
Goodwill	6	-	-	-	-	-	-	-	6
Other deferred tax liabilities	8	3	-	-	-	-	-	-	11
Total deferred tax liabilities (A)	**389**	**3**	**-**	**(3)**	**-**	**(3)**	**-**	**-**	**389**
Deferred tax assets									
Taxed risk provisions	121	-	-	1	-	1	-	(13)	109
Measurement differences for tangible assets	478	-	-	-	-	-	-	-	478
Application of the financial instrument standard (IFRS 9)	(19)	-	-	-	-	-	(51)	-	(70)
Bad debt provision	21	-	-	-	-	-	-	-	21
Measurement differences for intangible assets	8	-	-	-	-	-	-	-	8
Grants	16	-	-	-	-	-	-	-	16
Goodwill	175	-	-	-	-	-	-	-	175
Other deferred tax assets	13	22	-	(2)	-	(2)	-	-	33
Total deferred tax assets (B)	**813**	**22**	**-**	**(1)**	**-**	**(1)**	**(51)**	**(13)**	**770**
NET EFFECT DEFERRED TAX ASSETS/LIABILITIES (B-A)	**424**	**19**	**-**	**2**	**-**	**2**	**(51)**	**(13)**	**381**

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5) Other non-current assets

millions of euro	Balance at 12 31 2021	First-time consolid. effect acquisitions 2022	Changes during the period	Balance at 06 30 2022	*of which included in the NFP*	
					12 31 2021	*06 30 2022*
Other non-current assets	25		39	64	-	
Non-current derivatives		4	4	8		*8*
Total other non-current assets	**25**	**4**	**43**	**72**	**-**	***8***

"Other non-current assets" were up by 39 million euro compared to December 31, 2021. This change is related for 14 million euro to the payment of security deposits, for 13 million euro to receivables from the tax authorities for tax benefits under building bonuses due after the following year, and for 12 million euro to the recognition of receivables for prior-year items related to revenues for water services referred to the consolidated company ACSM-AGAM.
"Non-current derivative instruments" amounted to 8 million euro and resulted from the effects of first-time consolidations for 4 million euro, the fair value valuation of financial instruments at June 30, 2022 for 5 million euro, and the extinguishment of certain derivative contracts for 1 million euro.

CURRENT ASSETS

6) Inventories

millions of euro	Balance at 12 31 2021	First-time consolidation effect acquisitions 2022	Changes net during the period	Balance at 06 30 2022
- Materials	96		8	104
- Material obsolescence provision	(22)		(1)	(23)
Total materials	**74**	**-**	**7**	**81**
- Fuel	122		195	317
- Others	8		(2)	6
Raw and ancillary materials and consumables	**204**	**-**	**200**	**404**
Third-party fuel	**-**		**28**	**28**
Total inventory	**204**	**-**	**228**	**432**

Inventories amounted to 432 million euro (204 million euro at December 31, 2021), net of the related obsolescence provision for 23 million euro (22 million euro at December 31, 2021).
Inventories show a total increase of 228 million euro, as detailed below:

- 195 million euro related to the increase in inventories of fuels, which reflects both the price trend of the same (stocks include the inventories of fuels for the production of electricity, as well as the gas inventories for the sale and storage thereof) and the increase in quantities;
- 28 million euro for goods to third parties related to coal at the warehouse in Koper not yet cleared through customs in Italy;
- 7 million euro related to the increase in inventories of materials, including the allocation to the material obsolescence provision;
- other decreases amounting to 2 million euro.

7) Trade receivables

millions of euro	Balance at 12 31 2021	First-time consolidation effect acquisitions 2022	Changes net during the period	Balance at 06 30 2022
Trade receivables - invoices issued	1,124	8	144	1,276
Trade receivables - invoices to be issued	2,300	3	(19)	2,284
(Bad debts provision)	(133)		(37)	(170)
Total trade receivables	**3,291**	**11**	**88**	**3,390**

As of June 30, 2022 the "Trade receivables" amounted to 3,390 million euro (3,291 million euro at December 31, 2021), with an increase of 99 million euro. In detail, the changes were as follows:

- for 125 million euro, the increase in trade receivables from customers (related for 11 million euro to the effects of the first consolidations), which at June 30, 2022 had a balance of 3,289 million euro (3,164 million euro at December 31, 2021);
- for 31 million euro, the decrease in receivables from associates, which had a balance of 20 million euro (51 million euro at the end of the previous year);
- for 5 million euro, the increase in receivables from the Municipalities of Milan and Brescia; this item had an overall balance of 81 million euro (76 million euro in the previous year).

The change in trade receivables is primarily due to the increase in tariffs for the sale of electricity and gas in the half-year, which in turn was caused by the rise in commodity prices and the instalments granted to electricity, gas and district heating customers, which more than offset the reduction due to seasonality.
The changes in the Bad debts provision are outlined in the following table:

millions of euro	Balance at 12 31 2021	First-time consolidation effect acquisitions 2022	Provisions	Utilizations	Other changes	Balance at 06 30 2022
Bad debts provision	**133**	**-**	**45**	**(8)**	**-**	**170**

The "Bad debts provision", calculated in compliance with IFRS 9, amounted to 170 million euro and showed a net increase of 37 million euro compared to December 31, 2021. This provision is considered adequate to cover the risks to which it relates.

Provisions for the period amounted to 45 million euro, up by 35 million euro compared to the same period of the previous year, as a result of the higher credit exposure to customers due to the exceptional increase in turnover related to the trend in the energy scenario, as well as in anticipation of future expected losses in accordance with IFRS 9.

Given the high quality of customers, largely subject to credit check-in during the contract activation phase, and the significant proportion of bills paid by direct debit, amounting to 58% of the total, despite the increase in trade receivables, at June 30, 2022, there was no significant deterioration in payment performance on the part of customers. In fact, the collection time recorded in the first 6 months of 2022 is currently almost in line with the same period in 2021.

However, the increase in the value of past due receivables, as well as the increase in instalment requests from customers, generated a higher provision for bad debts.

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The following is the aging of trade receivables:

millions of euro	06 30 2022	12 31 2021
Trade receivables of which:	**3,390**	**3,291**
Current	**844**	**840**
Past due of which:	**432**	**284**
- Past due up to 30 days	100	90
- Past due from 31 to 180 days	202	69
- Past due from 181 to 365 days	39	32
- Past due over 365 days	91	93
Invoices to be issued	**2,284**	**2,300**
Bad debts provision	**(170)**	**(133)**

8) Other current assets

millions of euro	Balance at 12 31 2021	First-time consolid. effect acquisitions 2022	Changes during the period	Balance at 06 30 2022	*of which included in the NFP*	
					12 31 2021	*06 30 2022*
Current derivatives (commodity derivatives)	3,737		3,787	7,524	-	-
Other current assets of which:	314	17	132	463		
- receivables from Cassa per i Servizi Energetici e Ambientali	95		39	134		
- advances to suppliers	42		(16)	26		
- receivables from employees	1		-	1		
- tax receivables	52	3	7	62		
- receivables related to future years	26	7	54	87		
- receivables from Ergosud	2		-	2		
- receivables from social security entities	2		3	5		
- stamp office	1		-	1		
- receivables for damage compensation	3		(2)	1		
- receivables for COSAP advances	1		-	1		
- receivables for security deposits	37		16	53		
- receivables for RAI fee	3		4	7		
- credit transfer Gesi	2		-	2		
- other sundry receivables	47	7	27	81		
Total other current assets	**4,051**	**17**	**3,919**	**7,987**	**-**	**-**

"Other current assets" showed a balance of 7,987 million euro compared to 4,051 million euro at December 31, 2021, highlighting, net of the first-time consolidations of 18 million euro, an increase of 3,918 million euro.
"Current derivative instruments" increased by 3,787 million euro due to significant differentials between subscription prices and forward prices, which were affected by price volatility in the markets of raw materials, despite a significant reduction in the overall volumes handled during the year.
"Other current liabilities" include 7,260 million euro in "Current derivatives".
Receivables from Cassa per i Servizi Energetici e Ambientali, amounting to 134 million euro (95 million euro at December 31, 2021), mainly refer to receivables for equalizations pertaining to both 2022 and to outstanding receivables for equalizations pertaining to previous years and receivables for tariff components, net of collections made in the current year.
Tax receivables, amounting to 62 million euro, mainly relate to tax receivables from the tax authorities for withholding taxes and excise.
Receivables accruing in future years amounted to 87 million euro (26 million euro as at December 31, 2021) and net of the effect of first-time consolidation of 7 million euro showed an increase of 54 million euro mainly related to the advance payment of water derivation fees and insurance premiums.

Other sundry receivables include, 44 million euro (21 million euro as at December 31, 2021), in receivables for works to upgrade and improve energy efficiency in condominiums and third parties, for which tax benefits will be available under the building bonus scheme.

9) Current financial assets

millions of euro	Balance at 12 31 2021	First-time consolid. effect acquisitions 2022	Changes during the period	Balance at 06 30 2022	of which included in the NFP	
					12 31 2021	06 30 2022
Other financial assets	9	-	3	12	9	12
Total current financial assets	**9**	**-**	**3**	**12**	**9**	**12**

"Current financial assets" amounted to 12 million euro (9 million euro at December 31, 2021). This item mainly refers to financial receivables from minority shareholders and third parties.

10) Current tax assets

millions of euro	Balance at 12 31 2021	First-time consolidation effect acquisitions 2022	Changes net during the period	Balance at 06 30 2022
Current tax assets	**68**	**5**	**(44)**	**29**

At June 30, 2022, this item amounted to 29 million euro (68 million euro at December 31, 2021) and refers to IRES and IRAP for current taxes and 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.

11) Cash and cash equivalents

millions of euro	Balance at 12 31 2021	First-time consolid. effect acquisitions 2022	Changes during the period	Balance at 06 30 2022	of which included in the NFP	
					12 31 2021	06 30 2022
Cash and cash equivalents	**964**	**74**	**533**	**1,571**	**964**	**1,571**

"Cash and cash equivalents" at June 30, 2022 represent the sum of the Group's bank and postal asset balances. The increase related to the effect of the first-time consolidation of acquisitions in 2022 amounted to 74 million euro.

Bank deposits include accrued interest although this had not yet been credited at the end of the period.

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12) Non-current assets held for sale

millions of euro	Balance at 12 31 2021	First-time consolid. effect acquisitions 2022	Changes during the period	Balance at 06 30 2022	*of which included in the NFP*	
					12 31 2021	*06 30 2022*
Non-current assets held for sale	**162**	**-**	**(162)**	**-**	**-**	**-**

At June 30, 2022, "Non-current assets held for sale" had no value as a result of the sale of three properties located in Milan (classified in the item in question at December 31, 2021 for a value of 45 million euro), which took place in the month in February and to the sale, on April 1, of some assets relating to gas distribution referring to ATEM considered non-strategic for the Group whose value at the end of the previous year was equal to 117 million euro.

Please refer to the sections "Result from non-recurring transactions" and "Net result from discontinued operations" in the Income statement for more details on the gains generated.

EQUITY AND LIABILITIES

EQUITY

Shareholders' equity, which amounted to 4,495 million euro at June 30, 2022 (4,303 million euro at December 31, 2021), is set out in the following table:

millions of euro	Balance at 12 31 2021	Changes during the period	Balance at 06 30 2022
Equity pertaining to the Group:			
Share capital	1,629	-	1,629
Reserves	1,627	363	1,990
Group result of the year/period	504	(176)	328
Total equity pertaining to the Group	**3,760**	**187**	**3,947**
Minority interests	543	5	548
Total equity	**4,303**	**192**	**4,495**

The change of the Shareholders' equity was overall positive for 192 million euro. The net profit for the period generated a positive effect of 328 million euro, offset by the distribution of 283 million euro in dividends.
Lastly, the net fair value gain of cash flow hedge derivatives and the IAS 19 reserves for a total of 142 million euro and the net increase in minority interests for 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) Reserves

millions of euro	Balance at 12 31 2021	Changes during the period	Balance at 06 30 2022
Reserves	**1,627**	**363**	**1,990**
of which:			
- Change in the fair value of cash flow hedge derivatives and fair value bonds	40	166	206
- Tax effect	(12)	(51)	(63)
Cash flow hedge reserves	**28**	**115**	**143**
Change in the IAS 19 Revised reserve - Employee Benefits	(104)	40	(64)
Tax effect	28	(13)	15
IAS 19 Revised reserve - Employee Benefits	**(76)**	**27**	**(49)**

Reserves, which amounted to 1,990 million euro (1,627 million euro at December 31, 2021), consist of the legal reserve, extraordinary reserves, and the retained earnings of subsidiaries.

This item also includes the cash flow hedge reserve, positive for 143 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.
The balance also includes negative reserves of 49 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.
The item includes the equity reserve deriving from the first application of IFRS 9, and in particular the impairment of trade receivables according to the expected losses model.

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15) Result of the period

This item consists of the profit for the first half of 2022 of 328 million euro.

16) Minority interests

millions of euro	Balance at 12 31 2021	Changes during the period	Balance at 06 30 2022
Minority interests	**543**	**5**	**548**

"Minority interests" amounted to 548 million euro (543 million euro at December 31, 2021) and mainly represent the portions of capital, reserves and result pertaining to minority shareholders related to third-party shareholders.

LIABILITIES

NON-CURRENT LIABILITIES

17) Non-current financial liabilities

millions of euro	Balance at 12 31 2021	First-time consolid. effect acquisitions 2022	Changes during the period	Balance at 06 30 2022	of which included in the NFP	
					12 31 2021	06 30 2022
Non-convertible bonds	3,180		1,083	4,263	*3,180*	*4,263*
Payables to banks	851	115	184	1,150	*851*	*1,150*
Financial payables for non-current rights of use	89	12	14	115	*89*	*115*
Payables to other lenders	202			202	*202*	*202*
Total non-current financial liabilities	**4,322**	**127**	**1,281**	**5,730**	***4,322***	***5,730***

"Non-current financial payables" amounted to 5,730 million euro (4,322 million euro at December 31, 2021), with an increase of 1,281 million euro, net of the first-time consolidation effect of the period for 127 million euro.

"Non-convertible bonds" amounting to 4,263 million euro (3,180 million euro at December 31, 2021) relate to the following bonds, which are accounted for at amortized cost:

- 300 million euro, Private Placement maturing in December 2023 and coupon of 4.00%, the nominal value of which is equal to 300 million euro;
- 300 million euro, Private Placement maturing in March 2024 and coupon of 1.25%, the nominal value of which is equal to 300 million euro;
- 299 million euro, maturing in February 2025 and coupon of 1.75%, the nominal value of which is equal to 300 million euro;
- 297 million euro, maturing in October 2027 and coupon of 1.625%, the nominal value of which is equal to 300 million euro;
- 99 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;
- 395 million euro, maturing in July 2029 and coupon of 1.00%, the nominal value of which is equal to 400 million euro;
- 493 million euro, maturing in October 2032 and coupon of 0.625%, the nominal value of which is equal to 500 million euro;
- 496 million euro, maturing in July 2031 and coupon of 0.625%, the nominal value of which is equal to 500 million euro;
- 494 million euro, maturing in November 2033 and coupon of 1%, the nominal value of which is equal to 500 million euro;
- 495 million euro, maturing in March 2028 and coupon of 1.5%, the nominal value of which is equal to 500 million euro;
- 595 million euro, maturing in June 2026 and coupon of 2.5%, the nominal value of which is equal to 600 million euro.

The increase in the non-current component of "Non-convertible bonds" of 1,083 million euro compared to December 31, 2021 was due to the subscription of the new bonds maturing in 2026 and 2028 (for a total nominal value 1,100 million euro recorded net of amortized cost), partly offset by the decrease in the ECB exchange rate applied to the yen bond.

"Payables to banks" amounted to 1,150 million euro. This item showed an overall increase of 299 million euro attributable to the portion of new loans granted in the period maturing beyond 12 months, net of repayments of instalments falling due in the period, and to the effects of the first consolidations, amounting to 115 million euro.

"Financial payables for non-current rights of use" amounted to 115 million euro (89 million euro at December 31, 2021) and increased by 14 million euro, net of the effect of first-time consolidation for the period of 12 million euro. The increase in this item is attributable to the conclusion of new rental and lease contracts.
"Payables to other lenders" did not change from the previous year.

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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 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.

millions of euro	Nominal value	Book value	Current portion	Non-current portion	Fair Value
Bonds	4,298	4,293	30	4,263	3,466
Loans from banks and other lenders	1,617	1,766	414	1,352	1,497
Total	**5,915**	**6,059**	**444**	**5,615**	**4,963**

18) Employee benefits

At June 30, 2022, the balance on this item amounted to 240 million euro (294 million euro at December 31, 2021) with changes as follows:

millions of euro	Balance at 12 31 2021	First-time consolid. effect acquisitions 2022	Provisions	Utilizations	Other changes	Balance at 06 30 2022
Employee leaving entitlement (TFR)	136		19	(9)	(33)	113
Employee benefits	158			(5)	(26)	127
Total employee benefits	**294**	**-**	**19**	**(14)**	**(59)**	**240**

The change during the period is attributable for 19 million euro to provisions for the period, for 14 million euro to the decrease due to disbursements and for 18 million euro to the net decrease related to payments to pension funds and other increases of 1 million euro. In addition, the actuarial valuations for the period include the decrease resulting from actuarial gains/losses for a total of 42 million euro, mainly as a result of the increase in discount rates.

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

	2022	2021
Discount rate	from 2.10% to 3.42%	from -0.17% to 0.98%
Annual inflation rate	2.10%	1.75%
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	3.1%	2.8%
Average annual increase rate of supplementary pensions	1.1%	1.1%
Annual turnover frequencies	from 2.0% to 5.0%	from 2.0% 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;

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- 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.

19) Provisions for risks, charges and liabilities for landfills

millions of euro	Balance at 12 31 2021	First-time consolid. effect acquisitions 2022	Provisions	Releases	Utilizations	Other changes	Balance at 06 30 2022
Decommissioning provisions	327			(7)	(7)	(46)	267
Landfill closing and post-closing expense provisions	213			(34)	(3)	(7)	169
Tax provisions	54		1				55
Personnel lawsuits and disputes provisions	52			(3)	(7)		42
Other risk provisions	151	1	21	(2)	(3)	2	170
Provisions for risks, charges and liabilities for landfills	**797**	**1**	**22**	**(46)**	**(20)**	**(51)**	**703**

At June 30, 2022, provision for risks, charges and liabilities for landfills amounted to 703 million euro and showed a decrease of 94 million euro.

"Decommissioning provisions", which amounted to 267 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 uses for 7 million euro, to cover the expenses incurred during the reporting period, releases for 7 million euro and other decreases for 46 million euro, due to the update of the discount rates used to estimate the future costs of dismantling and restoration of the sites having "Tangible assets" as balancing entry.

The "Landfill closing and post-closing expense provisions", which amounted to 169 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, as required by current regulations. Changes in the period included utilizations of 3 million euro, which represent actual disbursements during the period, releases of 34 million euro related to adjustments to the provisions for landfills following the update, inflation and discount rates, and other decreases of 7 million euro.

"Tax Provisions", which amounted to 54 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. This item increased compared to December 31, 2021 by 1 million euro as a result of provisions for the period.

"Personnel lawsuits and disputes provisions", which totalled 42 million euro, refer to litigation with third parties for 38 million euro and employees for 2 million euro to cover liabilities that may arise from pending litigation, and lawsuits with Social Security Institutions for 2 million euro related to social security contributions that the Group believes it will not be required to pay and are the subject of specific disputes.

"Other provisions for risks", which amounted to 170 million euro, refer to provisions relating to public water derivation fees for 73 million euro, to the mobility provision for the costs arising from the corporate restructuring plan, for 1 million euro, as well as other provisions for 96 million euro, which also include the provision related to the dispute over the Grottaglie landfill. The main components of these provisions are net allocations of 19 million euro, of which 17 million euro related to additional charges for hydroelectric derivation surcharges, uses of 3 million euro and other increases of 2 million euro. The first-time consolidation effects of the period amounted to 1 million euro.

20) Other non-current liabilities

millions of euro	Balance at 12 31 2021	First-time consolid. effect acquisitions 2022	Changes during the period	Balance at 06 30 2022	*of which included in the NFP*	
					12 31 2021	*06 30 2022*
Other non-current liabilities	118	8	13	139	*31*	-
Non-current derivatives	11	1	(11)	1	*11*	*1*
Total other non-current liabilities	**129**	**9**	**2**	**140**	***42***	***1***

At June 30, 2022, this item increased by 11 million euro compared to the balance at the end of the previous year.

"Other non-current liabilities", which showed a balance of 139 million euro, refer to security deposits from customers, for 107 million euro, to liabilities pertaining to future years for 13 million euro, to medium/long-term payables to suppliers for 3 million euro, as well as other non-current liabilities for 16 million euro.

"Non-current derivatives" amounted to 1 million euro and showed a negative change of 11 million euro, net of the effect of the first consolidations, deriving from the fair value valuation of financial instruments at period-end.

CURRENT LIABILITIES

21) Trade payables and other current liabilities

millions of euro	Balance at 12 31 2021	First-time consolid. effect acquisitions 2022	Changes during the period	Balance at 06 30 2022	of which included in the NFP	
					12 31 2021	06 30 2022
Advances	8		(5)	3		
Payables to suppliers	2,886	6	434	3,326		
Total trade payables	**2,894**	**6**	**429**	**3,329**	**-**	**-**
Payables to pension and social security institutions	46		2	48		
Current derivatives (commodity derivatives)	3,708		3,552	7,260		
Other current liabilities of which:	733	21	(69)	685	*31*	*31*
- Payables to personnel	93		(13)	80		
- Payables to Cassa per i Servizi Energetici e Ambientali	143		(58)	85		
- Tax payables	84	1	121	206		
- Payables for tax transparency	7		(2)	5		
- Payables for A.T.O.	2		1	3		
- Payables to customers for work to be performed	18		5	23		
- Payables to customers for interest on security deposits	2		-	2		
- Payables to third-party shareholders	1		10	11		
- Payables for the purchase of equity investments	31		-	31	*31*	*31*
- Payables for auxiliary services	276		(106)	170		
- Payables for collections to be allocated	17		(17)	-		
- Payables to insurance companies	15		(1)	14		
- Payables for excise compensation	4		-	4		
- Payables for environmental compensation	4		(1)	3		
- Payables for RAI fee	7		9	16		
- Sundry payables	29	20	(17)	32		
Total other current liabilities	**4,487**	**21**	**3,485**	**7,993**	***31***	***31***
Total trade payables and other current liabilities	**7,381**	**27**	**3,914**	**11,322**	***31***	***31***

"Trade payables and other current liabilities" amounted to 11,322 million euro (7,381 million euro at December 31, 2021), representing an increase of 3,941 million euro.

"Trade receivables" amounted to 3,329 million euro and compared to the closing of the previous year, represent an increase of 429 million euro, excluding the first-time consolidation effects of the period for 6 million euro, mainly attributable to the increase in commodities trading operations with bilateral counterparties. Trade payables as at June 30, 2022 include deferred payments, amounting to 116 million euro, for gas storage purchases made during the first half of the year.

"Payables to pension and social security institutions" amounted to 48 million euro, up 2 million euro compared to December 31, 2021 and relate to the Group's debt position with social security and pension institutions.

"Current derivative" amounted to 7,260 million euro (3,708 million euro at December 31, 2021) and refer to the fair value valuation of commodity derivatives. The increase is the period under review is due to the significant differentials between subscription prices and forward prices, influenced by price volatility in commodity markets despite a significant reduction in overall volumes traded during the year.

"Other current assets" included 7,524 million euro in "Current derivatives".

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"Other current liabilities" mainly refer to:

- payables to employees for 80 million euro (93 million euro at December 31, 2021), 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, 2022;
- payables to the CSEA - Cassa per i Servizi Energetici e Ambientali for 85 million euro (143 million euro at December 31, 2021) 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 period under review.
- tax payables of 206 million euro (84 million euro at December 31, 2021), referring to payables to the tax authorities for excise duties, withholding taxes and VAT, with a significant change compared to the previous year mainly to the 46 million euro increase in excise duty payables, 42 million euro VAT payable, 7 million euro withholding tax payables and 3 million euro increase in payables for water derivation fees;
- payables relating to advance collections of electricity and gas futures contracts, the economic effect of which will be seen in the following year, amounting to 170 million euro (276 million euro at December 31, 2021);
- payables for the purchase of shareholdings of 31 million euro (31 million euro at December 31, 2021) relating to the purchases concluded in the previous years in the photovoltaic sector.

22) Current financial liabilities

millions of euro	Balance at 12 31 2021	First-time consolid. effect acquisitions 2022	Changes during the period	Balance at 06 30 2022	*of which included in the NFP*	
					12 31 2021	*06 30 2022*
Non-convertible bonds	533		(503)	30	*533*	*30*
Payables to banks	189	22	171	382	*189*	*382*
Current financial payables for rights of use	23	1	6	30	*23*	*30*
Payables to other lenders	1		-	1	*1*	*1*
Total current financial liabilities	**746**	**23**	**(326)**	**443**	***746***	***443***

"Current financial liabilities" amounted to 443 million euro (746 million euro at December 31, 2021) and, net of the first-time consolidation effects of 23 million euro in the year, showed a decrease of 326 million euro.

"Non-Convertible Bonds" amount to 30 million euro, a decrease of 503 million euro, as the net effect of the decrease in the principal repaid for the bonds that matured during the first half of the year.

Current "Payables to banks" amount to 382 million euro, representing an increase of 171 million euro compared with the end of the previous year, net of first-time consolidations of 22 million euro as a result of the new loans disbursed by credit institutions.

23) Tax payables

millions of euro	Balance at 12 31 2021	First-time consolidation effect acquisitions 2022	Changes net during the period	Balance at 06 30 2022
Tax liabilities	**21**	**5**	**152**	**178**

Tax payables amounted to 178 million euro (21 million euro at December 31, 2021) representing an increase, net of the effects deriving from the first consolidations, of 152 million euro compared to the end of the previous year.

24) Liabilities directly associated with non-current assets held for sale

millions of euro	Balance at 12 31 2021	First-time consolid. effect acquisitions 2022	Changes during the period	Balance at 06 30 2022	of which included in the NFP	
					12 31 2021	06 30 2022
Liabilities directly associated with non-current assets held for sale	**15**	**-**	**(15)**	**-**	**-**	**-**

At June 30, 2022, "Liabilities directly associated with non-current assets held for sale" had no value and decreased 15 million euro. At December 31, 2021, the item referred to liabilities pertaining to the gas distribution network branch referring to ATEMs considered non-strategic for the Group, the sale of which was finalized during the second quarter.

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5.11 Net debt

25) Net debt
(pursuant to Communication ESMA/31-62-1426)

The following table provides details of net debt:

millions of euro	Note	06 30 2022	First-time consolidation effect acquisitions 2022	12 31 2021
Bonds - non-current portion	17	4,263		3,180
Bank loans - non-current portion	17	1,150	115	851
Non-current financial payables for rights of use	17	115	12	89
Non-current payables to other lenders	17	202		202
Other non-current liabilities	20	1	1	11
Total medium/long-term debt		**5,731**	**128**	**4,333**
Non-current financial assets - related parties	3	(7)		(5)
Non-current financial assets	3	(20)	(1)	(19)
Other non-current assets	5	(8)	(4)	-
Total medium/long-term financial receivables		**(35)**	**(5)**	**(24)**
Total non-current net debt		**5,696**	**123**	**4,309**
Bonds - current portion	22	30		533
Bank loans - current portion	22	382	22	189
Current financial payables for rights of use	22	30	1	23
Current amounts due to other providers of finance	22	1		1
Other current liabilities	21	31		31
Total short-term debt		**474**	**23**	**777**
Other current financial assets	9	(10)		(8)
Current financial assets - related parties	9	(2)		(1)
Total short-term financial receivables		**(12)**	**-**	**(9)**
Cash and cash equivalents	11	(1,571)	(74)	(964)
Total current net debt		**(1,109)**	**(51)**	**(196)**
Net debt		**4,587**	**72**	**4,113**

The Group net financial position was 4,587 million euro.

Insofar as the disclosure about indirect financial debt is concerned, the Group has identified financial commitments due within one year in connection with employee benefits, decommissioning provisions and liabilities for landfills and tax disputes, amounting to about 62 million euro.

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

millions of euro	12 31 2021	Cash flow	Non-cash flow			06 30 2022
			First-time consolid. effect acquisitions 2022	Change in fair value	Other changes	
Bonds	3,713	597	-	(8)	(9)	4,293
Financial payables	1,355	331	150	-	44	1,880
Other liabilities	42	-	1	(10)	(1)	32
Financial assets	(33)	(2)	(1)	-	(3)	(39)
Other activities	-	-	(4)	(4)	-	(8)
Net liabilities deriving from financing activities	**5,077**	**926**	**146**	**(22)**	**31**	**6,158**
Cash and cash equivalents	(964)	(533)	(74)	-	-	(1,571)
Net debt	**4,113**	**393**	**72**	**(22)**	**31**	**4,587**

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5.12 Notes to the income statement

For changes in the scope of consolidation as at June 30, 2022, please refer to the "Notes to the Balance Sheet Items" section.
Moreover, the economic figures at June 30, 2022 are not consistent with the corresponding period of the previous year due to the following extraordinary transactions in the second half of 2021:

- acquisition by A2A Ambiente S.p.A. and line-by-line consolidation of 100% of TecnoA S.r.l., a company operating in the treatment of special waste.

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26) Revenues

Revenues for the period totalled 9,788 million euro (4,053 million euro at June 30, 2021) and therefore increased by 5,735 million euro (+141.5%).

Details of the more significant items are as follows:

Revenues millions of euro	06 30 2022	06 30 2021 Restated	Change	% June 2022/2021
Revenues from the sale of goods	9,037	3,351	5,686	n.s
Revenues from services	654	597	57	9.5%
Total revenues from the sale of goods and services	**9,691**	**3,948**	**5,743**	**n.s.**
Other operating income	**97**	**105**	**(8)**	**(7.6%)**
Total revenues	**9,788**	**4,053**	**5,735**	**n.s.**

The change, compared to the corresponding period of the previous year, is mainly related to the general increase in the energy scenario attributable to:

- about 57% to the wholesale energy markets, in particular electricity, due to rising prices. The contribution related to the growth of sold and intermediated market volumes is residual;
- more than 40% to retail markets mainly due to higher electricity, gas and heat unit prices.

Further details of the main items are as follows:

millions of euro	06 30 2022	06 30 2021 Restated	Change	% June 2022/2021
Sale and distribution of electricity	6,021	2,103	3,918	n.s.
Sale and distribution of gas	2,668	993	1,675	n.s.
Sale of heat	193	109	84	77.1%
Sale of materials	47	35	12	34.3%
Sale of water	38	41	(3)	(7.3%)
Sales of environmental certificates	55	53	2	3.8%
Connection contributions	15	17	(2)	(11.8%)
Total revenues from the sale of goods	**9,037**	**3,351**	**5,686**	**n.s.**
Services to customers	654	597	57	9.5%
Total revenues from services	**654**	**597**	**57**	**9.5%**
Total revenues from the sale of goods and services	**9,691**	**3,948**	**5,743**	**n.s.**
Reintegration of costs plant S. Filippo del Mela (plant essential Unit)	6	28	(22)	(78.6%)
Damage compensation	3	3	-	0.0%
Rents receivable	2	2	-	0.0%
Contingent assets	14	13	1	7.7%
Incentives for production from renewable sources (feed-in tariff)	23	36	(13)	(36.1%)
Other revenues	49	23	26	n.s
Other operating revenues	**97**	**105**	**(8)**	**(7.6%)**
Total revenues	**9,788**	**4,053**	**5,735**	**n.s.**

The item "Other operating revenues" showed a decrease of 8 million euro 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 22 million euro, lower revenues linked to incentives on net production from renewable sources for 13 million euro partially offset by higher other revenues for 26 million euro and higher contingent assets for 1 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 8,699 million euro (2,987 million euro at June 30, 2021), therefore representing an increase of 5,712 million euro.

The main components of this item are as follows:

Operating expenses millions of euro	06 30 2022	06 30 2021 Restated	Change	% June 2022/2021
Costs for raw materials and consumables	7,679	2,132	5,547	n.s.
Costs for services	864	711	153	21.5%
Total expenses for raw materials and services	**8,543**	**2,843**	**5,700**	**n.s.**
Other operating expenses	**156**	**144**	**12**	**8.3%**
Total operating expenses	**8,699**	**2,987**	**5,712**	**n.s.**

"Total expenses for raw materials and services" amounted to 8,543 million euro (2,843 million euro at June 30, 2021), increasing by 5,700 million euro.
This increase was due to the combined effect of the following factors:

- an increase of 5,739 million euro in the purchase of raw materials and consumables, due to an increase in costs for the purchase of power and fuel of 5,585 million euro, an increase in the costs relating to the purchase of environmental certificates of 141 million euro, an increase in purchase of materials of 20 million euro and a net decrease of 7 million euro arising from hedging gains and losses on operating derivatives;
- an increase of 153 million euro in costs for delivery, subcontracted work and services;
- the decrease in inventories of fuel and materials for 192 million euro.

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

millions of euro	06 30 2022	06 30 2021 Restated	Change	% June 2022/2021
Purchases of power and fuel	7,521	1,936	5,585	n.s.
Purchases of materials	96	76	20	26.3%
Purchases of water	1	1	-	0.0%
Hedging losses on operating derivatives	2	2	-	0.0%
Hedging gains on operating derivatives	(12)	(5)	(7)	n.s.
Purchases of emission certificates and allowances	271	130	141	n.s.
Total expenses for raw materials and consumables	**7,879**	**2,140**	**5,739**	**n.s.**
Delivery and transmission costs	483	385	98	25.5%
Maintenance and repairs	84	104	(20)	(19.2%)
Other services	297	222	75	33.8%
Total costs for services	**864**	**711**	**153**	**21.5%**
Change in inventories of fuel and materials	(200)	(8)	(192)	n.s.
Total expenses for raw materials and services	**8,543**	**2,843**	**5,700**	**n.s.**
Leases and rentals	59	61	(2)	(3.3%)
Concession fees	56	46	10	21.7%
Contributions to territorial entities, consortia and ARERA	6	5	1	20.0%
Taxes and duties	18	17	1	5.9%
Damages and penalties	2	3	(1)	(33.3%)
Contingent liabilities	8	4	4	100.0%
Other costs	7	8	(1)	(12.5%)
Other operating expenses	**156**	**144**	**12**	**8.3%**
Total operating expenses	**8,699**	**2,987**	**5,712**	**n.s.**

Trading margin

The following table sets out the results arising from the Trading Portfolio, including the effect of changes in derivative instruments; these figures relate to trading in electricity, gas and environmental certificates.

Trading margin millions of euro	Note	06 30 2022	06 30 2021	Change
Revenues	26	(1,475)	(323)	(1,152)
Operating expenses	27	1,521	325	1,196
Total trading margin		**46**	**2**	**44**

The first half of 2022 saw multiple values of European electricity and gas prices compared to the values seen in the first half of last year, and the persistence of exceptional volatility coupled with decreasing market liquidity contributed to the widening of absolute market bid/ask values while forcing traders to execute trades quickly.

It was possible to trade profitably through quotation techniques by exploiting opportunities characterized by very narrow execution time windows but on significant volumes, which benefited trading, flow brokering, price quotation and market making.

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28) Labour costs

Net of capitalized expenses, labour costs at June 30, 2022 amounted to 381 million euro (378 million euro at June 30, 2021).

"Labour costs" may be analysed as follows:

Labour costs millions of euro	06 30 2022	06 30 2021 Restated	Change	% June 2022/2021
Wages and salaries	295	292	3	1.0%
Social security charges	99	97	2	2.1%
Employee leaving entitlement (TFR)	18	18	-	0.0%
Other costs	21	20	1	5.0%
Total labour costs before capitalizations	**433**	**427**	**6**	**1.4%**
Capitalized labour costs	(52)	(49)	(3)	6.1%
Total labour costs	**381**	**378**	**3**	**0.8%**

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

	06 30 2022	06 30 2021	Change
Managers	203	210	(7)
Middle Managers	810	774	36
White-collar workers	5,906	5,654	252
Blue-collar workers	6,465	6,432	33
Total	**13,384**	**13,070**	**314**

At June 30, 2022, the average labour cost per capita amounted to 28.47 thousand euro. In the corresponding period of the previous year, it was 29.14 thousand euro.

At June 30, 2022, the Group had 13,511 employees. At June 30, 2021, the Group had 13,213 employees.

Other personnel costs include less than 1 million euro (value less than 1 million euro at June 30, 2021) costs relating to the total cost of the company's restructuring plan related to future staff leaving for redundancy.

29) Gross operating income

As a result of the above changes, consolidated "Gross operating income" at June 30, 2022 amounted to 708 million euro (688 million euro at June 30, 2021).

Further details may be found in the section "Results sector by sector".

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30) Depreciation, amortization, provisions and write-downs

"Depreciation, amortization, provisions and write-downs" totalled 373 million euro (332 million euro at June 30, 2021), representing an increase of 41 million euro.

The following table provides details of the individual items:

Depreciation, amortization, provisions and write-downs millions of euro	06 30 2022	06 30 2021 Restated	Change	% June 2022/2021
Amortization of intangible assets	109	95	14	14.7%
Depreciation of tangible assets	242	225	17	7.6%
Total amortization, depreciation and write-downs	**351**	**320**	**31**	**9.7%**
Provisions for risks	(24)	2	(26)	n.s.
Bad debt provision on receivables recognized as current assets	46	10	36	n.s.
Total depreciation, amortization, provisions and write-downs	**373**	**332**	**41**	**12.3%**

"Depreciation, amortization and write-downs" amounted to 351 million euro (320 million euro for the six months ended June 30, 2021).
Amortization of intangible assets amounted to 109 million euro (95 million euro at June 30, 2021). Depreciation and amortization increased by 14 million euro, of which 7 million euro related to the implementation of information systems, 3 million euro to the integrated water service and gas distribution and metering, 3 million euro related to the new customer lists of the companies Yada Energia and A2A Energia, and 1 million euro to changes in the scope of consolidation.

Depreciation of tangible assets show an increase of 17 million euro compared to June 30, 2021 and includes:

- higher depreciation and amortization of 1 million euro resulting from the consolidation of the companies 3 New & Partners and 4NEW acquired in the first half of 2022;
- higher depreciation and amortization of 4 million euro relating to the consolidation, from 2021, of Agripower, Octopus and TecnoA;
- higher depreciation and amortization of 1 million euro for rights of use;
- higher depreciation and amortization of 1 million euro as a result of the increased amount of waste transferred to A2A Ambiente S.p.A.'s landfills;
- higher depreciation and amortization of 3 million euro related to the photovoltaic panel divestment plan of the Sermide and Chivasso plants;
- higher depreciation and amortization of 1 million euro related to the disinvestment plan for the assets of the Linea 1 waste-to-energy treatment and storage plant in Parona;
- higher depreciation of 6 million euro mainly relating to the investments which went into production after June 30, 2021.

"Provisions for risks" had a net positive effect of 24 million euro (net effect of 2 million euro at June 30, 2021) due to surpluses of 46 million euro, following the termination of certain outstanding disputes and the release of provisions for closure and post-closure expenses on landfills and decommissioning, adjusted by provisions for the period of 22 million euro.
Surpluses in provisions for risks amounted to 46 million euro and included for 41 million euro the release of provisions for closure and post-closure expenses on landfills and decommissioning, for 3 million euro the release of provisions for legal disputes and personnel disputes, for 1 million euro to the release of funds for additional charges of hydroelectric derivation and to other releases for 1 million euro.
Provisions for the period, which amounted to 22 million euro, included 19 million euro in provisions for public water derivation fees, 1 million euro in provisions for tax contingencies, and 2 million euro in other provisions for pending litigation.

For further information, reference is made to note 20) Provisions for risks, charges and liabilities for landfills.

The "Bad debt provision" amounted to 46 million euro (10 million euro at June 30, 2021), consisting of the accrual for the period.

31) Net operating income

"Net operating income" amounted to 335 million euro (356 million euro at June 30, 2021).

32) Result from non-recurring transactions

The "Result from non-recurring transactions" amounted to 157 million euro (negative for 1 million euro at June 30, 2021) and refers to the gain from the sale of three properties located in Milan in February 2022.

33) Financial balance

The "Financial balance" closed with net expense of 30 million euro (net expense of 26 million euro at June 30, 2021).
Details of the more significant items are as follows:

Financial balance millions of euro	06 30 2022	06 30 2021	Change	% June 2022/2021
Financial income	16	10	6	60.0%
Financial expenses	(48)	(39)	(9)	23.1%
Affiliates	2	3	(1)	(33.3%)
Total financial balance	**(30)**	**(26)**	**(4)**	**15.4%**

"Financial income" amounted to 16 million euro (10 million euro at June 30, 2021) and may be analyzed as follows:

Financial income millions of euro	06 30 2022	06 30 2021	Change	% June 2022/2021
Realized on financial derivatives	2	-	2	n.s.
Gains on disposals of financial assets	-	2	(2)	n.s.
Other financial income of which:	14	8	6	75.0%
- *Financial income from the Municipality of Brescia (IFRIC 12)*	*5*	*3*	*2*	*66.7%*
- *Foreign exchange gains*	*1*	*1*	-	*0.0%*
- *Other income*	*8*	*4*	*4*	*100.0%*
Total financial income	**16**	**10**	**6**	**60.0%**

"Financial expense", which amounted to 48 million euro, increased by 9 million euro over the year ended June 30, 2021, and may be analyzed as follows:

Financial expenses millions of euro	06 30 2022	06 30 2021	Change	% June 2022/2021
Interest on bond loans	28	30	(2)	(6.7%)
Interest charged by banks	5	3	2	66.7%
Realized on financial derivatives	1	1	-	0.0%
Decommissioning costs	3	1	2	n.s.
Other financial expenses of which:	12	4	8	n.s.
- *Discounting charges*	*4*	*1*	*3*	*n.s.*
- *Financial expenses (IFRS 16)*	*1*	*1*	-	*0.0%*
- *Financial expenses (IFRIC 12)*	*2*	*1*	*1*	*100.0%*
- *Foreign exchange losses*	*1*	*1*	-	*0.0%*
- *Other expenses*	*3*	-	*3*	*n.s.*
Total financial expenses before capitalizations	**48**	**39**	**9**	**23.1%**
Capitalized financial expenses	-	-		
Total financial expenses	**48**	**39**	**9**	**23,1%**

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The decrease of 2 million euro in interest on bonds is essentially due to the refinancing of bonds that matured with the issuance of newer, bonds at lower rates.

The Affiliates was positive for 2 million euro (3 million euro at June 30, 2021), and was mainly attributable to the positive valuation of the shareholdings held in some associated companies.

34) Income taxes

"Income taxes" in the period in question equalled 143 million euro (-41 million euro at June 30, 2021) and include:

- 143 million euro taxes of the period;
- 9 million euro taxes as per LD 21/2022 "Decree taglia prezzi");
- reimbursement taxes previous years for 9 million euro.

It is highlighted that on the occasion of the closing of the 2022 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.

It is noted that the corresponding period of the previous year, in which the item for income taxes was -41 million euro, reflected the release of deferred tax liabilities as a result of the realignment option pursuant to LD 104/2020, exercised by some Group companies, which allowed the realignment of the differences between higher statutory values and lower values for tax purposes on tangible assets and the consequent deduction of higher tax amortization starting from the current year, as well as the release of a part of deferred IRAP tax assets as the Group considered their recoverability to be unreasonable; the impact of the release of deferred tax assets/liabilities amounted to 168 million euro, while the recognition of a substitute tax following the realignment option pursuant to LD 104/2020 was equal to 23 million euro.

35) Net result from discontinued operations

The "Net result from discontinued operations" is equal to 36 million euro (no value as at June 30, 2021) and refers mainly to the gain related to the sale of some assets concerning gas distribution referring to ATEMs considered non-strategic for the Group.

36) Result of minorities

The "Result of minorities" is negative for the Group for 27 million euro and mainly includes the portion attributable to minority interests of the ACSM-AGAM Group and the AEB Group. In the corresponding period of the previous year, the item showed a negative balance for the Group for 30 million euro.

37) Group result of the period

The "Group result of the period" was positive for 328 million euro (positive for 340 million euro at June 30, 2021).

5.13 Earnings per share

38) Earnings per share

	01 01 2022 06 30 2022	01 01 2021 06 30 2021
Earnings (loss) per share (in euro)		
- basic	0.1049	0.1097
- basic, from continuing operations	0.0934	0.1097
- basic, from assets held for sale	0.0115	-
- diluted	0.1049	0.1097
- diluted, from continuing operations	0.0934	0.1097
- diluted, from assets held for sale	0.0115	-
Weighted average number of outstanding shares for the calculation of earnings (loss) per share		
- basic	3,132,905,277	3,100,891,752
- diluted	3,132,905,277	3,100,891,752

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5.14 Note on related party transactions

39) Note on related party transactions

The definition of "related parties" is included in the international accounting standard describing the disclosures which must be made for related party transactions in financial statements (revised IAS 24).

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.
On August 2, 2019, the Municipality of Milan, also on behalf of the Municipality of Brescia, announced that the aforementioned Shareholders' Agreement was not subject to termination. Consequently, the agreement is to be considered renewed with effect from February 1, 2020 to January 31, 2023.
At the date of approval of this Half-Year Report at June 30, 2022, 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 directly and indirectly 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., in execution of the original assignment ordered in 2001, signed a contract with the Municipality of Milan for the management of services aimed at environmental protection for the period from January 1, 2017 to February 8, 2021; following the publication of the first tender cancelled by the municipality in consideration of the appeals notified and the second tender still in progress, the assignment was extended until April 30, 2023.
The tender now in progress was published on December 30, 2021; it is a European open procedure tender for the contracting of the municipal waste management service with reduced environmental impact from a life-cycle perspective, pursuant to the action plan for the environmental sustainability of consumption in the public administration sector (PAN GPP) and the Decree of the Ministry of the Environment and Protection of Land and Sea of February 13, 2014.
The original deadline for the submission of bids, originally set at July 11, 2022 following the orders of the Regional Administrative Court and the Council of State assessing the appeals notified by two economic operators as a precautionary measure, was postponed to September 19, 2022 with a ban on the awarding of contracts until the conclusion of the judgments on the merits.
The Lombardy Regional Administrative Court, Milan, Section I, set the public hearing on November 9, 2022 for the hearing of the merits of the two appeals.
Amsa is currently preparing the tender documentation.

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 2021, 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.

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.

As of November 1, 2020, the AEB Group's related-party transactions with related parties of the A2A Group are shown as related parties.

Lastly, in compliance with the requirements of the "Regulation on provisions relating to related party transactions" adopted by Consob with Resolution no. 17221 of March 12, 2010 and subsequently amended by Resolution no. 17389 of June 23, 2010, by way of a resolution of November 11, 2010 the Management Board approved, following the favorable opinion of the Internal Control Committee, the prescribed procedure for identifying the rules and controls designed to ensure the transparency and substantial and procedural correctness of the related party transactions carried out by A2A S.p.A. directly or through its subsidiaries. The aforementioned Procedure was applied effective January 1, 2011 and subsequently amended on August 1, 2012, November 7 and December 18, 2013 and June 22, 2015.
Following a periodic review, the Procedure was subsequently amended/supplemented and approved by the Board of Directors on June 20, 2016, subject to the favourable opinion of the Audit and Risks Committee and then updated on June 22, 2017, in view of Consob Resolution no. 19925 of March 22, 2017 and on December 16, 2019, in view of the amendments to art. 192-quinquies of Legislative Decree February 24, 1998, no. 58 ("TUF") (art. 4 of Legislative Decree May 10, 2019, no. 49).
Lastly, by resolution of the Board of Directors on June 25, 2021, subject to the favourable opinion of the Related Parties Committee established by board resolution of May 13, 2021, the Procedure was amended - effective as of July 1, 2021 - to comply with the Related Parties Regulation, as amended by Consob Resolution no. 21624 of December 10, 2020, in implementation of the so-called "Shareholders' Rights II" Directive. The aforementioned Procedure can be found on the website www.a2a.eu.

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 millions of euro	Total 06 30 2022	Of which with related parties								
		Companies associated and subsidiaries of associates	Companies related	Municipality of Milan	Subsidiaries direct and indirect Municipality of Milan	Municipality of Brescia	Subsidiaries direct and indirect Municipality of Brescia	Related parties individuals	Total related parties	% effect on the balance sheet item
TOTAL ASSETS OF WHICH:	**23,251**	**18**	**293**	**70**	**16**	**17**	**-**	**-**	**414**	**1.8%**
Non-current assets	*9,830*	*2*	*278*	*-*	*-*	*4*	*-*	*-*	*284*	*2.9%*
Shareholdings	272	2	266						268	98.5%
Other non-current financial assets	71		12			4			16	22.5%
Current assets	*13,421*	*16*	*15*	*70*	*16*	*13*	*-*	*-*	*130*	*1.0%*
Trade receivables	3,390	16	2	70	16	12	-	-	116	3.4%
Other current assets	7,987		13						13	0.2%
Current financial assets	12					1			1	8.3%
TOTAL LIABILITIES OF WHICH:	**18,756**	**42**	**1**	**1**	**2**	**7**	**-**	**-**	**53**	**0.3%**
Current liabilities	*11,943*	*42*	*1*	*1*	*2*	*7*	*-*	*-*	*53*	*0.4%*
Trade payables	3,329	37	1	1	2	7	-	-	48	1.4%
Other current liabilities	7,993	5							5	0.1%

Income statement millions of euro	Total 06 30 2022	Of which with related parties								
		Companies associated and subsidiaries of associates	Companies related	Municipality of Milan	Subsidiaries direct and indirect Municipality of Milan	Municipality of Brescia	Subsidiaries direct and indirect Municipality of Brescia	Related parties individuals	Total related parties	% effect on the balance sheet item
REVENUES	**9,788**	**22**	**17**	**167**	**49**	**21**	**1**	**-**	**277**	**2.8%**
Revenues from the sale of goods and services	9,691	22	17	167	49	21	1	-	277	2.9%
OPERATING EXPENSES	**8,699**	**29**	**1**	**3**	**7**	**4**	**-**	**-**	**44**	**0.5%**
Expenses for raw materials and services	8,543	2	1		7	-			10	0.1%
Other operating expenses	156	27		3		4			34	21.8%
LABOUR COSTS	**381**							**1**	**1**	**0.3%**
FINANCIAL BALANCE	**(30)**	**-**	**2**	**-**	**-**	**5**	**-**	**-**	**7**	**(23.3%)**
Financial income	16					5			5	31.3%
Affiliates	2		2						2	100.0%

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.

It should be noted that during the half-year, the A2A Group made grants totalling 1.5 million euro to foundations that have been included on a voluntary basis among related parties. Specifically, these involve: Fondazione AEM, Fondazione ASM, Comitato Banco dell'Energia Onlus, Fondazione Teatro alla Scala and Fondazione Brescia Musei.

* * *

With regard to the compensation paid to the corporate governance bodies, reference shall be made to the document "Remuneration Report – 2022" available on the website www.a2a.eu.

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

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

During the month of February, the sale was finalized of three properties located in Milan, classified as "Non-current assets held for sale" at December 31, 2021, the economic effect of which is recognized under "Result from non-recurring transactions".

In April, the Group finalized the closing of the sale of certain gas distribution assets related to ATEMs deemed non-strategic. The perimeter of activities covered by the operation includes approximately 157 thousand users, distributed in 8 Italian Regions, belonging to 24 ATEMs, for about 2,800 km of network. The economic effect of this transaction is recorded under "Net result from discontinued operations".

5.16 Guarantees and commitments with third parties

millions of euro	06 30 2022	12 31 2021
Guarantees received	923	966
Guarantees provided	2,289	1,509

Guarantees received

Guarantees received amounted to 923 million euro (966 million euro at December 31, 2021) and included 366 million euro for sureties and security deposits issued by subcontractors to guarantee the proper execution of the work assigned and 506 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 42 million euro and guarantees received by the AEB Group for 9 million euro.

Guarantees provided and commitments with third parties

Guarantees provided amounted to 2,289 million euro (1,509 million euro at December 31, 2021), of which 100 million euro for obligations undertaken in loan agreements. Said amount consists of guarantees issued by banks for 1,319 million euro, insurance companies for 55 million euro and the parent company A2A S.p.A., as parent company guarantee, for 774 million euro and guarantees provided by the ACSM-AGAM Group for 88 million euro and guarantees provided by the AEB Group for 53 million euro.

* * *

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

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5.17 Other information

1) Transactions as per IFRS 3 revised

In 2022, the A2A Group completed the following acquisitions of investments, which fall within the provisions of IFRS 3:

- the acquisition by A2A Rinnovabili S.p.A. of 100% of 4NEW S.r.l. and 3 New & Partners S.r.l., resulting in the line-by-line consolidation of 11 companies; A2A Rinnovabili S.p.A. also directly acquired 49% of Daunia Calvello S.r.l. and 30% of Daunia Serracapriola S.r.l., which are consolidated using the equity method. In transparency, the Group holds 74.5% of Daunia Calvello S.r.l. and 65% of Daunia Serracapriola S.r.l., through the associated company Daunia Wind S.r.l.. However, it does not fully consolidate the two companies as the conditions of control, as set forth in IFRS 10, do not exist;
- the acquisition by A2A Rinnovabili S.p.A. of 100% of Volta Green Energy S.r.l. and 60% of R2R S.r.l. resulting in the line-by-line consolidation of 7 companies.

The transactions summarized above are classified as business combinations in accordance with international standard IFRS 3 "Business Combinations"; the Group fully consolidated the companies through the application of the acquisition method prescribed by IFRS 3, by virtue of the control obtained on the entities acquired.
IFRS 3 requires all business combinations to be accounted for using the acquisition method within twelve months from acquisition. The acquirer must therefore recognize all the identifiable assets, liabilities and contingent liabilities relating to the acquisition at their fair values at the acquisition date and highlight the eventual recognition of goodwill.
The fee transferred in a business combination is determined at the date of acquisition of control and is equal to the fair value of assets transferred, liabilities incurred, and any equity instruments issued by the acquirer. Costs directly attributable to the transaction are recognized in the income statement when incurred. At the date of acquisition of control, the net equity of the investee companies is determined by attributing to individual assets and liabilities their fair value, except in cases where the IFRS provisions provide a different valuation criterion. Any residual difference with respect to the purchase cost, if positive, is recognized under the item "Goodwill" (hereinafter also goodwill); if negative, it is recognized in the income statement.

Business Combinations Rinnovabili Group

In March 2022, A2A Rinnovabili finalized the acquisition of 100% of Volta Green Energy S.r.l. and 60% of R2R S.r.l.. The acquisition transaction was concluded for a value of 22 million euro for the purchase of shareholdings, generating goodwill of 19.4 million euro, which will be allocated with the Purchase Price Allocation process within the time frame required by IFRS 3. The price was fully settled at the closing of the transaction.

In June 2022, A2A Rinnovabili completed the acquisition of 100% of 4New S.r.l. and 3 New & Partners S.r.l..

The transaction was finalized for a countervalue of 391.2 million euro for the purchase of shareholdings and 2.6 million euro for the take-over of former shareholders' loans, fully paid at the closing, and generated goodwill for 77.2 million euro, which will be allocated through the Purchase Price Allocation process within the timeframe required by IFRS 3.

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, green certificates, 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.

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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 Eurelectric. 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 also concluded for the purchase and sale of gas 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, 2022 was 200.0 million euro (60.1 million euro at December 31, 2021).

Derivatives of the industrial portfolio not considered hedges
Again with a view to optimising 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, 2022 was 0.2 million euro (0.3 million euro at December 31, 2021).

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) and Forward and Option 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 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, PEGAS).
The fair value at June 30, 2022 was 64.8 million euro (-31.6 million euro at December 31, 2021).

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 method, 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, 2022 was 291.182 million euro (310.036 million euro at December 31, 2021).

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

millions of euro	06 30 2022		12 31 2021	
Profit at Risk (PaR)	Worst case	Best case	Worst case	Best case
Confidence level 99%	(291.182)	472.805	(310.036)	468.517

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.

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The A2A Group therefore expects, with a 99% probability, not to have changes compared to the fair value at June 30, 2022 exceeding 291.182 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 hedge derivatives, these would be compensated by changes in the underlying physical.

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

VaR[2] (Value 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 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

Based on 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 2.215 million euro at June 30, 2022 (1.673 million euro at December 31, 2021). In order to ensure closer monitoring of activities, VaR and Stop Loss (the sum of VaR, P&L Realized and P&L Unrealized) limits are also set.

The following are the results of the assessments:

millions of euro	06 30 2022		12 31 2021	
Value at Risk (VaR)	VaR	Stop Loss	VaR	Stop Loss
Confidence level 99%, holding period 3 days	(2.215)	(2.215)	(1.673)	(1.673)

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 variable rate loans and the use of derivatives that limit the effects of fluctuations in interest rates.

The book value and type of gross debt at June 30, 2022 are shown in the table below:

millions of euro	06 30 2022			12 31 2021		
	Before hedging	After hedging	% after hedging	Before hedging	After hedging	% after hedging
Fixed rate	4,604	4,793	77%	3,844	4,005	79%
Variable rate	1,600	1,411	23%	1,255	1,094	21%
Total	**6,204**	**6,204**	**100%**	**5,099**	**5,099**	**100%**

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.

At June 30, 2022, the following are the hedging instruments for interest rate risk:

millions of euro		06 30 2022		12 31 2021	
HEDGING INSTRUMENT	HEDGED ASSET	Fair value	Notional	Fair value	Notional
Collar	Floating rate loan A2A	(0.7)	28.5	(1.6)	38.1
IRS	Floating rate loan subsidiaries	2.6	47.8	(0.1)	13.8
Total		**1.9**	**76.3**	**(1.7)**	**51.9**

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

millions of euro

ACCOUNTING TREATMENT	TYPE OF DERIVATIVES	FINANCIAL ASSETS				FINANCIAL LIABILITIES			
		NOTIONAL		FAIR VALUE		NOTIONAL		FAIR VALUE	
		at 06/30/2022	at 12/31/2021	at 06/30/2022	at 12/31/2021	at 06/30/2022	at 12/31/2021	at 06/30/2022	at 12/31/2021
Cash flow hedge	Collar	-	-	-	-	28.5	38.1	(0.7)	(1.6)
Cash flow hedge	IRS	-	-	-	-	47.8	13.8	2.6	(0.1)
Total		**-**	**-**	**-**	**-**	**76.3**	**51.9**	**1.9**	**(1.7)**

Derivatives on interest rates at June 30, 2022 in cash flow hedge refer to the following loans:

Loan	Derivative	Accounting
A2A S.p.A. variable rate bank loan, maturity November 2023, residual debt at June 30, 2022 of 28.6 million euro.	Collar on 100% of the amount of the loan until maturity thereof. At June 30, 2022, the fair value was negative for 0.7 million euro.	The loan is measured at amortized cost. The collar is a cash flow hedge, with 100% recognized in a specific equity reserve.
ACSM-AGAM variable rate bank loan, maturity December 2025, residual debt at June 30, 2022 of 7.8 million euro.	IRS on 100% of the amount of the loan until maturity thereof. At June 30, 2022, the fair value was positive 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 variable rate bank loan, maturity June 2023, residual debt at June 30, 2022 of 2.0 million euro.	IRS on 100% of the amount of the loan until maturity thereof. At June 30, 2022, the fair value was positive for 5 thousand euro.	The loan is measured at amortized cost. The IRS is a cash flow hedge, with 100% recognized in a specific equity reserve.
VOLTA GREEN ENERGY variable rate bank loan, maturity December 2026, residual debt at June 30, 2022 of 1.2 million euro.	IRS on 100% of the amount of the loan until maturity thereof. At June 30, 2022, the fair value was positive for 43 thousand euro.	The loan is measured at amortized cost. The IRS is a cash flow hedge, with 100% recognized in a specific equity reserve.
LA CASTILLEJA ENERGIA variable rate bank loan, maturity December 2034, residual debt at June 30, 2034 of 30.3 million euro.	IRS on 100% of the amount of the loan until December 2030. At June 30, 2022, the fair value was positive for 2.3 million euro.	The loan is measured at amortized cost. The IRS is a cash flow hedge, with 100% recognized in a specific equity reserve.
SISTEMES ENERGETICS CONESA I variable rate bank loan, maturity June 2030, residual debt at June 30, 2030 of 18.8 million euro.	IRS on 75% of the amount of the loan until maturity thereof. At June 30, 2022, the fair value was negative for 32 thousand euro.	The loan is measured at amortized cost. The IRS is a cash flow hedge, with 100% recognized in a specific equity reserve.

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The A2A Group performs sensitivity analysis by estimating the effects on the value of financial statement items relating to the portfolio of financial instruments deriving from changes in the level of interest rates. In particular, the sensitivity analysis measures the potential impact on the Income Statement and shareholders' equity of different market scenarios that would determine the change in fair value of derivative financial instruments and the change in financial expenses related to the portion of gross debt not hedged.
These market scenarios are obtained by shifting the reference interest rate curve at the reporting date up and down in parallel.
Keeping all other variables constant, the pre-tax result would be influenced by changes in the level of interest rates as follows:

millions of euro	Effect on the Income Statement (before tax)		Effect on Equity (before tax)	
	-50 bps	+50 bps	-50 bps	+50 bps
Change in financial expenses on gross variable-rate debt after hedging	0.2	(1.3)	-	-
Change in fair value of derivative financial instruments classified as non-hedge	-	-	-	-
Change in fair value of derivative financial instruments classified as hedge (excluding BCVA as per IFRS 13):				
Cash flow hedge	-	-	(1.0)	0.9
Fair value hedge	-	-	-	-

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, 2022 is as follows:

millions of euro		06 30 2022		12 31 2021	
HEDGING INSTRUMENT	HEDGED ASSET	Fair value	Notional	Fair value	Notional
Cross Currency IRS	Fixed rate bond in foreign currency	5.4	98.0	(9.0)	98.0
Total		**5.4**	**98.0**	**(9.0)**	**98.0**

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, 2022, the fair value of the hedge was positive for 5.4 million euro.
The fair value and, as a consequence, the effect on equity, would improve by 24.1 million euro in the event of a 10% increase in the forward curve of the euro/yen exchange rate with an appreciation of the yen, while it would worsen by 12.2 million euro in the event of a 10% drop in the forward curve of the euro/yen exchange rate with a depreciation of the yen.
The sensitivity analysis was performed with the aim of calculating the effect of changes in the forward curve of the euro/yen exchange rate on the fair value ignoring any impact on the adjustment due 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 2022	Portions maturing within 12 months	Portions maturing beyond 12 months	Portions maturing by				
				12 31 2023	12 31 2024	12 31 2025	12 31 2026	After
Bonds	4,293	30	4,263	600	299	595	-	2,769
Financial payables for rights of use (*)	145	30	115	23	17	13	12	50
Loans from banks and other lenders	1,766	414	1,352	438	89	82	370	373
Total	**6,204**	**474**	**5,730**	**1,061**	**405**	**690**	**382**	**3,192**

(*) Including finance leases.

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, 2022, the Group had a total of 3,106 million euro, as follows:
(i) committed revolving credit lines for 1,510 million euro, of which: a) 600 million euro maturing in 2023, b) 410 million euro maturing in 2025 and c) 500 million euro maturing in 2026, not used;
(ii) unused long-term EIB loans for a total of 25 million euro;
(iii) cash and cash equivalents totaling 1,571 million euro, including 1,429 million euro at the Parent Company level.

A2A also maintains a Bond Issue Program (Euro Medium Term Note Programme) of 6 billion euro, of which 1,800 million euro available at June 30, 2022.

The following table analyzes the worst case for financial liabilities (excluding payables for rights of use and including trade payables), in which all of the amounts shown are non-discounted future nominal cash flows determined on the basis of residual contractual maturities for both principal and interest. The undiscounted nominal flows of derivative contracts on interest rates are also included. Finally, any revocable financial lines used and current accounts payable are due within the next financial year.

06 30 2022 millions of euro	1-3 MONTHS	4-12 MONTHS	AFTER 12 MONTHS	TOTAL
Bonds	10	59	4,645	4,714
Loans from banks and other lenders	231	167	1,462	1,860
Total financial flows	**241**	**226**	**6,107**	**6,574**
Payables to suppliers	500	129	7	636
Total trade flows	**500**	**129**	**7**	**636**

12 31 2021 millions of euro	1-3 MONTHS	4-12 MONTHS	AFTER 12 MONTHS	TOTAL
Bonds	530	35	3,474	4,039
Loans from banks and other lenders	77	148	1,096	1,321
Total financial flows	**607**	**183**	**4,570**	**5,360**
Payables to suppliers	567	28	8	603
Total trade flows	**567**	**28**	**8**	**603**

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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 "Trade receivables".

f. Equity risk

At June 30, 2022, the A2A Group was not exposed to equity risk.
In particular, it should be noted that the parent company A2A S.p.A. did not hold any treasury shares at June 30, 2022.
As prescribed by IAS/IFRS, treasury shares do not constitute an equity risk as their purchase cost is deducted from equity, and even if they are sold any gain or loss on the purchase cost does not have any effect on income statement.

g. Covenants compliance risk

Bonds, loans, leases and committed revolving bank lines present Terms and Conditions in line with market practice for each type of instrument. In particular, they envisage: (i) negative pledge clauses as a result of which the parent company undertakes not to constitute collateral on its assets and those of its relevant subsidiaries (as defined from time to time in the documentation), with the provision of some exceptions and a threshold maximum permitted specifically identified; (ii) cross default/acceleration clauses that entail the obligation of immediate repayment of bonds and loans in the event of serious defaults; (iii) clauses that provide for the obligation of immediate repayment in the event of insolvency or other insolvency proceedings of the parent company or its relevant subsidiaries.

The bonds include (i) senior unsecured bonds for a nominal amount of 4,200 million euro (book value at June 30, 2022 equal to 4,193 million euro) 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 parent company resulting in a consequent downgrade of the rating to sub-investment grade level in the following 180 days (if within these 180 days, the company's rating returns to investment grade, the option may not be exercised); (ii) a private bond in yen with a maturity in 2036 for a nominal amount of 98 million euro (book value at June 30, 2022 equal to 101 million euro), which provides to the investor a Put clause in the event that the rating is lower at BBB- or equivalent level (sub-investment grade).

The loans stipulated with the European Investment Bank (EIB), nominal debt and book value of 719 million, of which 347 million with maturity beyond 5 years, provide for: i) a Credit Rating clause (if rating lower than BBB- or equivalent level at sub-investment grade), which provides for A2A's obligation to inform the EIB and the EIB's right to request further guarantees from A2A and, where these guarantees are not provided or not satisfactory, the right to request early repayment of the loan, and ii) a change of control clause of the parent company, with the right of the bank to invoke early repayment of the loan, upon notice to the company containing an indication of the reasons.

A loan of the subsidiary Fragea, whose residual debt at June 30, 2022 was 2.4 million euro, is secured by collateral on the property and plant financed.

Some ACSM-AGAM, SISTEMES ENERGETICS CONESA and LA CASTILLEJA ENERGIA bank loans include financial covenants, as shown in the relevant table below.

The committed revolving bank lines available, for a total of 1,510 million euro, provide a Change of Control clause which, in the event of a change of control of the parent company causing a Material Adverse Effect, allows the majority of banks lending the line to request the line to be extinguished and any amounts drawn down to be repaid.

At June 30, 2022, there was no situation of non-compliance with the covenants of the A2A Group companies.

A2A Group - Financial covenants at June 30, 2022

COMPANY	LENDER	LEVEL OF REFERENCE	LEVEL RECOGNIZED	DATE OF RECOGNITION
ACSM-AGAM	BEI	Available cash flow/net financial debt >= 14.0%	40.8%	06/30/2022
		Financial debt/equity <= 75.0%	35.6%	06/30/2022
		Net financial debt/Ebitda <= 3.0	1.60	06/30/2022
ACSM-AGAM	Unicredit	Debt Service Coverage Ratio <= 3	1.60	06/30/2022
		Gearing <= 1	0.31	06/30/2022
SISTEMES ENERGETICS CONESA	Banco Santander / Banco De Sabadell	Debt Service Coverage Ratio >= 1.05x	4.30x	06/30/2022
		Senior Debt / Equity ratio <= 85%	60%	06/30/2022
LA CASTILLEJA ENERGIA	CaixaBank	Debt Service Coverage Ratio >= 1.05x	2.36x	06/30/2022
		Senior Debt / Equity ratio <= 85%	83%	06/30/2022

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

Guarantees and commitments with third parties

Other information

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:

- 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.
- 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, 2022

A) On interest and exchange rates

The following analyses show the notional amounts of derivative contracts stipulated and not expired at the reporting date, by maturity

millions of euro	Notional value (a)						Balance sheet Value (b)	Progressive effect to the Income statement at 06 30 2022 (c)
	Due within 1 year		Due in 1 to 5 years		Due over 5 years			
	to be received	to be paid	to be received	to be paid	to be received	to be paid		
Interest rate risk management								
cash flow hedges as per IFRS 9		26.8		28.5		21.0	(1.7)	-
not considered hedges as per IFRS 9								
Total derivatives on interest rates	**-**	**26.8**	**-**	**28.5**	**-**	**21.0**	**(1.7)**	**-**
Exchange rate risk management								
considered hedges as per IFRS 9								
- on commercial transactions								
- on non-commercial transactions						98.0	5.4	
not considered hedges as per IFRS 9								
- on commercial transactions								
- on non-commercial transactions								
Total derivatives on exchange rates	**-**	**-**	**-**	**-**	**-**	**98.0**	**5.4**	**-**

(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 over time in the Income Statement from stipulation of the contract to the present date.

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.

		Volume by Maturity			Notional Value	Fair Value	
		Due within 1 year	Due within two years	Due within five years		Balance sheet Value (*)	Progressive effect to Income statement (**)
Energy product price risk management	Unit of measurement	Quantity			Millions of euro		
A. cash flow hedges as per IFRS 9, including:						**200.0**	**-**
- Electricity	TWh	2.8	0.1	0.2	345.4	150.4	
- Oil	Bbl						
- Coal	Tons						
- Natural Gas	TWh	0.5	0.1	0.1	53.1	35.8	
- Natural Gas	Millions of cubic metres						
- Exchange rate	Millions of dollars					-	
- Emission rights	Tons	1,126,456	95,000		96.9	13.7	
B. considered fair value hedges as per IFRS 9						**-**	**-**
C. not considered fair value hedges as per IFRS 9 of which:						**65.0**	**96.3**
C.1 hedge margin						**0.2**	**-**
- Electricity	TWh						
- Oil	Bbl						
- Natural Gas	Degrees day						
- Natural Gas	TWh						
- CO_2 Emission rights	Tons	624,000			50.1	0.2	
- Exchange rate	Millions of dollars						
C.2 trading transactions						**64.8**	**96.3**
- Electricity	TWh	18.9	9.2	1.5	4,811.2	64.2	65.8
- Natural Gas	TWh	105.7	24.5	5.5	9,252.2	1.1	30.7
- CO_2 Emission rights	Tons	1,743,000	586,000	138,000	188.2	(0.5)	(0.2)
- Environmental Certificates	MWh						
- Environmental Certificates	Tep						
Total						**265.0**	**96.3**

(*) 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 over time in the Income Statement from stipulation of the contract to the present date.

Financial and operating results for derivative transactions at June 30, 2022

Effects on the balance sheet

The following table shows the balance sheet figures at June 30, 2022, for derivative transactions.

millions of euro	NOTE	TOTAL
ASSETS		
NON-CURRENT ASSETS		**8**
Other non-current assets - Derivatives	5	8
CURRENT ASSETS		**7,524**
Other current assets - Derivatives	8	7,524
TOTAL ASSETS		**7,532**
LIABILITIES		
NON-CURRENT LIABILITIES		**1**
Other non-current liabilities - Derivatives	20	1
CURRENT LIABILITIES		**7,260**
Trade payables and other current liabilities - Derivatives	21	7,260
TOTAL LIABILITIES		**7,261**

Effect on the income statement

The following table sets out the income statement figures at June 30, 2022 arising from the management of derivatives.

millions of euro	Note	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				
Energy product price risk management and exchange rate risk management on commodities				
- considered hedges as per IFRS 9		313	-	313
- not considered hedges as per IFRS 9		154	(4,543)	(4,389)
Total revenues from the sale of goods		**467**	**(4,543)**	**(4,076)**
OPERATING EXPENSES	27			
Expenses for raw materials and services				
Energy product price risk management and exchange rate risk management on commodities				
- considered hedges as per IFRS 9		(20)	-	(20)
- not considered hedges as per IFRS 9		(141)	4,640	4,499
Total costs for raw materials and services		**(161)**	**4,640**	**4,479**
Total recognized in Gross operating income (*)		**306**	**97**	**403**
FINANCIAL BALANCE	33			
Financial income				
Interest rate risk management and equity risk management				
Income on derivatives				
- considered hedges as per IFRS 9		2	-	2
- not considered hedges as per IFRS 9		-	-	-
Total		**2**	**-**	**2**
Total financial income		**2**	**-**	**2**
Financial expenses				
Interest rate risk management and equity risk management				
Expenses on derivatives				
- considered hedges as per IFRS 9		(1)	-	(1)
- not considered hedges as per IFRS 9		-	-	-
Total		**(1)**	**-**	**(1)**
Total financial expenses		**(1)**	**-**	**(1)**
TOTAL RECOGNIZED IN FINANCIAL BALANCE		**1**	**-**	**1**

(*) 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, 2022, where applicable.

millions of euro	Criteria to measure the reported amount of financial instruments						
	Note	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 2022	Fair value at 06 30 2022 (*)
		Income statement	Equity				
		(1)	(2)	(3)	(4)		
ASSETS							
Other non-current financial assets							
Financial assets measured at fair value of which:							
- unlisted		44				44	n,d,
- listed						-	-
Financial assets held to maturity					1	1	1
Other non-current financial assets					26	26	26
Total other non-current financial assets	3					**71**	
Other non-current assets	5		8		64	72	72
Trade receivables	7				3,390	3,390	3,390
Other current assets	8	7,310	214		463	7,987	7,987
Current financial assets	9				12	12	12
Cash and cash equivalents	11				1,571	1,571	1,571
LIABILITIES							
Financial liabilities							
Non-current and current bonds	17 and 22		101		4,192	4,293	4,293
Other non-current and current financial liabilities	17 and 22				1,880	1,880	1,880
Other non-current liabilities	20		1		139	140	140
Trade payables	21				3,329	3,329	3,329
Other current liabilities	21	7,245	15		733	7,993	7,993

(*) 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.

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.

millions of euro	NOTE	LEVEL 1	LEVEL 2	LEVEL 3	TOTAL
Assets measured at fair value	3		7	4	11
Other non-current assets	5		8		8
Other current assets	8	7,519		5	7,524
TOTAL ASSETS		**7,519**	**15**	**9**	**7,543**
Non-current financial liabilities	17	99			99
Other non-current liabilities	20		1		1
Other current liabilities	21	7,259	1		7,260
TOTAL LIABILITIES		**7,358**	**2**	**-**	**7,360**

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%	(0.02)
Commodity Derivatives	Loss Given Default (LGD)	25%	0.00
Commodity Derivatives	Underlying interconnection capacity zonal Italy (CCC)	1%	0.07

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.
It should be noted that certain disputes illustrated in previous financial statements and still pending are not further reported due to the absence of updates or the modification of the previous risk situation.

A2A S.p.A.

Reorganization of Edison - compensation cases
Carlo Tassara: first lawsuit for damages against EDF and A2A S.p.A.
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.
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).
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 the judge (who rejected the preliminary request) to have an expert witness to calculate the damages (specifying that they should have been 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.
On September 8, 2021, the Milan Business Court filed Sentence 7859 rejecting all of the claims made by Carlo Tassara S.p.A., without accepting the reconstruction according to which the shareholders acted to cause an undervaluation of Edison and Edipower. According to the Business Court of First Instance, in the case submitted, the conditions for assessing management and coordination are not met. The court also found that the price of Edison shares, at which EDF purchased its shares during the tender offer, was not subject to review because it was the price defined by Consob pursuant to article 106 of the TUF; the sentence also highlights the difference between the price of Edison shares and the value of the Edipower subsidiary and, more importantly, the price at which the latter was sold to A2A.
Carlo Tassara S.p.A. served a writ of summons on the appeal and A2A S.p.A. entered an appearance requesting that the Tassara S.p.A. appeal be declared inadmissible as well as groundless, and re-proposed the exceptions, defenses and requests raised in the first level of judgement for full protection. At the first hearing on March 2, 2022, the judge adjourned the case to March 1, 2023 for clarification of conclusions.

Carlo Tassara: second lawsuit for damages against Transalpina dell'Energia and A2A S.p.A.
On April 14, 2022, Carlo Tassara S.p.A. served a new summons on the Court of Milan, requesting that Transalpina Di Energia and A2A be ordered, jointly and severally with each other, to pay Carlo Tassara S.p.A. the damages that will be quantified in the course of the proceedings, after ascertaining and declaring the liability of the two companies for the breach of article 106 TUF (Total Tender Offer).
In the writ of summons, Carlo Tassara S.p.A. quantifies the damage caused by the write-down of the value of its equity investment in Edison at 316,843,562.97 euro, figure resulting from the theoretical value of the tender offer calculated by Carlo Tassara S.p.A. on the basis of:
a) Value of Edison shares recorded in the financial statements by TDE and A2A (1.5003 euro/share);
b) Value assigned by Edison in fair value appraisals (1.3 euro/share);
c) Highest edict value identified by Consob (0.95 euro/share);
d) Market value to be defined by the court.

The writ of summons provides a description of the facts related to the extraordinary transaction to be ascertained: (i) the avoidance and violation of article 106 of the TUF and (ii) the demonstration of the existence of an alleged pact between the two defendants to depress Edison's value, prior to launching

a takeover bid - with the consequent violation of the rule protecting minority shareholders of listed companies and non-achievement of the latter of: (i) control price and (ii) market price of the Edison shares held by Carlo Tassara S.p.A..
The first hearing was fixed for January 11, 2023.

Class Action notified by ordinary shareholder

On May 4, a natural person shareholder, holder of 1,250,000 (equal to 0.025% of the share capital of Edison S.p.A.) ordinary shares of Edison S.p.A. as at the date of the reorganization transactions, served a writ of summons pursuant to article 140 bis of Legislative Decree no. 206 of September 6, 2005 of the Consumer Code for a class action before the Business Court of Milan, seeking an order that Transalpina Di Energia and A2A, jointly and severally with each other, pay to itself, and to all class members who join the action within the terms that may be set by the Court after declaring the admissibility of the action, compensation for damages to be quantified in the course of the proceedings, after ascertaining and declaring the liability of the two companies for the breach of article 106 TUF (Total Tender Offer).
The factual reconstruction proposed by the plaintiff and the alleged liability of the two defendant companies retrace the contents of the writ of summons served a few weeks earlier by Carlo Tassara S.p.A. (reference is therefore made to the statement of this position).
In view of the type of action brought, the alleged prerequisites of the class action are explained. The plaintiff did not quantify the damage suffered.
The court will first ascertain the existence of the requirements for admissibility of the class action and, if it is admissible, it will set a term and decide how to publicise the order so that class members can join the action. Whether the class action is admissible and whether the defendants are liable may lead to a quantification of the damages or the determination of the basis for their calculation.
The first hearing has been requested for November 24, 2022.

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.

Derivations of public water for the production of hydroelectricity in Lombardy

A number of appeals are still pending in which A2A and Linea Green have challenged the measures issued by the Lombardy Region to regulate the continuation of water derivation for hydroelectric use even after the expiry of their respective concessions.

In particular, 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, and reserved the request for settlement at the outcome of the assessments by the regional offices regarding the profitability of expired concessions. The additional fee was imposed retroactively from the original expiry of each concession; therefore, for the Grosotto, Lovero and Stazzona concessions, it would be effective from January 1, 2011, for the Premadio 1 concession from July 29, 2013, for the Grosio concession from November 15, 2016 and for the Resio concession from December 31, 2010.
A2A and Linea Green, which, like other operators, have always contested, also in the courts, the legitimacy, also constitutional, of article 53-bis, paragraph 5, of Regional Law 26/2003, challenged before the Superior Court of Public Waters and other competent bodies the D.G.R. 5130/2016 and the related and consequent measures that governed the conditions for the temporary continuation of each concession, and which, where provided for, ordered the revocation of the exemption of part of the State fee.
A2A has also more recently challenged the orders whereby the Lombardy Region ordered the company to pay the amount allegedly due for the operation of the large derivations of Grosio, Cancano - Premadio I, Lovero and Stazzona due to the company's failure to pay that part of the state fee that is exempt pursuant to article 73 of Royal Decree 1775/1933, a benefit allegedly revoked by some of the resolutions that governed the provisional continuation of the concession after its expiry. This and other related litigation are still ongoing.
The case brought by A2A in order to obtain the cancellation of the regional resolutions that governed the temporary continuation of the Cancano - Premadio I concession ended with the rejection sentence issued by the Joint Sections of the Supreme Court no. 15990/2020 and the judgement brought by A2A in order to obtain the cancellation of the regional resolutions that governed the temporary continuation of the Grosotto, Lovero and Stazzona concessions ended with the rejection sentence issued by the Joint Sections of the Supreme Court, no. 1043/2021.
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. In this last regard, it should be pointed out that A2A and Linea Green appealed before the TSAP for the annulment of General Director Decree (D.D.G.) no. 10544/2019 by means of which the Lombardy

Region ascertained and determined the amounts allegedly owed by the concessionaires as additional fees for 2019, disputes subsequently integrated with reference to the additional fee for the years 2020 and 2021, and with these appeals, they also requested referral to the Constitutional Court of a matter of constitutional legitimacy in relation to the aforementioned provisions introduced by the law converting Decree Law Simplifications with regard to hydroelectric concessions.
Also Regional Law 5/20 issued by the Lombardy Region in implementation of Law 12/2019 was submitted to the judgement of constitutionality by the Government, which, however, by Resolution of the Council of Ministers of November 24, 2021 after the amendments resulting from the entry into force of Regional Law no.19 November 4, 2021, waived the appeal.
With reference to hydroelectric concessions, national Law 12/2019 also established that regions may introduce an obligation for concessionaires to provide 220 kWh annually and free of charge to the same regions for each kW of average nominal capacity of the concession. Availing itself of this faculty, with art. 31 Regional Law L.R. 23/2019 and, therefore, with Regional Council Resolution D.G.R. 3347/2020, the Lombardy Region regulated the obligation of free transfer of electricity with effect from the year 2020 for expired and unexpired derivation concessions. By Regional Council Resolution D.G.R. no. 191 of February 11, 2022, the Friuli-Venezia Giulia Region also regulated this obligation for expired and unexpired derivation concessions. A2A and Linea Green have challenged the aforementioned regional measures on various grounds.
Finally, the same Law 12/2019 stipulated that concessionaires pay the regions a fee every six months, determined by a regional law, consisting of a fixed component and a variable component. A2A and Linea Green have challenged the Lombardy regional measures on various grounds.
For disputes relating to public water derivation fees, the Company allocated adequate provisions for risks on a prudent basis, the quantification of which also takes into account the payments - subject to any subsequent repayment upon the final outcome of the respective legal proceedings - of certain positions, for the sole purpose of preventing additional costs.

A2A Energiefuture S.p.A.

Monfalcone Plant Investigation (RNR 195/17 Public Prosecutor of Gorizia)
On March 08 and 09, 2017, following orders of the Public Prosecutor of Gorizia, 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, the guarantee information has been notified to three employees, regarding an investigation for the offences referred to in Article 452 bis of the Italian Criminal Code. Environmental pollution. The suspect employees appointed trusted defenders.
Subsequently, between December 2017 and January 2018, and then in December 2018 and July 2020, the Public Prosecutor of Gorizia proceeded with the acquisition of additional documentation at the plant.

On May 6, 2021 (and subsequently on June 4, 2021), the defenders of the former head of the plant (but not the other two employees who had received information of guarantee) were notified of the conclusion of the preliminary investigation pursuant to article 415 bis of the code of criminal procedure in relation to the crime of environmental disaster pursuant to article 452 quater, paragraph 1, no. 2 and paragraph 2 of the Criminal Code. From the same notification, it emerges that the company is charged with the offence referred to in article 25 undecies, paragraph 1, letter b), in relation to article 5, paragraph 1, letter a) of Legislative Decree 231/01.
In said notice of conclusion of the investigations, it is contested that the seabed in the area in front of the power plant quay has been compromised by coal run-off, the air has been compromised by emissions from the power plant and the balance of the ecosystem has been altered by contamination with heavy metals. A similar notice was served on May 10, 2021 at the Monfalcone power plant.
On July 29, 2021, the defense attorney of the former head of the plant was served with a decree scheduling a preliminary hearing for November 24, 2021 before the Preliminary Investigation Judge (GIP) of Gorizia. At the hearing of November 24, 2021, the Company's lawyer raised a preliminary objection of the nullity of the notice pursuant to article 415-bis of the Code of Criminal Procedure of the conclusion of the preliminary investigations since not duly notified. The exception was upheld by the Judge who referred the case back to the Public Prosecutor's Office so that it could serve a new notice of conclusion of the preliminary investigations. As a result of this decision, the trial regressed to the preliminary investigation stage. A new notice pursuant to article 415 bis of the Code of Criminal Procedure is awaited.
On July 1, 2022, a new notice pursuant to article 415 bis of the Code of Criminal Procedure of the conclusion of preliminary investigations was served on the defence counsel of the former head of the plant and on the defence counsel of the company. The new notice no longer contemplates the offence referred to in article 452 quater of the Criminal Code, i.e. environmental disaster, but rather that referred to in articles 452 bis and 452 quinquies of the Criminal Code, i.e. environmental pollution/unintentional crimes against the environment. Consequently, by virtue of the new and different predicate offences

referred to by the Public Prosecutor, the charge against the company in relation to administrative liability has also been amended, which now concerns the offence referred to in article 25 undecies, paragraph 1(a) and (c) of Legislative Decree 231/01.
The defence counsels will acquire a copy of the file for examination of the documentation and subsequent evaluations. The Public Prosecutor's Office will request the setting of a new preliminary hearing before the preliminary investigation judge (GIP) of Gorizia and, consequently, a new decree setting the hearing before the GIP will be served on the defence lawyers.

Linea Ambiente S.r.l. – Grottaglie landfill

Court of Taranto - Criminal Proceeding RGNR 2785/18

On March 14, 2019, an employee of A2A Ambiente S.p.A., seconded to Linea Ambiente S.r.l. as the company's Chief Operating Officer, was remanded in custody as part of investigations into the offences referred to in articles 319 and 321 of the Italian Criminal Code with reference to an alleged bribery connected with the issue of Executive Decision no. 45 dated April 5, 2018 by the Province of Taranto for the orographic optimization of the Linea Ambiente S.r.l.'s Grottaglie landfill.
On August 1, 2019, the Court of Taranto - Office of the Judge for Preliminary Investigation - at the request of the Prosecutor's Office, ordered the immediate trial, i.e. without a preliminary hearing being held, of the defendants subject to pre-trial custody, including the employee of A2A Ambiente, against whom the measure of pre-trial custody in prison was replaced by house arrest and, subsequently, with the obligation to stay in the municipality of residence and, finally, with the prohibition of residence in the province of Taranto (even this last measure was later revoked by order of January 24, 2022), setting the first hearing for this purpose on November 4, 2019. Said proceedings are currently underway and at the stage of the debates.

Court of Taranto no. 5400/19 R.G. Administrative Responsibility

Precautionary measures

On May 7, 2020, the Guardia di Finanza notified Linea Ambiente S.r.l. of a preventive seizure order issued by the GIP of Taranto on March 12, 2020 in the context of Proceedings no. 2785/18 R.G.N.R. and 5400/19 R.G. Admin. Resp. and deed of execution of preventive seizure pursuant to art. 53 of Legislative Decree 231/01, also valid as guarantee information pursuant to art. 369 of the Italian Criminal Code.
For the first time, Linea Ambiente was informed of the existence of Criminal Proceedings no. 5400/19 R.G. Admin. Resp. of Entities for bribery offences pursuant to article 25, paragraph 2, of Legislative Decree 231/01.
The preventive seizure, on May 7, 2020, was arranged up to the amount of 26,273,298 euro (equal to the presumed profit of the offence). On May 13, 2020 was the notification of appointment of a judicial administrator of the assets seized, including company shares and receivables.
On May 21, 2020, Linea Ambiente proposed a request for review of the seizure order, which was discussed in the Council Chamber on June 9, 2020, and rejected. The cautionary requests have been confirmed.
On June 11, 2020, a decree releasing the Linea Ambiente portions was notified. On September 10, 2020, the company was notified of the conclusion of the preliminary investigations pursuant to article 415-bis of the Code of Criminal Procedure. The notification was repeated, with partial changes, on January 21, 2021. On January 21, 2021, the Taranto Public Prosecutor's Office notified the defense lawyer of Linea Ambiente of an order to release and return 95.004% of the shares in Lomellina Energia held by Linea Ambiente and already placed under preventive seizure. This was done on the basis of a new estimate of the value of the shares made by the judicial administrator and on the fact that after the seizures made by the Guardia di Finanza there remained sums equal to about 5% the value of said shares.
On May 18, 2021, the Taranto Preliminary Investigation Judge (GIP), following the annulment by the Supreme Court of the preventive seizure order notified on May 7, 2020, issued a new preventive seizure order recalculating the "profit from the crime" as 20,304,974.88 euro (compared to the previous amount of 26,273,298.13 euro) by subtracting the "out-of-pocket costs" incurred by Linea Ambiente and quantified as 5,968,323.25 euro. In fact, the Supreme Court found that the original determination was erroneous of the alleged profit, identified by the Judge for Preliminary Investigation in the gross revenue that Linea Ambiente would have derived as a result of the landfill contributions made in the period April 2018 - February 2019, for a total amount of 26,273,398.13 euro. Consequently, the Supreme Court ordered the annulment of the decree and the return of the acts to the GIP of Taranto to comply with the principles of law dictated by the Supreme Court, according to which the profit is only the advantage of immediate and direct causal derivation of the crime. In the new seizure order notified on May 18, 2021, however, according to the Linea Ambiente defense, this principle was again disregarded and therefore on May 27, 2021, an appeal was filed with the Supreme Court against the same, requesting its cancellation. At the hearing on November 10, 2021, the Court declared the appeal inadmissible due to lack of standing because, according to the Court of Cassation, Linea Ambiente should not have been considered as a party to the committal proceedings opened with the sentence of annulment pronounced by the Court of Cassation on the appeal brought by the company's former Operating Director (in other words, according to the Court of Cassation, the judge of the Taranto Magistrate's Court, as judge of the committal, could

have ruled only against the original appellant, i.e. the former Operating Director, and not also against the other parties affected by the original decree).

On June 29, 2021, the Linea Ambiente counsel was re-notified of the preventive seizure order issued on May 18, 2021 by the GIP and the minutes of the execution of the same by which it was ordered to release and return to Linea Ambiente 3.352% of the shares held by it in the company Lomellina Energia for an estimated value (by the Judicial Administrator) of 1,617,284.96 euro. In May 2021, the Group complied with the request of the Judicial Administrator to pay the amounts seized up to the amount of 14 million euro. Subsequently, with a measure notified on March 14, 2022, granting the petition filed by the company, the GIP of Taranto ordered that the preventive seizure of Linea Ambiente's shareholding in Lomellina Energia still under seizure (1.644 %) be transferred to the corresponding sum of money (equal to 793,164.55 euro) to be paid to the indicated account. Once this payment had been made, in execution of the said decree, on May 17, 2022 the Guardia di Finanza released from seizure and returned to Linea Ambiente the 1.644 % of the shares it held in Lomellina Energia that had already been seized.

The proceedings of merit

On March 18, 2021, the Linea Ambiente S.r.l. counsel was served with the notice of the preliminary hearing scheduled for June 10, 2021 before the Taranto Preliminary Hearings Judge. In this preliminary hearing, the Municipality of Grottaglie filed a request to join the civil action. At the subsequent hearing on July 22, 2021, the defense of Linea Ambiente S.r.l. objected to the inadmissibility of the civil action of the Municipality of Grottaglie against Linea Ambiente S.r.l. The Preliminary Hearings Judge (GUP) accepted the objection and consequently declared the inadmissibility of the constitution of a civil party of the Municipality of Grottaglie, also rejecting the request of the latter, carried out in the alternative, to authorize the summons of the company as civil liable party, postponing the proceeding to November 11, 2021 for the continuation of the preliminary hearing. At this hearing, the defense raised a number of preliminary issues and the Judge granted time to respond and adjourned the hearing until January 20, 2022. At the hearing of January 20, 2022, the judge rejected the preliminary objections and postponed the decision on the preliminary motions to the hearing of March 31, 2022, then to May 31, 2022; at this hearing, due to the impediment of the titular GIP, an adjournment to September 29, 2022 was ordered.

At present, the company believes that the risk of confiscation is possible and has not made a provision for the amount of the seizure in view of the multiple concomitant factors, namely: i) the as yet preliminary phase of Proceedings no. 5400/19 R.G. Admin. Liability; ii) the exorbitant amount determined by the preventive seizure decree as profit deriving from the hypothetical predicate crime in respect of what is presently considered possible for a future effective confiscation order; iii) the fact that the time, considered to be in the fairly distant future, when such seizure may be ordered, cannot yet be determined, given the need of the definitive nature of any conviction judgement.

Linea Ambiente vs.Provincia di Taranto – Grottaglie Landfill

In January 2021 (with reiteration in February 2022), the Province of Taranto sent a warning notice for the removal of the waste dumped during the period of validity of DD 45/18, which also constitutes a response to the requests that the company had made in previous years regarding the procedures for fulfilling the obligations resulting from the Sentence of the Council of State no. 5985/2019, which had annulled the substantial variation no. 45/2018. The Province, according to as stated in the meagre communication of 2021, which does not give evidence of the provincial inquiry, does not open the required authorization procedure and indicates to the company: (i) to remove the waste delivered in excess of the authorized quantities, (ii) to restore the landfill profiles in accordance with authorization 426/08 and (iii) to activate the closure activities.

On February 9, 2021, Linea Ambiente met with the Province, expressly reserving the right to challenge the warning, in order to outline a technical path necessary to take appropriate action; in particular, the company illustrated a preliminary investigation path from which all possible solutions could emerge, including a new request for a substantial variant of the current authorization in line with Council of State Sentence 5986/2019.

The uncertainty of the technical solutions available and the unpredictability of the measures of the competent authorities, which have not carried out any technical investigation, make it impossible to predict the duration of the authorization process and the type of measure that will be issued to allow the company to resolve the current impasse.

In view of the flaws in the deed, the company appealed to the Apulia Regional Administrative Court to have the warning cancelled and notified additional grounds against the February 2022 communication; a hearing on the merits has not yet been scheduled.

The Group has set aside an adequate provision to cover any risk.

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Lecce Public Prosecutor's Office - Criminal Proceeding no. 6369/2019 R.G.N.R.

On February 26, 2020, at the Rovato headquarters of Linea Ambiente S.r.l., the Brescia Finance Police executed the "Search and Seizure Warrant" issued on February 5, 2020 by the Lecce Public Prosecutor's Office (Public Prosecutor Mignone) in relation to criminal proceedings no. 6369/2019 R.G.N.R..

The Finance Police then acquired a copy of the company's Organisational Model and the deeds and documents relating to the information flows destined for the Linea Ambiente S.r.l. Supervisory Body from November 2014 to January 2019.

The criminal proceedings have been filed against the company Linea Ambiente S.r.l. and the legal representative pro tempore for the offences referred to in articles 452 quaterdecies of the Italian Criminal Code (activities organised for the illicit waste trafficking) and 256 and paragraphs 1 and 3 of Legislative Decree 152/2006 (respectively waste collection, transport and disposal activities in the absence of the prescribed authorization/registration and the construction and management of unauthorized landfills) from which the company's administrative liability derives pursuant to articles 24 and 25 undecies of Legislative Decree 231/2001 and this - the said measure states - "in order to have, with several operations and through the setting up of continuous and organized means and activities, managed and illegally disposed of large quantities of urban waste, creating an illegal landfill, in order to obtain an unfair profit". These alleged offences were supposedly committed in "Rome and Grottaglie from November 1, 2014 to January 28, 2019 with permanence".

Together with the "Search and Seizure Warrant", the Finance Police notified the company "Guarantee and on the right of defence information", from which it emerges that the company AMA S.p.A. of Rome, "owner of the TMB Rocca Cencia and Salario plants in Rome", was also entered in the same proceedings.

The company has been informed that individuals who are legal representatives or directors of Linea Ambiente S.r.l. and AMA S.p.A. during the interested period have received requests to extend the preliminary investigations in the same proceedings.

Amsa S.p.A.

Milan Public Prosecutor's Office - Criminal Proceeding no. 33490/16 R.G.N.R.

On May 7, 2019, the Carabinieri investigative unit of Monza showed up at the Amsa S.p.A. headquarters to notify an order for the exhibition of 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. In relation to these proceedings, the Company's Chief Operating Officer and other employees were investigated, as well as three members of a tender judging committee issued by Amsa S.p.A..

No dispute has been raised against Amsa S.p.A. on the basis of the regulations on the administrative liability of legal persons, as Amsa S.p.A. considers itself to be an "injured party" and, in fact, has filed a complaint with the Public Prosecutor's Office through a trusted lawyer.

On December 23, 2019, lawyer of Amsa - as the injured party - was served notice for the setting of the preliminary hearing on February 17, 2020. As a result of this hearing, the Judge for Preliminary Investigation adjourned the hearing to May 25, 2020, setting a provisional schedule for its continuation. The measure in question does not cover the members of the tender committee, whose position has been withdrawn and closed. Filed as civil parties were Amsa S.p.A. and A2A Calore & Servizi S.r.l., as it was found to be an injured party in the same proceedings in relation to agreements made to its detriment by some companies competing in the district heating installation tenders, which aimed to distort free competition.

On January 18, 2021, the lawyer of Amsa S.p.A. was served notice of the setting of the preliminary hearing relating to the second line of investigation, registered under number 34213/19 R.G.N.R. - 21296/19 R.G.I.P. connected to the first. The preliminary hearing of this second matter was set for March 19, 2021 for the joining of the proceedings.

Amsa also filed as civil party against some of the defendants and in respect of certain allegations in connection with this additional matter. The trial underwent a series of postponements and the discussion of the preliminary hearing ended at the hearing on July 15, 2021 in which the defendants were sent for trial and the first hearing was set for November 18, 2021. At the hearing of July 8, 2021, at the conclusion of the reconnaissance on the requests for alternative rites, the Judge also set the calendar for the treatment of alternative rites, scheduling numerous hearings between September and October 2021. At the hearing of October 21, 2021, set for the decision on alternative procedures, the Judge, as regards the positions of interest to AMSA, accepted the plea bargains requested by pronouncing a sentence of application of the penalty, while for a defendant who had requested an abbreviated trial, it pronounced a sentence of acquittal.

At the hearing on November 18, 2021, the preliminary issues raised by the defense of the defendants on remand were discussed; at the end of the hearing, the Court reserved its decision and adjourned the proceedings until the hearing on December 10, 2021. At this hearing the Court, in order to withdraw its reservation, rejected the objections raised by the defense and then opened the hearing, inviting the

parties to formulate their preliminary requests, on which it reserved the right to decide, adjourning the hearing until January 14, 2022. At this hearing, the Court granted the preliminary investigations, admitted the testimonial and documentary evidence requested and ordered the transcription of telephone and environmental interceptions. The case was adjourned until March 14 for the start of the preliminary hearing, and further hearings have been scheduled until December 12, 2022 for the hearing of witnesses.

Linea Green S.p.A.

Brescia Public Prosecutor's Office - Criminal Proceeding no. 3891/2020 R.G.N.R.

On September 22, 2020, the person in charge of the technical and operational management of the Isola hydroelectric plant on the Grigna stream in Barzio Inferiore was notified of a request for an extension of the preliminary investigation. The interested party thus learned of the existence of investigations involving the latter in relation to an alleged crime of environmental pollution in conjunction with the legal representative of the company that owns the plant, which does not belong to Linea Green, but to a third company with which Linea Green has signed a management contract.
Subsequently, on March 26, 2021, the Carabinieri from the Forestry Department appeared at the Linea Green offices to acquire documentation and, on that occasion, invited the company's legal representative to appoint a lawyer for the company, since, as shown in the report notified, it was "under investigation for the administrative offence depending on the crime referred to in article 25 undecies paragraph 1 letter a) of Legislative Decree 231/01", i.e. in relation to the offence of environmental pollution referred to in article 452 bis of the Criminal Code.

Unareti S.p.A.

2i Rete Gas S.r.l./Unareti S.p.A. - tender gas distribution service Atem Milano 1

In 2018, 2iRete Gas S.r.l. notified to the Milan Regional Administrative Court an appeal against the award of the gas distribution service ordered by the Municipality of Milan in favour of Unareti S.p.A., requesting the cautionary suspension of the award provision 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. The Council of State rejected the requests for investigation. The defects of the award could be classified under three categories of topics: reasons for excluding Unareti, reasons for re-establishing the commission and reasons for redefining the ranking. Within the terms, Unareti notified an incidental 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 on the merits, subsequently to November 21, 2019, the Regional Administrative Court issued Sentence no. 2598 on December 5, 2019 in which it upheld three grounds of appeal by 2i Rete Gas and one ground for the cross-appeal filed by Unareti ordering the annulment of the award unless the Administration ordered it.

2i Rete Gas S.r.l. notified the sentence on January 17, 2020 and all parties notified the appeal to the Council of State; 2i Rete Gas S.r.l. and Unareti S.p.A. appealed the grounds absorbed and not examined at first instance. The Municipality and 2i Rete Gas S.r.l. also requested cautionary suspension of the sentence, which was then waived; therefore, following the Council Chamber set for April 2, all three appeals were discussed at the only hearing on the merits set for July 9, 2020.
On September 7, 2020, the Council of State filed Sentence no. 5370, which upheld the appeal by Unareti, thus confirming the legitimacy of the award of the tender to Unareti. The Council of State, reforming the first instance ruling, also found that the reliance on the requirements of 2iRG S.p.A. in favour of 2iRG complied with the law, with the result that the first instance ruling was erroneous insofar as it excluded 2iRG from the tender. The Council of State also examined and ruled on the rejection or inadmissibility of all the other grounds of appeal of 2iRG and Unareti at first instance.

On February 18, 2021, 2i Rete Gas S.r.l. filed an appeal with the Supreme Court pursuant to article 111 of the Italian Constitution, article 362, paragraph 1 of the Italian Code of Criminal Procedure and Article 110 of the Italian Code of Civil Procedure to ask the Supreme Court, which will have to decide in Joint Sections, to ascertain the lack of jurisdiction of the Council of State when it issued Sentence no. 5370 on September 7, 2020. The Company and the Municipality of Milan have entered an appearance by lodging a counter-appeal. The hearing was held on May 24, 2022 and the sentence is still pending.
On December 16, 2021, Unareti and the Municipality of Milan signed the service agreement, with ATEM management to begin on March 1, 2022.

ACSM-AGAM S.p.A.

ACSM-AGAM S.p.A. and Acsm Agam Ambiente S.r.l.: lawsuit for damages against the Municipality of Varese regarding the municipal sanitation concession

In 2020, ACSM-AGAM S.r.l. and Acsm Agam Ambiente S.p.A. filed a lawsuit with the Special Business Court of Milan seeking a declaration of contractual and non-contractual non-fulfilment by the Municipality of Varese, with a consequent order for damages. The Municipality of Varese caused direct damage to the assets of the ACSM-AGAM Group by ordering the early termination of the service contract signed with Acsm Agam Ambiente. In fact, Acsm Agam Ambiente reduced the income flows related to the contract and incurred unforeseen and otherwise avoidable charges for the transitional continuation of the contract at more onerous conditions and ACSM-AGAM S.p.A. suffered a significant reduction in the value of the subsidiary's shareholding, despite and after the signing of the Framework Agreement that characterized the extraordinary transaction in 2018. After the order of the Court of Milan of January 20, 2022 declaring the lack of jurisdiction of the Court of Milan and the jurisdiction of the ordinary Court of Varese, the Companies resumed the proceedings before the Court of Varese.

AEB S.p.A.

Judgments on the integration transaction between A2A and AEB S.p.A.

With two initial appeals with cautionary request (R.G. 971/2020 submitted by CST Centro Servizi Termici (Thermal Service Center), DE.CA.BO. S.r.l. and Lombardy Regional Councillor Marco Fumagalli; R.G. 983/2020 submitted by Seregno Municipal Councillor Tiziano Mariani) filed with the Milan Regional Administrative Court, the resolution of the Seregno Municipal Council approving the merger between A2A and AEB was challenged; this resolution was suspended by Ordinances no. 868/2020 and no. 869/2020 by which the Regional Administrative Court accepted the precautionary requests submitted by the appellants and set the merit hearing for December 2, 2020.
On December 2, 2020, the third appeal was also discussed (R.G. 1095/2020 submitted by Idrotech and Eco Term S.r.l.s.).
A2A, the Municipality of Seregno and AEB have filed separate cautionary appeals before the Council of State to obtain the annulment and/or reform of the ordinances. The Council of State, at the outcome of the Council Chamber set for August 27, 2020, on August 28, 2020, upheld the appeals *"due to the clear lack of legitimacy and interest of the claimants at first instance and the consequent clear lack of the assumption of direct and immediate harm involving the same claimants from the contested deeds, in view of the nature of the corporate change and the inapplicability of the transaction subject to the appeal at first instance"*.
The resolution of the Municipality of Seregno, therefore, also took effect for the purposes of the corporate deeds that were in fact carried out. The company has evaluated the content of the Council of State's ordinances and the appeals and, also in light of the position of the appointed lawyers, performed the company transaction, considering the prevalence of the principles of legal certainty and market confidence given the performance of corporate acts.
On February 15, 2021, the Milan Regional Administrative Court published the judgments upholding the three appeals filed respectively by (i) CST Centro Servizi Termici di Calzolari Maurizio, Depositi Carboni Bovisa DE.CA.BO. S.r.l. and Marco Fumagalli (Councillor Lombardy Region) Sentence no. 412/21, (ii) Tiziano Mariani (Councillor Municipality of Seregno) Sentence no. 413/21 and (iii) Idrotech di Corno Irwin Maria Sentence no. 414/21.
In order to enforce Sentence 413/21, Municipal Councillor Mariani has also appealed to the Milan TAR for a judgement of compliance. On March 2, 2021, the Regional Administrative Court, at the claimant's request, issued a precautionary decree in which it denied single-court precautionary measures, but set a Council Chamber for March 24, 2021. Following the hearing on the merits on April 28, 2021, with Sentence no. 1248 of May 20, 2021, the Regional Administrative Court rejected the appeal for compliance, on the grounds that delivery by AEB of the due diligence of the transaction to Councillor Mariani constituted full compliance with Sentence 413/21. In the same sentence, the Lombardy Regional Administrative Court (TAR) also specified that *"not included in the compliance effect"* of the ruling for which compliance was requested (i.e. of Sentence no. 413/21) are *"the validity and effectiveness of the corporate deeds adopted as a consequence of the contested resolution, for which the administrative judge does not have jurisdiction (Civil Cassation, Joint Sections, Ordinance January 23, 2014, no. 1237; Sentence December 30, 2011, no. 30167; Council of State, Plenary Meeting, Sentence June 3, 2011 , no. 10)"*, thus confirming that the acceptance of the appeal proposed by the Director Mariani did not produce immediate effects on the company deeds that have occurred in the meantime.

AEB and the Municipality of Seregno have filed an appeal with the Council of State requesting a suspension of the effects of Sentence 413/21. On March 22, 2021, the Council of State denied the suspension because it found that the ruling did not jeopardize the stability of the corporate integration transaction and, given the peculiarity and delicacy of the matter, scheduled a merit hearing as early as July 1, 2021. A similar appeal has been filed - without a request for precautionary measures - by A2A.

The sentences 412 and 414 qualify the business combination as a transformation of AEB S.p.A. into a mixed company carried out in alleged violation of art. 17 Legislative Decree 175/16 and art. 3 Legislative Decree 50/16 and consider that the conditions do not exist for exemption from the procedures dictated by art. 10 of the same Legislative Decree no. 175/16. A2A, as well as AEB and the Municipality of Seregno, has notified appeal to the Council of State to request the annulment of the sentences. The public hearing to discuss the merits of the appeals was held on July 1, 2021, with the sole exception of the appeal notified by A2A against Sentence 413/21.
On September 1, 2021, the State Board filed Sentence 6143 dismissing the appeals served by the City and AEB against Sentence 413. A2A was also notified of the sentence on September 2.
On September 1, 2021, the Council of State also filed Sentence 6142 by which it rejected the appeals notified by the Municipality, AEB and A2A against Sentence 414 of February 15, 2021 (which had upheld the appeals notified by Idrotech and Ecoterm); and on September 6, 2021, the Council of State also filed Sentence 6213 by which it rejected the appeals notified by the Municipality, AEB and A2A against Sentence 412 of February 15, 2021 (which had upheld the appeal notified by Regional Councillor Fumagalli, CST and DE.CA.BO.).
Also in these two cases, therefore, the annulment of the resolution passed by the Seregno City Council on April 20,2020 with number 17 was confirmed.
Moreover, on September 3, the legal counsel of the appellants, Idrotech and Eco Term, asked the Municipality, AEB and A2A to provide compensation for the damages suffered by the companies as a result of the illegitimate transaction carried out, announcing possible legal action in the event of inactivity. The Municipality replied, fulfilling its obligations to respond to the companies.
A2A and AEB have appealed the sentences both before the Council of State by way of revocation and appeal by cassation.
In its appeals for revocation, A2A claimed that the Council of State had made a factual error in two respects: on the one hand, in that it mistakenly deemed the companies claiming at first instance to be "operators in the sector" and, as such, legitimated to act against the merger between A2A and AEB; on the other, in that it mistakenly qualified the merger as a public-private partnership aimed at obtaining public assignments, without appreciating the fact that it was objectively unsuitable.
In its appeals to the Supreme Court, A2A claimed both absolute lack of jurisdiction on the part of the administrative judge (since it decided on appeals lodged by parties without legitimacy) and excess of jurisdictional power due to exceeding the limits of administrative jurisdiction (since the Council of State's pronouncements invaded the sphere of regulatory production reserved for the legislator, introducing an obligation to tender in corporate transactions with public companies that is not provided for by the law).
The disputes were settled out of court with the original plaintiff companies with the settlement of the compensation claims made, without any acknowledgement of liability, and the consequent waiver by them of the appeals filed in first instance, the Regional Administrative Court rulings and their effects, and the Council of State rulings and their effects, and the waiver by A2A and AEB of the appeals for revocation and cassation.
As a result of the opposition filed by BEA, in the revocation proceedings in connection with these waivers, the Council of State set the hearing for discussion for October 6, 2022, whereas the Court of Cassation has not yet set a hearing.

Monza Public Prosecutor's Office - Criminal Proceeding no. 1931/2021 R.G.N.R.

On July 5, 2021, officers and agents of the Guardia di Finanza of Seregno showed up at the headquarters of AEB S.p.A. in Seregno to execute "personal and local search orders" and "request for delivery - local search order". The proceedings, which in the initial phase were against unknown persons, originated from two complaints submitted to the Prosecutor's Office on November 25, 2019 and on February 10, 2020 by Tiziano Mariani, Municipal Councillor of the Municipality of Seregno, who also notified an appeal to the TAR in the terms referred to above.
The "personal and local search decree" concerns the Chair of the Board of Directors of AEB S.p.A and is also valid as "information of guarantee" pursuant to art. 369 of the Italian Code of Criminal Procedure for the person under investigation. On the basis of this decree, the Chair of AEB is being investigated, in conjunction with others (art. 110 of the Criminal Code), who have not been named, for the offences referred to in art. 353 bis Criminal Code (disturbance of the freedom of the procedure for choosing a contractor), 319 Criminal Code (bribery for an act contrary to the duties of office), 321 Criminal Code (penalties for the briber), committed between "October 2019 and in present permanency."

At the same time, AEB was served with a "request for delivery and a local search decree" with which the Monza Public Prosecutor's Office ordered the acquisition of documentation concerning the transaction.

Subsequently, on September 24, 2021, the Finance Police of Seregno, at the request of the Monza Public Prosecutor's Office, appeared at the A2A Milan headquarters to serve, as part of Procedure no. 1931/2021 R.G.N.R. relating to the merger between the A2A and AEB Groups, a notice of non-repeatable technical checks on the IT supports already previously seized, with the appointment on October 8, 2021 of a consultant appointed by the Public Prosecutor's Office to make the forensic copy.

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The deed in question was notified to persons, other than the current directors of A2A S.p.A., who in A2A S.p.A., Unareti S.p.A. and A2A Illuminazione Pubblica S.r.l. had positions of responsibility, or considered such, for various reasons in the project in question and also contains information about the guarantee and the right of defense in relation to the investigation concerning the hypotheses of crime pursuant to articles 110 of the Italian Criminal Code (conspiracy), 353 bis Criminal Code (disturbance of the freedom of the procedure for choosing a contractor), 319 Criminal Code (bribery for an act contrary to the duties of office), 321 Criminal Code (penalties for the corruptor).

A2A Ambiente

Busto Arsizio Public Prosecutor's Office - Criminal Proceeding no. 9079/2021 R.G.N.R. (formerly no. 24/2017 R.G.N.R.)

On 02.18.2021, the Carabinieri - forestry department showed up at the Gerenzano landfill site in execution of investigation activities delegated by the Public Prosecutor's Office of Busto Arsizio within the framework of criminal proceeding no. 24/2017 R.G.N.R. Form 44 (i.e. against unknown persons), to acquire documentation on the plant, then notifying the person in charge of the plant and the head of A2A Ambiente's "Impianti Lombardia" organizational structure of the proceedings for the alleged offences under articles 81 paragraph 2 (continuation), 110 (conspiracy), 452 quater (environmental disaster), 452 septies (obstruction of control) of the Italian Criminal Code.

Gerenzano is a former quarry, later converted into a landfill, located in the territory of the municipality of the same name, which owns it, with an area of about 80 hectares. It is divided into two lots Gerenzano 1 and Gerenzano 2.

Gerenzano 1 is the original unit, dating back to the mid-1960s when waste disposal activities began. At the end of the 1970s, 200 municipalities, including Milan, delivered waste there. In July 1980, the Municipality of Gerenzano and the municipal company of the Municipality of Milan (then AMNU) signed an agreement whereby AMNU exclusively took over the management of the landfill of waste from the Municipality of Milan and 69 other municipalities.

AMNU then built a new controlled landfill and carried out environmental remediation and restoration works (with regional contributions).

The cultivation of Gerenzano 1 by AMNU, later to become AMSA, continued until its final closure in 1988. A new area was then identified where Gerenzano 2 was built and managed by AMSA from 1989 to 1991, the year in which conferring ceased.

In the context of the obligations taken on with the management of the landfill for environmental recovery, AMSA carried out a series of interventions including the impermeable cover, the biogas collection and combustion plant, weir wells and groundwater purging, the treatment plant for emitted groundwater, leachate collection works, a leachate purifier, and environmental recovery interventions.

The operation of the plants in application of the authorization measures will have to continue until the waste is mineralized, as far as biogas is concerned, and until the water table is back in good condition, as far as purging wells are concerned.

As regards the latter activity, AMSA took responsibility for a situation of degradation and pollution that existed prior to its taking over the management of the area, in relation to which it had no responsibility.

In 2013, as part of the reorganization of the A2A Group's environmental chain, A2A Ambiente took over from AMSA in the management of the Gerenzano landfill and in the service contract still in force as a result of technical extensions with the Municipality of Milan for the post-mortem management service of the landfill.

On July 1, 2022, the conclusion of the preliminary investigations pursuant to article 415-bis of the Code of Criminal Procedure was notified.

In the notice, the person in charge (at the time of the contested facts, i.e. from May 29, 2015 to November 13, 2020) of the Gerenzano Hub and the person in charge of the "Lombardy Plants" structure (the latter in current permanence) are charged with having caused an environmental disaster in the management of the plant (article 452 quater of the Criminal Code) by means of an unlawful dysfunction of the purification plant of the groundwater emitted by means of a hydraulic barrier so as not to carry out the containment of the contamination of the water table and by means of an unlawful dysfunction of the purification plant for the treatment of the polluting fluids before their discharge into the Bozzente stream and of having obstructed and eluded the environmental supervision and control activities by ARPA (article 452 septies Criminal Code from May 29, 2015 permanently for the person in charge of the facility and from November 21, 2016 for the person in charge of the Hub).

No charges against the company under Legislative Decree 231/01 appear in the notice of conclusion of investigations. The notice of setting the preliminary hearing is pending.

* * *

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 and, in August 2017, served notices of assessment for IRES, IRAP and VAT for the years 2013 and 2014. The company has proposed a timely appeal against all the deeds notified. The Provincial Tax Commission of Chieti and the Regional Tax Commission of Pescara issued unfavourable rulings for IRES and IRAP. The appeals against the VAT assessment notices for the years 2011-2014 were rejected by the Provincial Tax Commission of Chieti and upheld by the Regional Tax Commission of Pescara. On May 8, 2019, the Company filed an appeal with the Supreme Court for IRES 2011 and 2012. In February 2020, the Company filed an appeal with the Supreme Court for IRES 2013 and 2014 and IRAP 2011-2014 and a counter-appeal with the Supreme Court for VAT 2011 and 2012. On May 5, 2020, the Company filed a counter-appeal with the Supreme Court for 2013-2014 VAT. 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. On February 21, 2020, the Office filed a counter-appeal and a cross-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 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.
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 2001, 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 9, 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 2, 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 the appeal was upheld and the judgement was adjourned to the Regional Technical Committee (CTR). On December 23, 2019, the Company filed an appeal for reinstatement in CTR and an appeal for revocation with the Supreme Court. For 2003 the appeal made by the Tax Revenue Office was discussed on November 7, 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.
No provisions for risks have been recognized.

5
Notes to the Half-yearly financial report

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A2A Ciclo Idrico S.p.A. – IMU assessment notices of Municipality of Montichiari for the years 2013-2018

On December 4, 2019, the Municipality of Montichiari (BS) issued notices of assessment for IMU purposes for the years from 2013 to 2018 regarding the purification plant located in the territory of the same municipality. On January 29, 2020, the Company filed an appeal with the Provincial Tax Commission. A risk provision of 0.7 million euro has been recognized.

A2A Energia S.p.A. merging company of Linea Più S.p.A. - General IRES/IRAP/VAT audit for fiscal years 2013 and 2014

On September 17, 2019 the Lombardy Regional Department - Large Taxpayers Section - opened in respect of A2A Energia S.p.A. (merging company of Linea Più S.p.A.) a general audit for IRES, IRAP and VAT purposes for tax periods 2013 and 2014. This audit was completed on October 22, 2019. On December 24, 2019, the Lombardy Regional Department issued notices of assessment for IRES, ROBIN TAX, IRAP and VAT purposes for the tax periods verified. On July 24, 2020, the Company appealed against all the assessments to the Provincial Tax Commission. At the hearing on May 11, 2021, the Milan Provincial Tax Commission upheld the company's appeals. On September 24, 2021, the Office appealed, and on November 19, 2021, the Company filed a notice of counter-claim to the appeal. A risk provision of 10.3 million euro has been recognized.

A2A Ambiente S.p.A. - Tax audit on sulphur dioxide and nitrogen oxides SO2 NOx emissions for the 2014 and 2019 tax periods

On October 24, 2019, the Naples Customs Agency 2 - Excise Department for Audits and Controls - opened against A2A Ambiente S.p.A. an administrative technical audit of the Acerra waste-to-energy plant for the recovery of the tax on emissions of sulphur dioxide and nitrogen oxides for the years 2014-2019. The audit was completed on February 27, 2020. On April 24, 2020, the Company submitted its observations regarding the notice of assessment prepared by the inspectors. On December 11, 2020, the Naples Customs Agency served notice of payment and imposition of penalties for the years 2015-2019. In March 2021, the Company filed an appeal with the Naples Provincial Tax Commission. The company is assessing the action to be taken. A risk provision of 0.5 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 2022 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.

6

Attachments to the notes to the Half-yearly financial report

6.1 1. Statement of changes in tangible assets

Tangible assets millions of euro	RESIDUAL VALUE AT 12 31 2021	FIRST CONSOLIDATION	CHANGES DURING THE PERIOD	
			INVESTMENTS	CHANGES IN CATEGORY
Land	141	2	4	1
Buildings	544	5	6	2
Plant and machinery	3,908	135	94	53
Industrial and commercial equipment	55		6	
Other assets	132		16	3
Landfills	25			2
Construction in progress and advances	544		168	(61)
Leasehold improvements	124		10	
Right-of-use assets	115	13		
Total tangible assets	**5,588**	**155**	**304**	**-**

Tangible assets millions of euro	RESIDUAL VALUE AT 12 31 2020	FIRST CONSOLIDATION	CHANGES DURING THE PERIOD	
			INVESTMENTS	CHANGES IN CATEGORY
Land	127	15	1	
Buildings	597		5	7
Plant and machinery	3,788	142	81	27
Industrial and commercial equipment	50		5	
Other assets	122		8	7
Landfills	26			
Construction in progress and advances	226	34	149	(42)
Leasehold improvements	113	2	9	
Right-of-use assets	113	14		
Total tangible assets	**5,162**	**207**	**258**	**(1)**

CHANGES DURING THE PERIOD							RESIDUAL VALUE AT 06 30 2022
RECLASSIFICATIONS/ OTHER CHANGES		DISPOSALS/SALES		WRITE-DOWNS	AMORTIZATION	TOTAL CHANGES FOR THE PERIOD	
GROSS VALUE	ACCUMULATED AMORTIZATION	GROSS VALUE	ACCUMULATED AMORTIZATION				
(1)						4	147
26	(24)				(15)	(5)	544
231	(279)	(15)	14		(176)	(78)	3,965
6	(6)	(1)	1		(5)	1	56
16	(16)	(7)	7		(16)	3	135
(9)					(4)	(11)	14
(2)						105	649
					(11)	(1)	123
6	17				(15)	8	136
273	**(308)**	**(23)**	**22**	**-**	**(242)**	**26**	**5,769**

CHANGES DURING THE PERIOD							RESIDUAL VALUE AT 06 30 2021
RECLASSIFICATIONS/ OTHER CHANGES		DISPOSALS/SALES		WRITE-DOWNS	AMORTIZATION	TOTAL CHANGES FOR THE PERIOD	
GROSS VALUE	ACCUMULATED AMORTIZATION	GROSS VALUE	ACCUMULATED AMORTIZATION				
(1)						-	142
(16)	19				(16)	(1)	596
163	(177)	(46)	45		(165)	(72)	3,858
6	(8)				(5)	(2)	48
27	(25)	(5)	5		(16)	1	123
10	(13)				(2)	(5)	21
(1)						106	366
4	(4)				(9)	-	115
8	(4)				(13)	(9)	118
200	**(212)**	**(51)**	**50**	**-**	**(226)**	**18**	**5,387**

6.2 2. Statement of changes in intangible assets

Intangible assets millions of euro	RESIDUAL VALUE AT 12 31 2021	FIRST CONSOLIDATION	CHANGES DURING THE PERIOD	
			INVESTMENTS	CHANGES IN CATEGORY
Industrial patent and intellectual property rights	52		8	4
Concessions, licences, trademarks and similar rights	1,881	5	106	9
Goodwill	746	98		
Assets in progress	119	3	33	(17)
Other intangible assets	327	2	12	4
Total intangible assets	**3,125**	**108**	**159**	**-**

Intangible assets millions of euro	RESIDUAL VALUE AT 12 31 2020	FIRST CONSOLIDATION	CHANGES DURING THE PERIOD	
			INVESTMENTS	CHANGES IN CATEGORY
Industrial patent and intellectual property rights	40		7	4
Concessions, licences, trademarks and similar rights	1,876		94	6
Goodwill	426	65		
Assets in progress	74		46	(9)
Other intangible assets	321	19	8	
Total intangible assets	**2,737**	**84**	**155**	**1**

CHANGES DURING THE PERIOD							RESIDUAL VALUE AT 06 30 2022
RECLASSIFICATIONS/ OTHER CHANGES		DISPOSALS/SALES		WRITE-DOWNS	AMORTIZATION	TOTAL CHANGES FOR THE PERIOD	
GROSS VALUE	ACCUMULATED AMORTIZATION	GROSS VALUE	ACCUMULATED AMORTIZATION				
(1)					(13)	(2)	50
241	(244)	(4)	3		(76)	35	1,921
10	(10)					-	844
						16	138
(8)	(5)				(20)	(17)	312
242	**(259)**	**(4)**	**3**	**-**	**(109)**	**32**	**3,265**

CHANGES DURING THE PERIOD							RESIDUAL VALUE AT 06 30 2021
RECLASSIFICATIONS/ OTHER CHANGES		DISPOSALS/SALES		WRITE-DOWNS	AMORTIZATION	TOTAL CHANGES FOR THE PERIOD	
GROSS VALUE	ACCUMULATED AMORTIZATION	GROSS VALUE	ACCUMULATED AMORTIZATION				
					(11)	-	40
134	(128)	(6)	5		(71)	34	1,910
8	(20)					(12)	479
(2)						35	109
44	(4)				(15)	33	373
184	**(152)**	**(6)**	**5**	**-**	**(97)**	**90**	**2,911**

6.3 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 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
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
Proaris S.r.l. in liquidation	Milan	Euro	1,875
Azienda Servizi Valtrompia S.p.A.	Gardone Val Trompia (BS)	Euro	8,939
Yada Energia S.r.l.	Milan	Euro	2,400
LaboRAEE 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	10,000
Amsa S.p.A.	Milan	Euro	10,000
SED S.r.l.	Robassomero (TO)	Euro	1,250
TecnoA S.r.l.	Brescia	Euro	3,000
Bergamo Servizi S.r.l.	Brescia	Euro	10
A2A Recycling S.r.l.	Novate Milanese (MI)	Euro	5,000
A2A Integrambiente S.r.l.	Brescia	Euro	10
Electrometal S.r.l	Castegnato (BS)	Euro	200
Areslab S.r.l.	Brescia	Euro	10

% OF SHAREHOLDING CONSOLIDATED BY GROUP AT 06 30 2022	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
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
89.00%	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
60.00%	60.00%	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
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
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
100.00%	100.00%	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
90.00%	90.00%	A2A Ambiente S.p.A.	Line-by-line consolidation
100.00%	100.00%	A2A Ambiente S.p.A.	Line-by-line consolidation

Company name	REGISTERED OFFICE	CURRENCY	SHARE CAPITAL (THOUSANDS)
A2A Security S.c.p.a.	Milan	Euro	52
BIOENERGIA GUALDO S.r.l.	Gualdo Tadino (PG)	Euro	10
WALDUM TADINUM ENERGIA S.r.l.	Gualdo Tadino (PG)	Euro	10
ENERGIA ANAGNI S.r.l.	Anagni (FR)	Euro	10
BIOENERGIA ROCCASECCA S.r.l.	San Vito (FR)	Euro	10
LumEnergia S.p.A.	Villa Carcina (BS)	Euro	300
A2A Energy Solutions S.r.l.	Milan	Euro	4,000
ES Energy S.r.l.	Jesi (AN)	Euro	10
A2A Rinnovabili S.p.A.	Milan	Euro	50
INTHE 2 S.r.l.	Milan	Euro	210
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
Trovosix S.r.l.	Milan	Euro	20
Des Energia Tredici S.r.l.	Milan	Euro	10
CS Solar2 S.r.l.	Milan	Euro	15
Flabrum S.r.l.	Milan	Euro	100
Solar italy V S.r.l.	Milan	Euro	10
Rossini Energia S.r.l.	Milan	Euro	-
Verdi Energia S.r.l.	Milan	Euro	-
Vivaldi Energia S.r.l.	Milan	Euro	-
Pergolesi Energia S.r.l.	Milan	Euro	-
Cilea Energia S.r.l.	Milan	Euro	-
Tosti Energia S.r.l.	Milan	Euro	-
Albinoni Energia S.r.l.	Milan	Euro	-
Bellini Energia S.r.l.	Milan	Euro	-
Corelli Energia S.r.l.	Milan	Euro	-
Leoncavallo Energia S.r.l.	Milan	Euro	-

% OF SHAREHOLDING CONSOLIDATED BY GROUP AT 06 30 2022	SHAREHOLDING %	SHAREHOLDER	VALUATION METHOD
99.81%	99.81%	A2A S.p.A. (45.96%) Unareti S.p.A. (18.37%) A2A Ciclo Idrico S.p.A. (10.49%) Amsa S.p.A. (9.14%) A2A gencogas S.p.A. (3.95%) A2A Ambiente S.p.A. (3.95%) A2A Calore & Servizi S.r.l. (2.60%) A2A Energiefuture S.p.A. (1.93%) A2A Energia S.p.A. (0.19%) A2A Energy Solutions S.r.l. (0.19%) Linea Green S.p.A. (0.19%) Linea Gestioni S.r.l. (0.19%) LD Reti S.r.l. (0.19%) Linea Ambiente S.r.l. (0.19%) A2A Recycling S.r.l. (0.19%) A2A Smart City S.p.A. (0.19%) ACSM-AGAM S.p.A. (0.19%) Aprica S.p.A. (0.19%) Lomellina Energia S.r.l. (0.19%) Retragas S.r.l. (0.19%) Lereti S.p.A. (0.19%) Azienda Servizi Valtrompia S.p.A. (0.19%) Acel Energie S.r.l. (0.19%) Varese Risorse S.p.A. (0.19%) Reti Valtellina Valchiavenna S.r.l. (0.19%) AEVV Farmacie S.r.l. (0.19%)	Line-by-line consolidation
80.00%	80.00%	A2A Ambiente S.p.A.	Line-by-line consolidation
90.00%	90.00%	A2A Ambiente S.p.A.	Line-by-line consolidation
55.00%	55.00%	A2A Ambiente S.p.A.	Line-by-line consolidation
55.00%	100.00%	Energia Anagni S.r.l.	Line-by-line consolidation
94.72%	94.72%	A2A Energia S.p.A.	Line-by-line consolidation
100.00%	100.00%	A2A S.p.A.	Line-by-line consolidation
50.00%	50.00%	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 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

Company name	REGISTERED OFFICE	CURRENCY	SHARE CAPITAL (THOUSANDS)
Monteverdi Energia S.r.l.	Milan	Euro	-
Tartini Energia S.r.l.	Milan	Euro	-
Trovaioli Energia S.r.l.	Milan	Euro	-
Paganini Energia S.r.l.	Milan	Euro	-
Puccini Energia S.r.l.	Milan	Euro	-
Gash 1 S.r.l.	Milan	Euro	10
Gash 2 S.r.l.	Milan	Euro	10
Volta Green Energy S.r.l.	Rovereto (TN)	Euro	10
VGE 01 S.r.l.	Rovereto (TN)	Euro	10
VGE 02 S.r.l.	Rovereto (TN)	Euro	10
VGE 03 S.r.l.	Rovereto (TN)	Euro	10
VGE 04 S.r.l.	Rovereto (TN)	Euro	10
VGE 06 S.r.l.	Rovereto (TN)	Euro	10
R2R S.r.l.	Rovereto (TN)	Euro	10
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
Fragea S.r.l. società agricola	Sesto ed Uniti (CR)	Euro	20,000
AGRIPOWER S.R.L.	Milan	Euro	500
B-HOLDING S.R.L.	Milan	Euro	50
CASTEL RITALDI BIOENERGIA SOCIETÀ AGRICOLA S.R.L.	Milan	Euro	50
DONNA RICCA BIOENERGIA S.R.L. SOCIETÀ AGRICOLA	Milan	Euro	10
GIULIANA BIOENERGIA SOCIETÀ AGRICOLA A.R.L.	Milan	Euro	65
IUMAGAS BIOENERGY SOCIETÀ AGRICOLA A.R.L.	Milan	Euro	50
LA MARROCCA SOCIETÀ AGRICOLA A.R.L.	Milan	Euro	10
LI.F.E. S.R.L.	Milan	Euro	10
MARSICA AGROENERGIA S.R.L.	Milan	Euro	60
PONZANO BIOENERGIA SOCIETÀ AGRICOLA A.R.L.	Milan	Euro	40
PRATI BIOENERGIA SOCIETÀ AGRICOLA A.R.L.	Bologna	Euro	40
ROBERTA BIOENERGIA S.R.L.	Milan	Euro	10
SAN QUIRICO BIOENERGIA SOCIETÀ AGRICOLA A.R.L.	Milan	Euro	160
SCALENGHE BIOGAS SOCIETÀ AGRICOLA S.R.L.	Milan	Euro	10
STROVINA BIOENERGIA SOCIETÀ AGRICOLA A.R.L.	Milan	Euro	40
SUGAR ENERGIA SOCIETÀ AGRICOLA A.R.L.	Milan	Euro	100
TORRE ZUINA SOCIETÀ AGRICOLA A.R.L.	Milan	Euro	10
TULA BIOENERGIA SOCIETÀ AGRICOLA A.R.L.	Milan	Euro	40
VITTORIA BIOENERGIA S.R.L.	Milan	Euro	50
CONSORZIO UMBRIA BIOENERGIA	Zola Predosa (BO)	Euro	1
Lomellina Energia S.r.l.	Parona (PV)	Euro	358
Asm Energia S.p.A.	Vigevano (PV)	Euro	2,511
ACSM-AGAM S.p.A.	Monza	Euro	197,344
Lereti S.p.A.	Como	Euro	86,450
ComoCalor S.p.A.	Como	Euro	3,516
Reti Valtellina Valchiavenna S.r.l.	Sondrio	Euro	2,000

% OF SHAREHOLDING CONSOLIDATED BY GROUP AT 06 30 2022	SHAREHOLDING %	SHAREHOLDER	VALUATION METHOD
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
70.00%	70.00%	Volta Green Energy S.r.l.	Line-by-line consolidation
100.00%	100.00%	Volta Green Energy S.r.l.	Line-by-line consolidation
100.00%	100.00%	Volta Green Energy S.r.l.	Line-by-line consolidation
100.00%	100.00%	Volta Green Energy S.r.l.	Line-by-line consolidation
100.00%	100.00%	Volta Green Energy S.r.l.	Line-by-line consolidation
60.00%	60.00%	A2A Rinnovabili S.p.A.	Line-by-line consolidation
100.00%	100.00%	A2A S.p.A.	Line-by-line consolidation
95.60%	95.60%	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%	AGRIPOWER S.R.L.	Line-by-line consolidation
100.00%	100.00%	AGRIPOWER S.R.L.	Line-by-line consolidation
51.00%	51.00%	AGRIPOWER S.R.L.	Line-by-line consolidation
100.00%	100.00%	B-HOLDING S.R.L.	Line-by-line consolidation
51.00%	51.00%	AGRIPOWER S.R.L.	Line-by-line consolidation
100.00%	100.00%	AGRIPOWER S.R.L.	Line-by-line consolidation
100.00%	100.00%	AGRIPOWER S.R.L.	Line-by-line consolidation
54.02%	54.02%	LA MARROCCA SOCIETÀ AGRICOLA A.R.L.	Line-by-line consolidation
51.00%	51.00%	B-HOLDING S.R.L.	Line-by-line consolidation
51.00%	51.00%	B-HOLDING S.R.L.	Line-by-line consolidation
51.00%	51.00%	AGRIPOWER S.R.L.	Line-by-line consolidation
93.75%	93.75%	AGRIPOWER S.R.L.	Line-by-line consolidation
82.00%	82.00%	B-HOLDING S.R.L.	Line-by-line consolidation
51.00%	51.00%	AGRIPOWER S.R.L.	Line-by-line consolidation
100.00%	100.00%	AGRIPOWER S.R.L.	Line-by-line consolidation
51.00%	51.00%	AGRIPOWER S.R.L.	Line-by-line consolidation
51.00%	51.00%	B-HOLDING S.R.L.	Line-by-line consolidation
75.00%	75.00%	B-HOLDING S.R.L.	Line-by-line consolidation
90.92%	90.92%	CASTEL RITALDI BIOENERGIA SOCIETÀ AGRICOLA S.R.L.	Line-by-line consolidation
100.00%	100.00%	A2A Ambiente S.p.A. (64.30%) Linea Ambiente S.r.l. (35.70%)	Line-by-line consolidation
45.00%	45.00%	A2A Energia S.p.A.	Line-by-line consolidation
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

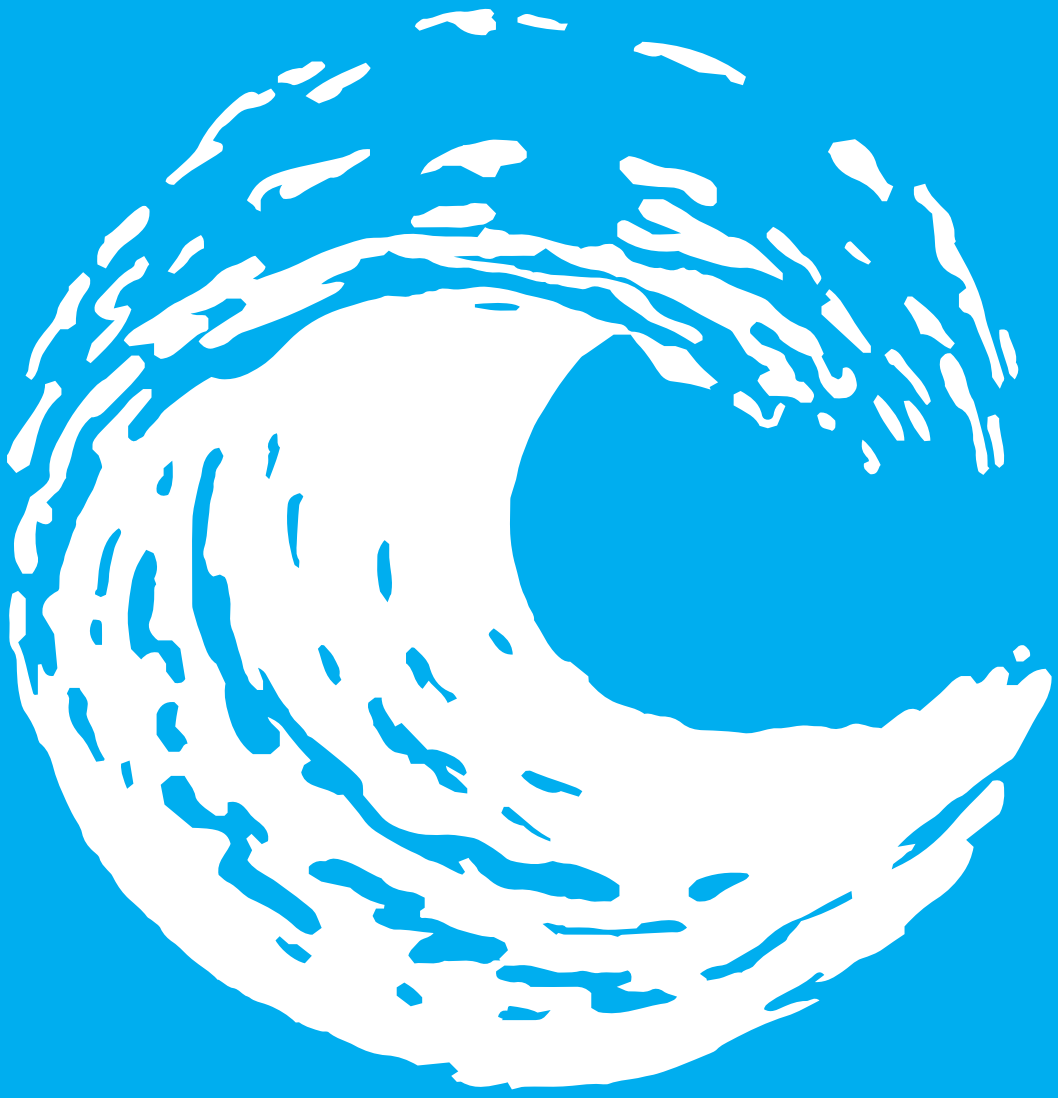
Company name	REGISTERED OFFICE	CURRENCY	SHARE CAPITAL (THOUSANDS)
Acel Energie S.r.l.	Lecco	Euro	17,100
Acsm Agam Ambiente S.r.l.	Varese	Euro	4,500
Varese Risorse S.p.A.	Monza	Euro	6,000
AEVV Impianti S.r.l.	Monza	Euro	21,800
AEVV Farmacie S.r.l.	Sondrio	Euro	100
A2A E-MOBILITY S.r.l.	Milan	Euro	1,000
Ambiente Energia Brianza S.p.A.	Seregno (MB)	Euro	119,496
A2A Illuminazione Pubblica S.r.l.	Brescia	Euro	19,000
Gelsia S.r.l.	Seregno (MB)	Euro	20,345
RetiPiù S.r.l.	Desio (MB)	Euro	110,000
Gelsia Ambiente S.r.l.	Desio (MB)	Euro	4,671
4NEW S.r.l.	Milan	Euro	811
4NEW MONTE GRIGHINE S.r.l.	Milan	Euro	10,000
CERVETERI ENERGIA S.r.l.	Milan	Euro	21
DE - STERN 12 S.r.l.	Milan	Euro	50
STCS S.r.l.	Milan	Euro	10
LA CASTILLEJA ENERGIA SL	Madrid (ES)	Euro	4
SISTEMES ENERGETICS CONESA I SOCIEDAD LIMITADA	Madrid (ES)	Euro	3
GLOBAL ONEGA SL	Madrid (ES)	Euro	10
RESPETO AL MEDIO AMBIENTE SL	Madrid (ES)	Euro	3
3 New & Partners S.r.l.	Milan	Euro	25,000
Mimiani wind S.r.l.	Milan	Euro	100

% OF SHAREHOLDING CONSOLIDATED BY GROUP AT 06 30 2022	SHAREHOLDING %	SHAREHOLDER	VALUATION METHOD
99.75%	99.75%	ACSM-AGAM S.p.A. (99.75%)	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%	A2A S.p.A.	Line-by-line consolidation
33.52%	33.52%	A2A S.p.A.	Line-by-line consolidation
100.00%	100.00%	Ambiente Energia Brianza S.p.A.	Line-by-line consolidation
100.00%	100.00%	Ambiente Energia Brianza S.p.A.	Line-by-line consolidation
100.00%	100.00%	Ambiente Energia Brianza S.p.A.	Line-by-line consolidation
100.00%	100.00%	Ambiente Energia Brianza S.p.A. (70%) A2A Integrambiente S.r.l. (30%)	Line-by-line consolidation
100.00%	100.00%	A2A Rinnovabili S.p.A.	Line-by-line consolidation
100.00%	100.00%	4NEW S.r.l.	Line-by-line consolidation
100.00%	100.00%	4NEW S.r.l.	Line-by-line consolidation
100.00%	100.00%	4NEW S.r.l.	Line-by-line consolidation
100.00%	100.00%	4NEW S.r.l.	Line-by-line consolidation
100.00%	100.00%	GLOBAL ONEGA SL	Line-by-line consolidation
100.00%	100.00%	RESPETO AL MEDIO AMBIENTE SL (50%) GLOBAL ONEGA SL (50%)	Line-by-line consolidation
100.00%	100.00%	4NEW S.r.l.	Line-by-line consolidation
100.00%	100.00%	4NEW S.r.l.	Line-by-line consolidation
100.00%	100.00%	A2A Rinnovabili S.p.A.	Line-by-line consolidation
100.00%	100.00%	3 New & Partners S.r.l.	Line-by-line consolidation

6.4 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
Metamer S.r.l.	San Salvo (CH)	Euro	650
NETCITY S.r.l.	Pescara	Euro	20
SET S.r.l.	Toscolano Maderno (BS)	Euro	104
Messina in Luce S.c.a r.l.	Monza	Euro	20
Serio Energia S.r.l.	Concordia sulla Secchia (MO)	Euro	1,000
Visano Soc. Trattamento Reflui S.c.a.r.l.	Brescia	Euro	25
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
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
Fratelli Omini S.p.A.	Novate Milanese (MI)	Euro	260
ASM Codogno S.r.l.	Codogno (LO)	Euro	1,898
Prealpi Servizi S.r.l.	Varese	Euro	5,451
Consul System S.p.A.	Ascoli Piceno	Euro	2,000
Saxa Gres S.p.A.	Anagni (FR)	Euro	3,100
Società Agricola Mattioli Energia S.r.l.	Finale Emilia (MO)	Euro	20
Daunia Calvello S.r.l.	Rovereto (TN)	Euro	100
Daunia Serracapriola S.r.l.	Rovereto (TN)	Euro	2,000
Daunia Wind S.r.l.	Rome	Euro	6,025
Acinque Energy Greenway S.r.l.	Monza	Euro	8,464
Total shareholdings			

SHAREHOLDING %	SHAREHOLDER	CARRYING AMOUNT AT 06 30 2022 (THOUSANDS)	VALUATION METHOD
50.00%	A2A Alfa S.r.l. in liquidation	-	Equity
50.00%	A2A gencogas S.p.A.	-	Equity
50.00%	A2A Energia S.p.A.	2,683	Equity
49.00%	A2A Energia S.p.A.	759	Equity
49.00%	A2A S.p.A.	996	Equity
70.00%	Varese Risorse S.p.A. (55%) A2A Illuminazione Pubblica S.r.l. (15%)	11	Equity
40.00%	A2A S.p.A.	759	Equity
40.00%	A2A S.p.A.	10	Equity
52.00%	A2A Calore & Servizi S.r.l.	124	Equity
32.90%	A2A Smart City S.p.A.	91	Equity
26.00%	A2A Energy Solution S.r.l.	6,571	Equity
40.00%	Aprica S.p.A.	2,992	Equity
50.00%	A2A Ambiente S.p.A.	67	Equity
25.00%	A2A Ambiente S.p.A.	351	Equity
30.00%	A2A Ambiente S.p.A.	5,661	Equity
49.00%	Linea Gestioni S.r.l.	3,626	Equity
12.47%	ACSM-AGAM S.p.A.	-	Equity
49.00%	A2A Energy Solution S.r.l.	7,279	Equity
27.71%	A2A Ambiente S.p.A.	-	Equity
20.00%	Agripower S.r.l.	475	Equity
74.50%	A2A Rinnovabili S.p.A. (49%) Daunia Wind S.r.l. (25.5%)	17,690	Equity
65.00%	A2A Rinnovabili S.p.A. (30%) Daunia Wind S.r.l. (35%)	23,268	Equity
50.00%	3 New & Partners S.r.l.	195,008	Equity
70.00%	Varese Risorse S.p.A.	-	Equity
		268,421	



6.5 5. List of holdings in other companies

Company name	SHAREHOLDING %	SHAREHOLDER	CARRYING AMOUNT AT 06 30 2022 (THOUSANDS)
Immobiliare-Fiera di Brescia S.p.A.	0.90%	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.	
L.E.A.P. S.c.a.r.l.	8.29%	A2A S.p.A.	
Guglionesi Ambiente S.c.a.r.l.	1.01%	A2A Ambiente S.p.A.	
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.	11.25%	A2A Smart City S.p.A.	
DI.T.N.E. S.c.a.r.l.	1.73%	A2A S.p.A.	
E.M.I.T. S.r.l. in liquidation	10.00%	A2A S.p.A.	
COMIECO	6.29%	A2A Recycling S.r.l. (2.13%) A2A Ambiente S.p.A. (4.16%)	
CONAPI S.c.a.r.l.	20.00%	A2A Recycling S.r.l.	
Blugas Infrastrutture S.r.l.	27.51%	A2A S.p.A.	
Casalasca Servizi S.p.A.	13.88%	Linea Gestioni S.r.l.	
Sinergie Italiane S.r.l. in liquidation	23.25%	A2A S.p.A. (15.70%) Ambiente Energia Brianza S.p.A. (7.55%)	
Confidi Toscana S.c.a.r.l.	n.s.	Linea Ambiente S.r.l.	
Credito Valtellinese	n.s.	Linea Ambiente S.r.l.	
Futura S.r.l.	1.00%	A2A Calore & Servizi S.r.l.	
MORINA S.r.l.	5.00%	Azienda Servizi Valtrompia S.p.A.	
Comodepur S.c.p.a. in liquidation	9.81%	ACSM - AGAM S.p.A.	
T.C.V.V.V. S.p.A.	0.25%	ACSM - AGAM S.p.A.	
CIAL-CONSORZIO IMBALLAGGIO ALLUMINIO	0.60%	A2A Ambiente S.p.A.	
COREVE	0.88%	A2A Ambiente S.p.A.	
COREPLA-CONSORZIO RECUPERO PLASTICA NAZIONALE	3.04%	A2A Ambiente S.p.A.	
RICREA-CONSORZIO NAZIONALE RICICLO E RECUPERO IMBALLAGGI ACCIAIO	n.s.	A2A Ambiente S.p.A.	
CIC-CONSORZIO ITALIANO COMPOSTATORI	n.s.	A2A Ambiente S.p.A.	
Total investments in other companies			**7,049**

7

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

Since the last quarter of 2021, there has been a very tense and volatile situation in the energy markets at EU and national level, which was exacerbated at the end of February following the Russian-Ukrainian armed conflict. To cope with this situation of exceptional instability and in order to contain the impact of price spikes on end customers, protecting in particular those in an uncomfortable situation, the Government intervened on several occasions with a series of urgent legislative initiatives (i.e. Law Decree) and with a total expenditure allocation of approximately 12.6 billion euro in the first half of 2022 alone.
Of interest to the A2A Group and in relation to the first half of 2022 are:

- Law No. 234 of December 30, 2021 (Budget Law 2022):
  - In order to contain the effects of energy price increases, the following was done for the first quarter of 2022:
    - cancel the general system charges for domestic and non-domestic users with power up to 16.5 kW and reduce the general system charge rates for the gas sector;
    - derogate from the provisions of Presidential Decree no. 633 of October 26, 1972, providing for VAT reduced to 5% for the consumption of methane gas for combustion for civil and industrial uses;
    - redetermine the benefits granted to economically disadvantaged and physically challenged customers, introducing a supplementary compensation (supplementary bonus - CCI) for the supply of natural gas and electricity to minimize increases in supply costs;
  - article 1(509) stipulated that in the event of default by domestic customers for bills issued between January 1 and April 30, 2022, sellers and operators of greater protection are obliged to offer bills in installments for a period of 10 months. ARERA Resolution 636/2021/R/com defined the rules for implementing the provision, stipulating that sellers are required to notify customers by means of a reminder or default letter. The A2A Group, also thanks to agreements signed with Consumer Associations, has made available forms of installment of the entire amount with the utmost flexibility, according to the specific needs of customers, without the application of interest and with the consequent suspension of detachment actions, even before the due date of the invoice, in addition to voluntarily extending this provision to district heating residential customers.

- Law Decree no. 4 of January 27, 2022, converted into Law no. 25 of March 28, 2022 (LD Sostegni ter):
  - article 14 extends the provisions of the Budget Law 2022 with regard to the cancellation of general system charges, providing that as of January 1, 2022 also for all users with available power equal to or greater than 16.5 kW, including those connected in medium and high/very high voltage or for public lighting or electric vehicle recharging in places accessible to the public, the reduction of the rates will be ordered, entrusting ARERA with the task of implementing this provision retroactively;
  - article 15 provided for the recognition to companies with high electricity consumption (referred to in the MISE Ministerial Decree of December 21, 2017), whose costs per kWh of the electricity component increased by more than 30% compared to the same period of 2019, an extraordinary contribution to partially offset the higher costs incurred, in the form of a tax credit, of 20% of the expenses incurred for the energy component purchased and actually used in the first quarter of 2022;
  - article 15 bis provided for an initial intervention to collect the so-called "extra-profits", introducing a two-way compensation mechanism on the price of electricity fed in by certain types of renewable plants (photovoltaic plants with a capacity above 20 kW eligible for fixed premiums not dependent on market prices, deriving from the Conto Energia mechanism, and solar, hydro, geothermal and wind power plants with a power output greater than 20 kW that do not have access to incentive mechanisms, which entered into operation prior to January 1, 2010, including plants in dedicated withdrawal and on-site exchange). The mechanism establishes the economic regulation with the GSE of the differences, in the period from February 1 to December 31, 2022, between a reference price defined by the Law Decree itself per market zone and, for hydroelectric basin plants, the monthly average zonal price, for the remaining plants, the hourly zonal price. The rule provides for the exclusion of energy from supply contracts concluded before January 27, 2022, provided that they are not linked to spot market trends and were not concluded at an average price 10% higher than the reference value ('threshold value'). Resolution no. 266/2022/R/eel established the procedures for implementing the mechanism by providing, in particular: (i) the determination of the share of energy injected pertaining to supply contracts entered into before January 27, 2022, by comparing the total energy actually injected by all the plants pertaining to the contract/s over the reference time horizon and the total contractual volumes for the same period ii) the communication, accompanied by a certificate issued by an auditing firm, of a single average price for the contracts (this price is taken into account in the economic regulation if the contract is connected to the spot market or the price is higher than the threshold value); iii) the identification of the date of entry into operation for plants subject to refurbishment with the date of activation of the connection following the intervention; iv) the exclusion from the mechanism of the portion of hydroelectric energy subject to free transfers to the Regions. In terms of timing, ARERA has stipulated that by July 10, 2022, the GSE will send the operators concerned by the measure a request to provide the necessary information by August 10, 2022. The economic adjustment takes

place from October 2022 for the months February-August 2022, and by the end of the second month following the month to which the production relates for the remaining months of the reference period. Any adjustments will be made by the GSE by May 2023. The estimated overall impact of the measure for the A2A Group is currently being assessed.

- Law Decree no. 14 of February 22, 2022, converted into Law no. 28 of April 5, 2022 (LD Ukraine):
  - in relation to the thermoelectric sector, established the possibility of implementing a program to maximize the use of coal- and fuel-oil-fired plants, giving ARERA the task of establishing the fees to reimburse any higher costs incurred by the operators concerned by the measure;
  - in order to provide greater support to domestic customers affected by the increase in energy costs, it broadened the perimeter of social bonus recipients by raising the ISEE threshold to 12,000 euro (previously set at 8,265 euro) for the period April-December 2022 and extended, from April 30 to June 30, 2022, the provisions set out in the Budget Law 2022 concerning the obligation for sellers to grant domestic customers bill installments.

- Law Decree no. 17 of March 1, 2022, converted into Law no. 34 of April 27, 2022 (LD Energy):
  - the following was also confirmed for the second quarter of 2022:
    - the cancellation of the general system charges for all domestic and non-domestic users, and likewise the reduction of the general system charges for the gas sector, as well as the extension of the reduced VAT rate to 5% for invoices accounting for consumption of gas for civil and industrial use;
    - the redetermination of the benefits granted to economically disadvantaged and physically challenged customers through the confirmation of the introduction of the supplementary bonus (CCI) for the supply of natural gas and electricity;
    - to energy-intensive businesses, whose costs per kWh of the electricity component have increased by more than 30% compared to the same period in 2019, the extraordinary contribution to partially offset the higher costs incurred, in the form of a tax credit, of 20% of the costs incurred for the energy component purchased and actually used in the first quarter of 2022;
  - article 18 bis amended the law establishing the Authority, introducing the principle that ARERA establishes and updates the tariff not only in relation to market trends, but also on the basis of the real cost of raw material procurement;
  - in relation to renewable energy plants, the LD provided for a voluntary participation mechanism of purchase and withdrawal of renewable energy by the GSE (contract of at least three years) and sale to consumers at prices set by the MiTE. In relation to permitting procedures, the LD extended the definition of a de facto eligible area (pending identification by the Regions) to new photovoltaic plants built, also in agricultural areas, at a maximum distance of 500 metres from industrial areas and 300 metres from the motorway network (so-called solar belt), as well as liberalizing the construction of photovoltaic plants on the roofs of buildings. Further actions concerned the definition of authorization procedures in eligible areas and the simplification of photovoltaic repowering;
  - with reference to gas storage, the LD set a target of filling 90% of the available national capacity, starting from the storage year 2022- 2023, and provided that the modulation service to end customers (civil and non-civil with consumption of no more than 50,000 cubic metres per year) should be ensured primarily through the use of storage.
  - with reference to the by-products that can be used in biomethane production plants, article 12a expands the number of agricultural and agro-industrial by-product matrices allowed, in addition to those listed in Annex IX of the Ministerial Decree of February 2016 (e.g. by-products of primary processing of cereals, fruit, vegetables, etc.).

- Law Decree no. 21 of March 21, 2022, converted into Law no. 51 of May 20, 2022 (LD Taglia Prezzi):
  - introduced an extraordinary contribution to companies with meters with an available power of 16.5 kW or more, other than those with high electricity consumption, in the form of a tax credit equal to 12% of the expenditure incurred for the purchase of the energy component, actually used in the second quarter of 2022, if the price of the energy component has increased by more than 30% of the average price per kWh for the same quarter of 2019;
  - introduced an extraordinary contribution to companies other than those with a high consumption of natural gas to partially compensate for the higher charges incurred for the purchase of gas in the form of a tax credit equal to 20% of the expenditure incurred for the purchase of gas consumed in the second quarter of 2022, for uses other than thermoelectric ones, if the reference price, calculated as the average, referring to the first quarter of 2022, of the reference prices of the Intraday Market (MI-GAS) published by the GME, has increased by more than 30% of the corresponding average price referring to the same quarter of 2019;
  - introduced the possibility for companies to pay in installments the amounts due for energy consumption for the months of May and June 2022 for a maximum number of monthly installments

not exceeding 24 months. To support the specific liquidity needs generated by the granting of installment plans by suppliers, SACE will be required to issue its own guarantees in favor of banks, national and international financial institutions and other entities authorized to exercise credit in Italy, up to a maximum limit of 9,000 million euro;
- article 37 provided for a second measure to levy the so-called "extra-profits" by introducing an extraordinary contribution of 10% (increased by the subsequent LD Aiuti to 25%) to be borne by entities that carry out in the Italian territory, for the subsequent sale of goods, the activity of electricity production, methane gas production or natural gas extraction, entities reselling electricity, methane gas and natural gas, and entities that carry out the activity of production, distribution and trade of oil products. The taxable base of the contribution is the increase in the balance between active and passive transactions, referring to the period from October 1, 2021 to March 31, 2022 (period extended by LD Aiuti to April 30, 2022), compared to the balance of the corresponding period of 2021. The contribution is due in cases where the above-mentioned increase exceeds 5 million euro and is not due if the increase is less than 10%. The impact for the A2A Group is quantified at approximately 9 million euro in direct taxes. The extraordinary contribution also includes the company A2A Energiefuture S.p.A. for an amount of 36 million euro, the taxable amount of which refers to the San Filippo del Mela plant, under the regulated regime of essentiality pursuant to article 65 of Annex A to Resolution 111/06. In this case, the contribution is therefore closely linked to the operation of the plant and as such falls within the cost items recognizable under the cost-replacement consideration provided for in the essentiality regime. A credit of the same amount was therefore entered.
  Pursuant to the provisions of the subsequent DL Aiuti, the Group made a payment to the Revenue Agency of approximately 18 million euro (40% of the total amount of 45 million euro by way of advance payment) and will pay the balance of the remaining amount by November 30, 2022. The companies subject to the subsidy filed for reimbursement with the Revenue Agency.

- Law Decree no. 36 of April 30, 2022, converted into Law no. 79 of June 29, 2022 (LD PNRR2):
  - in relation to the production of hydrogen from renewable sources, an exemption from the payment of general system charges is envisaged for the consumption of electricity from renewable sources in electrolysis plants also in the event that the energy is taken from the grid with the obligation to connect third parties, in the cases and in compliance with the technical conditions to be established by a subsequent MiTE MD.

- Law Decree no. 50 of May 17, 2022, converted into law no. 91 of July 15 (LD Aiuti):
  - the introduction of a supplementary bonus (CCI) for the supply of natural gas and electricity in support of economically disadvantaged and physically challenged customers was also confirmed for Q3 2022;
  - in relation to the tax credit facilities, the percentage granted to companies was increased (from 20% to 25% for high-consumption electricity and gas companies, and from 12% to 15% for electricity companies that are not high-consumption but have a power exceeding 16.5 kW);
  - in relation to gas storage, in order to meet the liquidity needs attributable to the commodity market context, the LD provided that SACE guarantees also apply to market operators. In addition, it is established that GSE, in close coordination with Snam, will provide a filling service of last resort through the purchase of gas for storage and subsequent sale by December 31, 2022 (up to a countervalue of 4 billion euro), on the basis of a Ministerial Decree (after consulting ARERA) to be adopted by July 15, 2022. The filling service of last resort is regulated by DM MiTE, after consulting ARERA;
  - in relation to permitting procedures for power generation plants from renewable sources, it has established as de facto suitable areas (pending identification by the Regions) for the installation of all renewable source plants the areas not subject to constraints under Legislative Decree January 22, 2004, no. 42, stipulating a minimum distance to be respected from areas subject to the protection of cultural heritage of 7 km for wind power plants and 1 km for photovoltaic plants.

7.1 Generation and Trading Business Unit

Remuneration of the availability of production capacity: start of capacity market from 2022

Legislative Decree no. 379 of 2003 provided for a transitional measure of remuneration for the availability of capacity aimed at guaranteeing the adequacy of the electricity system (capacity payment in force in the period 2004-2021) and a regime measure based on a market mechanism (capacity market).

The precise criteria for defining this market were set out by ARERA with Resolution ARG/elt 98/11 and by Terna S.p.A. through the "Discipline of the remuneration system for the availability of electricity production capacity", the related Annexes and the "Technical Operating Provisions": it technically consists of a one-way contract for differences entered into with Terna S.p.A. and awarded following an auction in which producers acquire the right to receive a premium (in €/MW/year) with respect to the obligation to offer all the capacity committed in the Previous Day Market and the capacity not accepted as a result of the energy markets on MSD, returning to Terna S.p.A. the difference - if positive - between the market benchmark prices and a strike price (in €/MWh).

In relation to the auctions for the delivery years 2022 and 2023, the mechanism was approved by MD MiSE June 28, 2019, after endorsement by the EU Commission. During these auctions, A2A S.p.A. was awarded all the capacity offered, namely around 5 GW/year for approximately 340 million euro in total premium (gross value net of possible penalties for unavailability). Approximately 0.12 GW for 2022 and 0.24 GW for 2023 are related to new capacity. The award price in both auctions was 33,000 €/MW/year for existing capacity and 75,000 €/MW/year for 15 years for new capacity (i.e. both awards were at cap).

Some operators and Associazione Italia Solare filed an appeal for the annulment of the Ministry of Economic Development Decree of June 28, 2019 and related acts of ARERA and Terna S.p.A., also proposing an appeal to the EU Court of Justice. The hearing on the merits of the Regional Administrative Court has been postponed pending the decision of the EU Tribunal, which is expected in 2022. A2A S.p.A. has appeared as a counterparty to defend the legitimacy of the awards.

With reference to the 2022 and 2023 deliveries, Terna S.p.A., jointly with the MiTE (Ministry of Ecological Transition), intervened granting extensions to the deadlines for submitting authorization certificates in the case of new non-authorized capacity and for the deadlines for the start of the delivery period for new capacity. In the latter case, the final term of the contract was also extended by a period equal to the extension granted for the start of the delivery period. The new deadlines have been set as follows:

- presentation of the authorization certificates for the new non-authorized capacity: by December 31, 2020 (for delivery 2022) and by October 31, 2021 (for delivery 2023);
- start of delivery for new capacity (subject to reasoned request): July 01, 2022 (for delivery 2022) and July 01, 2023 (for delivery 2023).

A2A S.p.A. has obtained the authorizations for all the new unauthorized capacity awarded:

- 2022 delivery: repowering of the combined-cycle plants of Cassano and Chivasso;
- 2023 delivery: repowering of the combined-cycle plants of Piacenza and Sermide and for the Cassano engines.

In relation to deliveries for the years 2024 and 2025, the Ministerial Decree MiTE October 28, 2021 approved the mechanism as amended in 2021, subject to positive verification by ARERA (Resolution 378/2021/R/eel).

Compared to the mechanism already in force, the most significant changes concern the possibility of bidding in relation to non-relevant new units, the introduction of more details for the participation of storage systems, the possibility for successful bidders of new unauthorized capacity to obtain authorization titles up to 6 months before the delivery date, the possibility for new or repowered capacity to extend the start of the delivery period until December of the first year of delivery, with a corresponding postponement of the final term of the contract (and application of a penalty for each month of delay), as well as the right to fully assign the contract subject to Terna S.p.A. consent.

Moreover, again in relation to the delivery years 2024 and 2025, with reference to the economic parameters of the capacity market, ARERA Resolution 399/2021/R/eel provided as follows:

- a premium cap of 70,000 €/MW/year for new capacity (down from 75,000 €/MW/year planned for 2022-2023 deliveries) and 33,000 €/MW/year for existing capacity (value confirmed and coincident with as planned for foreign capacity);
- for the purposes of calculating the strike price, equal to the variable cost of an open cycle gas turbine fuelled by natural gas (with yield defined by ARERA), the element covering the cost of gas supply was initially confirmed for each month using the forward prices recorded at the TTF hub in the previous month. The price risk mitigation mechanism in the event of a declaration of a state of

gas emergency by the MiTE was also confirmed. Starting from March 5, 2022, however, due to the extreme volatility of gas prices generated by the Russian-Ukrainian conflict, which led to a significant and systematic misalignment between the spot price and the forward price, thus making the strike price unrepresentative of the variable cost of the leading technology, ARERA Resolution 83/2022/R/eel set the value of the component covering the cost of natural gas equal to SAP (weighted average of the prices of the offers accepted at MGAS).

On February 21, 2022 was the auction for the 2024 delivery while, with reference to subsequent years, further use of the capacity remuneration system will be determined on the basis of adequacy assessments for the three consecutive years.
With reference to the delivery year 2024 alone, A2A S.p.A. was awarded a total of approximately 5.4 GW of capacity at national level, of which 1.3 GW of new construction (combined cycles, photovoltaic plants, electrochemical storage), for a total premium of approximately 199 million euro. Specifically:

- 4,096 MW of existing CDP[1] (tender price of 33,000 €/MW/year);
- 20 MW of newly authorized CDP (tender price of 70,000 €/MW/year);
- 1,311 MW of new unlicensed CDP (tender price of 48,110 €/MW/year).

Authorization procedures are currently underway for the construction of the new combined cycles in Cassano and Monfalcone.

Remuneration of plants essential for the safety of the electricity system

Resolution 269/2020/R/eel declared the San Filippo del Mela power plant (groups 2, 5 and 6) owned by A2A Energiefuture S.p.A. "essential" for the security of the electricity system with cost reintegration also for 2022 (as per Resolution 111/06).

With Resolution 563/2021/R/eel, the Authority accepted to provide for a percentage of 2.5% on both sides from 2022 for the purposes of calculating the component covering the imbalance fee (as an exception to the previous values of 1.3% for positive imbalances and 1.4% for negative imbalances).
With reference to the amount at June 30, 2022, the value of the reinstatement is estimated at around 6 million euro.

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 S.p.A. for the forward procurement 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.

Following the auction on February 20, 2019, A2A Energiefuture S.p.A. was awarded a 10-year supply of 286 MVAr of reactive energy at a weighted average price of 28,098 €/MVAr/year. The first device went into operation on March 1, 2020 and the second on June 1, 2020.

The contract provides for the supply of continuous and automatic voltage regulation, without active energy 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 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). The economic adjustment is made on a monthly basis.

The total amount at June 30, 2022 is approximately 7.8 million euro.

1 CDP: Capacity Available in Probability.

Gas Storage: measures to ensure security of supply

In light of the situation of geopolitical instability arising from the Russian-Ukrainian conflict and in order to guarantee the supply of natural gas during the 2022-2023 TA, the MiTE - and consequently ARERA as far as it is concerned - has intervened through repeated measures to ensure the achievement of the target of filling 90% of the available national storage capacity, in line with the provisions of the LD Energia. In the current context, in the absence of stimulus measures, gas injection in storage is not attractive due to unfavorable spreads between the injection and delivery phase. In addition, capacity booking is disincentivized due to the high financial burden of storing gas. In order to overcome these critical issues, MiTE and ARERA issued the following measures:

- the MiTE Ministerial Decree of March 14, 2022, in addition to the customary specification of the storage companies' disbursement profiles, has:
  - provided that the reserve prices set by ARERA for each auction and service may be set in the zero range;
  - stipulated that the gas stocks in the storages as at March 31, 2022 remain allocated to their holders;
  - allowed technical injection profiles involving dynamic well pressures even higher than the original static reservoir pressure for extended periods of time (within safety limits);
- this Ministerial Decree was followed by ARERA Resolution 110/2022/R/gas, which provided for zero reserve prices for all capacity allocation procedures for modulation storage services and the non-application of costs related to the technical consumption of compression and treatment plants. The same Resolution also provided that, in the event of failure to meet the minimum stock by the end of October 2022, a penalty of 1.15 €/MWh would be applied and that, in relation to gas stocks on April 1, a zero charge would be applied;
- in light of the low allocations as a result of the storage auctions held in March, the MiTE MD of April 1, 2022 has:
  - established the holding of auctions on a weekly basis (in the period from April 1, 2022 to 31 October 2022) for the allocation of monthly injection products with a zero reserve price, coupled with two-way contracts for differences to cover the price spread between injection - disbursement;
  - provision for storage companies to allow the injection of gas volumes in excess of the allocated space capacities through the implicit allocation of the relevant space and winter supply;
  - established that Snam Rete Gas S.p.A. shall procure storage capacity (uniform service with injection in April) to cover the gas volumes for system operation (CNG, consumption, losses and delta IN-OUT of DSOs) for the period November 2022 to March 2023 and the management of technical consumption of storage companies;
- as a result, ARERA Resolution 165/2022/R/gas introduced the recognition of a premium (so-called "storage premium") equal to 5 €/MWh (in first application) for the volumes in storage at the end of the injection phase and resulting from the injection of seasonal/monthly products as well as from the implicit injection of space for April injections exceeding the awarded products. The premium is paid by Snam Rete Gas S.p.A. to storage users at the end of the injection period. With the same Resolution, the Authority provided for the procurement of gas volumes for system operation and for the management of technical consumption of storage companies in the AGS market segment at a price equal to the average price of the transactions recorded, on the day of offer, in the continuous trading market for the day of delivery, increased by 30 €/MWh (in purchase) for gas for system operation and 7 €/MWh for technical consumption and decreased by 30 €/MWh or set equal to 0 (if the difference is negative) in sale;
- ARERA Resolution 189/2022/R/gas defined the contract outline for two-way differentials to cover the injection-delivery spread and specified that the storage premium is applied not only for seasonal products but also for monthly products and implicit allocations with injection in May;
- lastly, considering the trend of injection into storage and the consequent risk of not reaching the 90% fill target at the end of the campaign, the MiTE Ministerial Decree of June 22, 2022 established a service of last resort for Snam Rete Gas S.p.A. - in first application in relation to the month of June - functional to the achievement of the storage filling target of 5.4 billion Scm. The manner in which the quantities of injected gas will be made available to the market during the winter of 2022-2023 will be defined by an act of policy of the MiTE, after consulting the Authority. In addition, Snam Rete Gas S.p.A. will notify MiTE of any deviation from the optimal technical filling curve and will proceed with the activation of the service of last resort, subject to approval by MiTE, for the months following June;
- ARERA Resolution No. 274/2022/R/gas defined the procurement by Snam Rete Gas S.p.A. of the volumes identified by the MiTE in the AGS segment, at a price equal to the average price of the transactions recorded on the continuous trading market for the day of delivery, increased by €7/MWh. ARERA has also defined the recognition of a storage premium, which varies according to the summer/winter spread for implicit allocations from June 24, 2022 until the end of the 2022/2023 thermal year.

A2A S.p.A. has provided for the allocation of storage capacity (seasonal product and implicit allocation with recognition of the premium equal to 5 €/MWh in relation to the gas in storage at the end of the injection period) in line with the quantities procured in previous years and with the objective of guaranteeing the modulation service to civil and non-civil customers supplied by A2A Energia S.p.A..

Incentives for production from renewable sources: implementation of the EU RED II Directive

With the approval of Legislative Decree no. 199 of 2021, which implements EU Directive 2018/2001 (so-called RED II), Italy has redefined the framework of incentive schemes for the production of energy from renewable sources necessary to achieve the decarbonization targets by 2030. This new measure modifies the previous regulatory framework regarding incentives for renewable sources (Legislative Decree March 3, 2011, no. 28) and requires that by 2030, at least 30% of gross final consumption be supplied by renewable sources, outlining the characteristics of the new support mechanisms.

In particular, with regard to the production of electricity, the new Legislative Decree provides for:

- pending definition of the new incentives, the extension of the current mechanism (RES MD 2019) until the unallocated quotas are exhausted. In this regard, the GSE has already announced the eighth competitive procedure (closed on March 2, 2022) and a ninth procedure open on May 31, 2022;
- for plants close to economic competitiveness (firstly, photovoltaic and wind power), a new incentive MD will be defined in the second half of 2022, characterized by a five-year planning horizon. Plants with a capacity of over 1 MW will continue to have access to incentives through competitive procedures (auctions), with quotas divided by geographical areas and premiums for the use of storage systems, while those of a smaller size will have direct access to the support mechanism (abolition of registers);
- in order to facilitate the authorization procedures, in the second half of 2022, it is foreseen that a special MiTE Decree will identify the criteria for the definition of the areas suitable (and not suitable) for the installation of renewable source plants: the Regions will have 180 days from the date of publication of the Ministerial Decree to proceed with the identification of these areas to the extent of reaching at least the installation targets foreseen by the PNIEC to 2030. In eligible areas, the landscape opinion will not be binding for the purposes of obtaining authorization and the time limit for obtaining authorization will be reduced by one-third;
- again the MiTE, in the first part of 2022, is called upon to define the modalities of disbursement of the resources allocated by the PNRR and intended, among others, for agri-voltaic systems, biomethane, hydrogen, recharging columns and the development of new efficient district heating networks.

In 2021, the Government intervened with a new Simplification Decree (LD 77/2021) aimed at encouraging the development of new renewable source plants. The main interventions include the setting up of the new EIA Commission for PNIEC-PNRR projects (including photovoltaic and wind power), the introduction of the national EIA procedure for photovoltaic plants over 10 MW, the extension of the simplified authorization procedure for photovoltaic plants in industrial areas up to 20 MW connected to medium voltage (with exemption of the EIA up to 10 MW) and some interventions aimed at further encouraging repowering interventions on existing plants. Further simplification measures have been introduced with numerous legislative measures to combat high energy prices (see the dedicated section for more details). At June 30, 2022, the incentives paid by the GSE to the A2A Group's plants powered by renewable sources amounted to 27.6 million euro.

GSE incentive type
millions of euro

Feed-in tariff	8.2
TO and RID	5.2
Energy account (FV)	14.2
Total	**27.6**

Large hydroelectric derivation concessions

Article 11-quater of Law no. 12/2019 partly amended the rules on large derivation hydroelectric concessions (plants with nominal power greater than 3 MW). The new rules provide that the Regions shall regulate with their own laws by March 31, 2020 (deadline extended to October 31, 2020 by the Cura Italia Law Decree, and to date not respected by various Regions) 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 and, in any case, no later than October 31, 2022 (L.D. 18/2020).

The Regions may also require concession holders to provide 220 kWh a year free of charge for each kW of average nominal power of the concession and may require the payment of an additional fee for expired concessions operated on a temporary basis.
In terms of compensation to outgoing operators, the new rule prescribes:

- for wet works: the transfer without compensation of ownership to the Regions, except for the compensation only of investments not yet amortized;
- for dry works: the recognition of a residual value derived from accounting records or certified appraisal. In the event of non-inclusion in the project of 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.

On April 8, 2020, Lombardy enacted Regional Law no. 5/2020 (amended with Regional Law no. 19/2021), which governs the methods and procedures for awarding concessions for large-scale hydroelectric derivations and determines the related state fee.
The new state fee has a fixed part related to the concession power and a variable part as a percentage of the revenues from the sale of energy fed into the grid by the plant, net of energy supplied free of charge to the Region.
Lombardy Regional Law no. 23/2019 also imposed on concessionaires, starting in 2020, the obligation to provide free electricity to the Region (220 kWh for each kW of concession power), providing for the possibility of monetizing the fulfillment. For concessions under the so-called temporary continuation, there is an additional annual fee determined on a reconnaissance basis at 20 euro/kW.
Most of A2A S.p.A. large-scale derivation concessions in Valtellina (for a nominal concession power of around 200 MW) have expired[2] and exercised under temporary continuation, most recently in accordance with Lombardy Regional Council Resolution no. XI/5823 of December 29, 2021 . The Linea Green S.p.A. concession of Resio also expired on December 31, 2010, and the temporary continuation of operations was also established for this concession.
Other A2A S.p.A. hydroelectric concessions (plants in Mese, Udine and Calabria with total nominal power of about 345 MW) expire in 2029. Also added are the large-scale derivations not yet expired of Linea Green S.p.A. (Mazzuno and Darfo), as well as the concession of Gravedona of ACSM-AGAM S.p.A. expiring in 2029.

2 The concessions of Grosotto, Lovero and Stazzona expired December 31, 2010 while the one of Premadio 1 at July 28, 2013 (Premadio 2 has validity until December 31,2043). The Grosio concession expired on 15/11/2016.

7.2 Market Business Unit

2017 Competition Law and removal of price protections for electricity and gas

Law August 4, 2017, no. 124, as amended. (Competition Law 2017) 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, paragraphs 59 to 85, introduces relevant provisions relating to the energy market, providing, inter alia, for the end of price protection schemes from January 1, 2021, for small electricity businesses and from January 1, 2023, for gas household customers[3] and micro electricity businesses[4], according to the methods and criteria defined by the MiTE aimed at guaranteeing an aware transition in the free market.

Decree Law No. 152 of November 6, 2021 (LD Recovery) moved the date for the end of price protection for domestic customers to January 1, 2024, also providing that for so-called vulnerable and energy-poor customers, the protection service will continue to apply until the measures provided for in article 11.2 of Legislative Decree no. 210/2021 according to which all sellers are required to offer such customers a price that reflects the cost of energy in the wholesale markets.

Resolution 491/2020/R/eel defined the Gradual Protection Service (STG), activate as from January 1, 2021 for small electricity businesses, without a supplier on the free market[5]. For the period from January 1 to June 30, 2021 (provisional regime) the TSG was supplied by the current operators for greater protection under almost unchanged economic and contractual conditions while, from July 1, 2021 (definitive regime) and for a period of three years, the TSG is supplied by operators selected by means of an auction organized by Acquirente Unico S.p.A. in which A2A Energia S.p.A. was awarded 3 lots (Lazio; Lombardy with the exception of Milan; Veneto, Liguria and Trentino-Alto Adige), for a total of around 80,000 POD and approximately 1.8 TWh/year.

Resolution 208/2022/R/eel defined the rules for the allocation of the TSG of micro-enterprises with power up to 15 kW (about 2 million PODs for about 5 TWh/year of consumption), without a supplier on the free market, as of January 1, 2023. This service will be provided for 4 years by selected operators[6] through an auction organized by Acquirente Unico S.p.A. during which 12 customer lots will be awarded, with a ceiling of areas that can be awarded per single operator equal to 35% of the total volumes (4 lots). The lots will be assigned on the basis of the lowest price offered, expressed in €/POD/year, to cover the marketing and unbalancing costs not already recognized by ARERA, and for which a floor has not been set.

The contractual conditions applied, as for the TSG of small businesses, are those provided for the PLACET Offers while the economic conditions, defined by ARERA, provide for the introduction of a "single national fee" to be paid by customers and determined as a weighting of prices offered by operators at auction in the various areas.
In implementation of the provisions of the Competition Law, on May 5, 2022, the MiTE Ministerial Decree was approved, establishing the Vendors List in the electricity sector[7] and defining the conditions, criteria, methods and technical, financial and honourableness requirements for the registration, permanence and exclusion of entities from the List. As a transitional measure, it has been established that companies registered as commercial counterparties of end customers in the Integrated Information System (SII) are automatically accredited in the List, except for the need to formalize the registration by submitting a self-declaration of possession of the technical and integrity requirements within 90 days from the adoption by the MiTE of the directorial decree containing the forms for submitting the application for registration and the required documents.

3 When LD Aiuti was converted into law, an amendment was presented proposing to also postpone the end date of the protection service for domestic gas customers to January 1, 2024 in order to align it with that for domestic electricity customers.
4 According to the EU definition, micro-electrical enterprises have fewer than 10 employees and an annual turnover not exceeding 2 million euro.
5 The perimeter of this first batch covered about 230,000 subjects between small businesses (number of employees between 10 and 50 and/or annual turnover between 2 and 10 million euro) owners of LV withdrawal points and micro-businesses owners of at least one point of withdrawal with contractually committed power greater than 15 kW that, at December 31, 2020, had not yet chosen supply in the free market.
6 The auction is scheduled to take place in September 2022 and only one operator per corporate group that has served at least 100,000 PODs/PDRs as at December 31, 2021 may participate.
7 The publication of the Ministerial Decree in the Official Journal is still pending.

Prescription of electricity and natural gas consumption dating back more than two years

The 2018 Budget Law, in article 1, paragraphs 4-10, introduced the statute of limitations in electricity and gas supply contracts with reference to consumption dating back more than two years, with significant impacts in the relationships between customers and sellers, between distributors and sellers and in those with the transmission operator and with the other subjects of the supply chain. The effective date of this provision has been differentiated: from March 1, 2018 for the electricity sector and from January 1, 2019 for the gas sector.

The Law initially provided that the prescription not be recognized to the customer in the event that the missed or erroneous collection of consumption data was attributable to the customer; however, paragraph 295 of article 1 of the Budget Law 2020 removed this case, providing for the recognition of the prescription period even in cases of ascertained liability of the customer, and in fact, introducing an objective responsibility for operators of the supply chain, especially those responsible for metering, even in the absence of a specific assessment of faults or inefficiencies in their operations[8].

Starting in 2018, ARERA intervened with numerous measures in order to implement the legislative provision, and most recently with Resolutions 603/2021/R/com and 604/2021/R/com, which will come into force from 2022. On the one hand, in compliance with the Sentences of June 14, 2021, no. 1441, 1444 and 1449 of the Lombardy Regional Administrative Court, it amended Resolution 569/2018/R/com, and, on the other hand, defined the methods of compensation of settlement items arising from exceptions to the two-year statute of limitations raised by the end customer and the seller, giving the CSEA the role of compensating party vis-à-vis the seller and, with specific reference to the electricity sector, promoting the quality of the metering service of distribution companies, through greater responsibility on their part, in order to reduce the adjustments made available with delays of more than two years.

Resolution 603/2021/R/com was subsequently challenged by Italgas Reti S.p.A., which contested the introduction of specific obligations for distributors, which provided for the sending to sellers of all the necessary information, including documented evidence, aimed at ascertaining the presence of causes preventing the acceptance of the prescription. The Lombardy Regional Administrative Court, in partial acceptance of the request, with Order no. 422 of April 9, 2022, ordered the suspension of the information obligations of distributors, postponing the decision to December 1, 2022.

Components to cover marketing costs on the electricity protected market, on the free electricity market and on gas protection

For the year 2022, as provided for in Resolutions 401/2021/R/gas and 402/2021/R/eel, the updating of the RCV and PCV components (to cover the marketing costs of electricity, respectively, on the greater protection and free market) and QVD (to cover the marketing costs of gas at retail level) was postponed to the second quarter, following ARERA's need to carry out in-depth studies related to the evolution of the retail market structure and to align the remuneration methods of the various regulated entities. The new values will be valid for the period from April 1, 2022 to March 31, 2023 (as per Resolutions 146/2020/R/eel and 147/2020/R/gas).

Compared to the previously published values, there was a substantial increase in the components due to the delayed update to January 1, 2022.

PCV €/POD/year	2021	January 1, 2022 March 31, 2022	April 1, 2022 March 31, 2023
	Single national	Single national	Single national
Domestic POD	65.44	65.44	69.88
Various use POD	124.71	124.71	113.09

8 In this regard, mention should be made of the closure in January 2021 of the investigative proceedings initiated by the AGCM against certain sales companies with the imposition of a total fine of 12.5 million euro. The Antitrust Authority has, in fact, ascertained the unjustified rejection of the two-year statute of prescription requests submitted by users, due to the late billing of electricity and gas consumption, in the absence of evidence that the delay was due to the responsibility of consumers.

€/POD/year	2021		January 1, 2022 March 31, 2022		April 1, 2022 March 31, 2023	
RCV	C-North	C-South	C-North	C-South	C-North	C-South
Domestic POD	24.42	26.67	24.42	26.67	30.14	34.06
Various use POD	47.42	65.83	47.42	65.83	48.74	71.40
RCVsm*	C-North	C-South	C-North	C-South	C-North	C-South
Domestic POD	41.19	42.66	41.19	42.66	44.73	48.31
Various use POD	72.00	107.73	72.00	107.73	69.72	129.29
RCVi	C-North	C-South	C-North	C-South	C-North	C-South
Domestic POD	19.54	21.34	19.54	21.34	24.11	27.25
Various use POD	37.93	52.67	37.93	52.67	38.99	57.12

* Minor separate companies (≤ 10 MIO POD).

QVD €/PDR/year	2021		January 1, 2022 March 31, 2022		April 1, 2022 March 31, 2023	
	€/PDR/year	c€/mc	€/PDR/year	c€/mc	€/PDR/year	c€/mc
Domestic PDR	62.74	0.7946	62.74	0.7946	67.32	0.7946
PDR condominium home use<200,000	82.39	0.7946	82.39	0.7946	88.41	0.7946

The estimated impact for the A2A Group is approximately 6.2 million euro.

Additional mechanisms to cover efficient costs on the protected market

With reference to the additional cost compensation mechanisms for the electricity greater protection service as per the TIV, the following is noted:

- in May 2022, 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 recognized in the definition of the RCV component, for an amount equal to 220,000 euro, which was paid in the 2nd half of 2022 (PUC 2021);
- in April 2022, A2A Energia S.p.A. submitted a request for access to the mechanism to compensate for arrears of end customers, aimed at recognizing any charges related to arrears exceeding the unpaid ratio already considered within the RCV component (COMP 2021), for an amount equal to about 490,000 euro, which will be paid in the 2nd half of 2022.

Compensation mechanism for general system charges not collected from final customers

Resolution 32/2021/R/eel introduced a mechanism for the recognition of General System Overheads (GSO) not collected from defaulting end customers, however already paid to the distributors by the selling companies. The mechanism will apply until the adoption of specific interventions, including legislative ones, aimed at a different management of the GSO collection chain and the related guarantee system. Transport users may participate, including on behalf of their commercial counterparts, choosing annually between:

- an ordinary regime: in which there is granting of uncollected GSO for which invoices have been due for more than 12 months and the appropriate credit protection procedures have been activated, and GSO waived as a result of settlement, assignment or credit restructuring agreements;
- a simplified scheme: under which only a share of the amount of uncollected GSO is recognised, which is obtained by using estimates; this share is equal to 75% of the estimate of the Declared Uncollected GSO (i.e. the estimated amount) made with respect to the values found in the company's accounting situation as set out in the mandatory unbundling communications (TIUC) and in the approved financial statements.

The A2A Group's sales companies have submitted a special application for access to the mechanism by May 2022, and in the second half of 2022, they should see an amount of approximately 1.2 million euro paid by CSEA.

Prescriptive and sanctioning measures for non-diligent scheduling strategies within the electricity dispatching service (i.e. 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. Proper scheduling is desirable because it allows for more effective system safety management and promotes cost reduction. For these reasons, 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, and avoiding arbitrage between prices on different markets[9].

In 2016, given the significant increase in dispatching costs, ARERA launched a fact-finding investigation from which numerous prescriptive and/or asymmetric regulation and sanctioning measures were derived towards some operators for their "non-diligent" scheduling strategies. These proceedings have not yet been concluded due to the litigation they have generated.

As regards the A2A Group, the adoption of prescriptive measures concerned:
- Linea Più S.p.A. (now A2A Energia S.p.A.): the measure imposed returning approximately 3.9 million euro to Terna S.p.A.;
- Enercity S.r.l. (then Suncity Energy S.r.l. and now A2A S.p.A.): the measure imposer returning approximately 737 thousand euro to Terna S.p.A.;
- Gelsia S.r.l.: the measure imposed returning approximately 8 thousand euro to Terna S.p.A..

The same companies were also subject to sanctions for violation of article 14.6 of ARERA Resolution 111/06 ("diligent planning"). In particular:
- Linea Più S.p.A. (now A2A Energia S.p.A.) was imposed a fine of approximately 1.5 million euro (Resolution 164/2018/S/eel);
- for Enercity S.r.l. (then Suncity Energy S.r.l. and now A2A S.p.A.), the proceedings (initiated by Determination DSAI/81/2017/eel) have not yet been concluded;
- for Gelsia S.r.l. the proceedings (initiated by Determination DSAI/86/2017) have not yet been concluded.

Linea Più S.p.A. (now A2A Energia S.p.A.) appealed against both the prescriptive measure and the penalty measure. Enercity S.r.l. (then Suncity Energy S.r.l. and now A2A S.p.A.) and Gelsia S.r.l. also appealed against the prescription.

A2A Energia S.p.A., Suncity Energy S.r.l. (now A2A S.p.A.) and Gelsia S.r.l. settled in 2019, the amounts of the prescriptive measure to Terna S.p.A. and A2A Energia S.p.A. also the amounts of the fine to ARERA.

Between 2020 and 2021, the Council of State - for A2A Energia S.p.A. and Suncity Energy S.r.l. (now A2A S.p.A.) - and the Lombardy Regional Administrative Court - for Gelsia S.r.l. - upheld the respective appeals against the prescriptive measures, and Terna S.p.A. offset the relevant amounts.

In light of the Authority's power of review, Resolutions 217/2021/E/eel and 419/2021/E/eel, in compliance with the rulings of the Council of State, have launched new procedures aimed at reviewing, or possibly confirming the aforementioned prescriptive measures. The deadline for the supplementary enquiry, which has been extended several times, was lastly set by Resolution 249/2022/E/eel at December 31, 2022 for A2A Energia S.p.A. and at June 30, 2023 for Suncity Energy S.r.l.. (now A2A S.p.A.) and Gelsia S.r.l..

With reference to the dispute of A2A Energia S.p.A. against the sanctioning measure, on September 27, 2021 the Council of State cancelled Resolution 164/2018/S/eel and, as a result of this sentence, approximately 450 thousand euro was paid to the company in December 2021 and the remaining amount, inclusive of accrued legal interest, equal to approximately 1.06 million euro in May 2022.

9 ARERA intervened with Resolution 523/2021/R/eel, which implements the reform of the regulation of imbalances, in implementation of the European regulatory framework. The main additions include the extension, as of April 1, 2022, of the single price mechanism for the valuation of the imbalances of all units, without distinctions based on characteristics, and the introduction of additional fees for the failure to comply with dispatching orders for qualified units.

In light of the possibility of the re-exercise of the Authority's sanctioning power provided for by the Council of State, with Resolution 8/2022/E/eel, ARERA restarted proceedings against A2A Energia S.p.A. aimed at redetermining the administrative fines imposed.

By virtue of their power to review the prescriptive (for A2A Energia S.p.A., A2A S.p.A. and Gelsia S.r.l.) and sanctioning (for A2A Energia S.p.A.) proceedings, the companies have made the necessary provisions in their financial statements.

New fee on the bill to cover the net cost of procurement of available production capacity by Terna S.p.A.

Resolution 365/2019/R/eel introduced a new fee to be collected through the electricity bill aimed at covering the costs related to the operation of the capacity market. As of January 1, 2022, the new fee is applied to users of withdrawal dispatching and is divided into two unit fees: the first to be applied during the peak hours of the electricity system and the second to be applied during the remaining off-peak hours. The fees are appropriate to cover 70% and 30%, respectively, of the net charges arising from the mechanism.

These values are established, together with the indication of the peak and off-peak hours, by Terna S.p.A. and in the first definition were set for peak hours equal to 39.799 €/MWh (annual update) and for off-peak hours (quarterly update) equal to 1.296 €/MWh for the first quarter of 2022, 1.305 €/MWh for the second quarter of 2022 and 1.886 €/MWh for the third quarter of 2022.

Resolution 566/2021/R/eel also defined the methods for transferring the charge to end customers, establishing that for customers in the free market, in compliance with the principle of price negotiation between the parties, sellers may independently define the methods of application. On the other hand, with regard to services of last resort and PLACET offers, ARERA has established that for customers:

- in the higher protection service: the fee is included in the PD element (dispatching price) that makes up the tariff;
- in the STG: a one-off fee published by ARERA before the start of each quarter and for each month of the quarter is applied. This fee will be included in the Cdisp (dispatching fee) that forms the price charged to customers;
- for the safeguard service: a one-rate fee is applied, differentiated for each month of application, defined by Terna S.p.A. on a quarterly basis;
- with PLACET offers: the one-rate fee defined for customers served in the STG is applied.

Award of the safeguard service for the two-year period 2021-2022

The Law August 3, 2007, no. 125/07 established a safeguard service for all companies and public bodies without an electricity supplier and that have at least one medium or high voltage supply point or only low voltage points with more than 50 employees or an annual turnover of more than 10 million euro.

A2A Energia S.p.A. was selected, through a public tender procedure, for the period January 1, 2021 - December 31, 2022, as the electricity supplier for the safeguard service in batch 2 (Lombardy) and batch 4 (Marche, Tuscany and Sardinia), for about 650 GWh.

The prices charged are determined in accordance with the Authority's rules and the calculation methods laid down by the MiSE and include wholesale electricity costs, dispatching and commercialization costs. In particular, A2A Energia S.p.A. applies to the energy supplied and the related grid losses a consideration equal to the average monthly purchase prices on the GME market, differentiated by time slot and increased by the omega parameter (Ω) equal to 10.17 €/MWh for batch 2 and equal to 13.57 €/MWh for batch 4.

Interventions to increase consumer awareness

The Authority, in order to concretely support the exit path of customers from the protection regime towards the free market, also in this first half of 2022, has implemented a series of interventions aimed at guaranteeing end customers both greater transparency of billing documents and new tools to increase the comparability of offers on the market.
Specifically:

- Resolution 135/2022/R/com introduced the standardized offer code with the aim of providing customers with information on the type of offer they intend to subscribe to. This code must be stated in the contractual material and invoicing documents;
- Resolution 209/2022/R/com revised the rules of Bill 2.0 by introducing information on annual consumption, understood as the difference between two readings taken/self-readings, covering a period of 12 consecutive months, and an estimate of the annual expenditure incurred net of any items not effecting the supply of energy (e.g. RAI fee, indemnities, etc.). The Authority, in application

of Legislative Decree 210/2021, has also provided for the inclusion in the bill of an Internet address prepared by ARERA through which the end customer will be able to jointly access the "protection" tools made available by the legislation, such as the "Offers Portal", the "Energy and Environment Consumer Desk" and the "Consumption Portal".

A2A Group's initiatives to support its customers to cope with the energy crisis

In order to combat rising energy bills, the A2A Group, in cooperation with the main Consumer Associations, has implemented a number of actions to support its domestic customers:

- extended the scope of Resolution 636/2021/R/com, which required installment for sellers for a period of 10 months of overdue electricity and gas invoices issued between January 1, 2022 and April 30, 2022, providing for the granting of customized installment plans at the customer's request also in a period prior to the due date of the invoice, with the extension of the application to district heating residential customers;
- recognized a one-off billing bonus of 435 euro, for a total of 260,000 euro, to all Ukrainian customers of A2A Energia S.p.A. who are hosting compatriots fleeing from the territories of the Russian-Ukrainian conflict and have expressly requested it. For this initiative, the Group received the special "Friend of the Consumer 2022" award that Codacons has given to organizations that have taken action to provide aid and solidarity to the Ukrainian people.

Closure of the investigation by the AGCM against A2A Energia S.p.A. for the application of the costs of the online payment service by credit card (PS 10728)

With measure dated September 20, 2017, the AGCM imposed a fine of 220,000 euro to A2A Energia S.p.A. for violation of the provisions of art. 62 of the Consumer Code on the application of surcharges for the use of the credit card for the payment of bills via the website. The company filed an appeal before the Lazio Regional Administrative Court stating that the surcharge requested was not due to the use of the payment instrument, but to the provision of a service that brings with it an objective added value (considering that since January 1, 2017, the company has discontinued the function of collection at the physical counters).

In addition, in order to protect the opposing needs for the protection of users and the creation of a competitive market, in which the economic and financial equilibrium of operators is safeguarded, article 19 of Directive 2011/83/EU (Consumer Rights Directive), implemented by the rule in article 62 of the Consumer Code, provides that Member States prohibit professionals to impose on consumers, in relation to the use of certain payment instruments, fees that exceed those incurred by the professional for the use of such instruments thus legitimizing, in our opinion, the conduct of A2A Energia S.p.A..

The Council of State subsequently accepted the appeal filed by Automobile Club d'Italia against the decision of the Lazio Regional Administrative Court, which had confirmed the validity of the measure by means of which AGCM had sanctioned the operator for violation of the aforementioned provision of the Consumer Code.

Request for information from the AGCM with regard to A2A Energia S.p.A. concerning the way in which the application of sales charges is displayed in promotional material (PS 11615)

Following a request for information and material on commercial offers aimed at domestic customers and micro-businesses (PS 10958), with a provision of June 15, 2021 (PS11615), the AGCM invited (so-called moral suasion) A2A Energia S.p.A. to remove the profiles of possible unfairness in relation to the manner in which the offers known as A2A Click, Extra2A and Prezzo Chiaro A2A are presented, requesting that all price components and other charges be indicated in any promotional communication, in particular where such components may be discretely quantified by the supplier. At the same time, for similar (and in some cases additional) profiles, the AGCM opened 13 investigative proceedings (which were then followed by others) against an equal number of suppliers active on the free market, which were closed in 11 cases with the adoption of commitments and in 2 with penalty measures.

In particular, with regard to A2A Energia S.p.A., the Authority found that the offer communications did not make sufficiently clear the application of the marketing costs of the raw material, although correctly mentioned in the contractual documentation. According to the preliminary assessments of the AGCM, the lack of transparency of these elements could mislead the economic behavior of the consumer, who must be able to have all the information adequate to reliably predict the amount of the overall monthly and/or annual expenditure to be incurred, right from the first submission of the offer.

In order to achieve a prompt closure of the procedure, A2A Energia S.p.A. has deemed it appropriate to make certain changes to the promotional communications relating to its supply offers, such as to make the amount of the price components discretionally defined and, in particular, the marketing charges, more evident. The company also committed to reproduce the same changes on the new website, which will go live in June 2022.

In view of the commitments proposed, the AGCM found that the possible unfairness of the commercial practice had ceased to exist and therefore, on November 26, 2021, it decided to close the proceedings.

Request for information from the AGCM with respect to A2A Energia S.p.A. concerning the use of the so-called "green claim" (PS12263)

On April 7, 2022, AGCM received a request for information from A2A Energia S.p.A. aimed at ascertaining that the company does not engage in unfair commercial practices in breach of the Consumer Code. AGCM asked to certify the truthfulness and sustainability of some of the claims used in the promotion of electricity and natural gas offers by the seller (and which appear, for example, on the website as well as being used in other distribution channels), which could unlawfully influence the economic behavior of the end customer if they were omissive or misleading.

Part of the information provided in the feedback concerns the Guarantees of Origin mechanism, which for 100% Green electricity offers allows the seller to certify the feeding into the grid from plants fuelled by renewable sources of a quantity of electricity at least equal to that consumed by the end customer subscribing to the offer.

With regard to other, more general propositions, evidence was provided of the commitment made over the years in pursuit of the objectives of sustainability and reduction of environmental impacts, which integrate the Group's values, as highlighted in the Business Plans, attesting and recalling the results achieved also with reference to the information published in the integrated sustainability reports.

7.3 Waste Business Unit

Waste Pricing Method for the second regulatory period 2022-2025 (MTR-2)

With Resolution 363/2021/R/rif, ARERA defined the criteria for recognition of the efficient operating costs for the regulatory period 2022-2025 (MTR-2), confirming the general approach that distinguished the first method and establishing the criteria for defining the access tariffs to undifferentiated waste and OFMSW treatment plants.

With reference to the municipal sanitation service, ARERA introduces some new elements mainly attributable to the need to:

- envisage a multi-year economic and financial plan (PEF) with the possibility of spreading the extra cap costs over the regulatory period and, for balances, even beyond 2025;
- strengthen incentives for the development of activities for the valorization of recovered materials and/or energy;
- configure appropriate corrective mechanisms in light of the regulatory changes introduced by Legislative Decree no. 116/2020;
- take into account the objectives of compliance with the obligations and quality standards that will be introduced by the Authority as from 2023, and the simultaneous need to guarantee coverage of the additional costs attributable to them.

In the first half of 2022, the A2A Group's municipal sanitation companies prepared the raw 2022-2025 PEF for each individual concession in accordance with the new ARERA methodology to be submitted to the municipalities for subsequent integration activities - as managers of tariff activities and relations with users - and validation as the Territorially Competent Entity (ETC). In this regard, it should be noted that the approval of the TARI resolutions (PEF-regulation-tariffs) has recently been aligned by article 43, paragraph 11, of Law Decree 50/2022 with the budget approval deadlines, if the latter are set after April 30 of each year. The approval date of the 2022-2025 PEF was extended to July 31, 2022, during the extraordinary meeting of the State City and Local Government Conference on June 28, 2022.

In most cases, in continuity with 2020-2021 and in the presence of assignments obtained after competitive tendering procedures, ETC is expected to avail itself of article 4.5 of the MTR, preserving any efficiencies and thus applying the value envisaged by the previous contracts - if lower than the maximum value of the MTR - subject to compliance with the economic-financial balance of operations.

With regard to treatment, ARERA introduces an asymmetric tariff regulation, to be determined taking into account regional governance, the degree of integration of the operator and the location of the plant with respect to the waste hierarchy. In particular, the Authority has established, as a prerequisite for the identification of regulated tariff plants - so-called "minimum" plants - the presence of a rigid market with a strong and stable excess of demand, in addition to the following alternative conditions: i) having committed capacity for flows guaranteed by sector scheduling; ii) having been identified as "minimum" during scheduling by the competent parties.

The identification of regulated plants must be carried out as part of the ETC scheduling activities (in Lombardy by the Regional Government) "in time for the determination of tariff revenues", the submission of which to ARERA was set for April 30, 2022 (ordinatory term). For plants that are not subject to tariff regulation, so-called "additional", on the other hand, publication of the "main criteria on which the fees are based" is envisaged on the Manager's website.

Resolution 68/2022/R/rif updated the WACC valuation to be used for the 2022-2025 regulatory period, based on the TIWACC criteria set out in Resolution 614/2021/R/com.

For the municipal sanitation service, without prejudice to the provisional values included in the 2022-2025 PEF subject to adjustment during the biennial update, ARERA set a rate of return on capital equal to 5.6%. The ETC may, however, consider updating the 2022-2025 PEF with the newly published WACC.

For treatment, with reference to "minimum" cycle closure plants - i.e. "intermediate" plants from which flows derive indicated as entering "minimum" cycle closure plants - ARERA set a rate of return on capital equal to 6%.

The Lombardy Region, with Council Resolution no. 5777/2021 of December 21, 2021 complied with the provisions of article 6 of Resolution 363/2021/R/rif, declaring all the undifferentiated and OFMSW treatment plants as "additional", taking into account that Lombardy is not in market conditions with

structural rigidity either for the entire municipal waste chain or for OFMSW and is, on the contrary, characterized by plant self-sufficiency and competitive gate prices. The Region has, therefore, strengthened the monitoring obligations of plant operators, reserving the possibility of revising this provision during the biennial updating of tariffs following any changes in market conditions and the adoption of the National Waste Management Plan.

With reference to the treatment plants located in Piedmont, in implementing the provisions of article 6 of Resolution no. 363/2021/R/rif, the Region identified the Villafalletto landfill and, consequently, also the adjacent Villafalletto treatment plant of A2A Ambiente S.p.A., among the "minimum" cycle closure plants located in the region, defining the "minimum" flows entering the aforementioned plants for the years 2022-2023. During the first half of 2022, the company, as operator of the above-mentioned plants, prepared the multi-year PEF as per MTR-2 and submitted it to the ETC for subsequent validation activities that are currently being finalized. Since the existing contracts with the transferors have lower gate fees than the ARERA tariff carp, no significant impact on the prevailing tariffs is expected.

With reference to the undifferentiated waste treatment plants located in Campania, Regional Council Resolution no. 190/2022 identified the waste-to-energy plant in Acerra and the mechanical biological treatment plant in Caivano as "minimum" cycle closure plants and "intermediate" plants, from which flows derive indicated as entering "minimum" cycle closure plants. By way of Executive Decree no. 235/2022, the Campania Region also approved the 2022-2025 PEF as per MTR.2 for the Acerra plant, which is managed by A2A Ambiente S.p.A. by means of a service contract "in the form of management operation".

Quality regulation of the municipal waste management service (2023-2025)

Resolution 15/2022/R/rif approved the "Consolidated text for the regulation of the quality of the municipal waste management service" (TQRIF), with the introduction from January 1, 2023 of a set of minimum and homogeneous contractual and technical quality obligations for all managements (regardless of how the service is entrusted), alongside quality indicators and related general standards differentiated by regulatory schemes, identified in relation to the actual starting quality level guaranteed to users, determined by the ETC on the basis of the services provided for in the Service Contract(s) and/or in the Quality Charter(s) in force.

The set of obligations and quality standards introduced by Resolution 15/2022/R/rif is broken down as follows:

- contractual quality: a) management of requests for activation, change and termination of service; b) management of complaints, requests for information and correction of amounts charged; c) points of contact with the user; d) methods and frequency of payment, installments and refunds of amounts not due; e) collection of waste on call; f) disruption and repair of equipment for home collection;
- technical quality: a) continuity and regularity of service; b) security service.

When approving the 2022-2025 multi-annual PEF, ETCs are required to identify the positioning of the individual management in the "Matrix of reference schemes", determining the regulatory scheme and the related obligations applicable to the management, to be valued in the definition of the forecast costs associated with compliance with the quality obligations provided by the TQRIF in the PEF 2022- 2025. Furthermore, ETCs may, on the basis of a justified proposal by the Managers, define any qualitative standards that improve or go beyond those laid down in the TQRIF.

		Provision of obligations and control instruments for technical quality (continuity, regularity and security of the service)	
		Technical quality = NO	Technical quality = YES
Provision of contract quality obligations	Quality contractual = NO	SCHEME 1 Minimum quality level	SCHEME 3 Intermediate quality level
	Quality contractual = YES	SCHEME 2 Intermediate quality level	SCHEME 4 Advanced quality level

The Resolution also introduces the obligation to adopt a single "Quality Charter for the integrated municipal waste management service" in accordance with the provisions of the TQRIF for each award, indicating the reference regulatory scheme, the service obligations, the indicators and related contractual

and technical quality standards provided for by the Authority, as well as the additional or improved standards provided for by the ETC.

Finally, the Managers are required to report - through the preparation of an electronic performance register - and communicate the data relating to the quality indicators to the Authority and the ETC, as well as publishing the following information on their website: the positioning of management within the matrix of regulatory schemes, the quality standards for which they are responsible and the results achieved in terms of compliance with these standards (from 2024), the average tariff applied to households for the integrated municipal waste management service, the breakdown of the fees applied to households and non-household users. The Authority may also proceed to publish the aforementioned information with a view to said regulation.

Incentive framework for biomethane production from OFMSW

The current biomethane incentive framework is regulated by the MiSE MD March 2, 2018 (so-called MD 2018) that provides for the recognition of a premium in the form of Consumption Input Certificates (CICs) for producers who feed biomethane into the grid exclusively for the transportation sector. For producers of biomethane and advanced biofuels (including those derived from OFMSW) there is a mechanism for withdrawal by the GSE of both the CICs due (with a fixed value of 375 €/CIC for 10 years) and the production of biomethane.

As provided for in Legislative Decree 199/2021, expected in the first half of 2022 is a MiTE MD regarding the incentive of biomethane that will extend its use not only to transport but also to other sectors (industrial, residential, tertiary and agriculture). From the draft MD circulated in November 2021, it emerged that the new support mechanism will be characterized by incentivizable quotas and competitive procedures referenced from the MDs of incentives for renewable electricity sources: the subject of the auctions will be a contract for two-way differences that will consider the difference between the tariff as a result of competitive procedures and the average monthly price of methane (including the value of the guarantee of origin). The projects that win the competitive procedures will also receive a capital contribution which, depending on the technology, may reach up to 40% of the eligible costs (relating to the expenses for the construction of the plants), thus also allocating the resources earmarked by the PNRR for the development of biomethane plants.

This new tool aims, firstly, to encourage the conversion of existing agricultural biogas plants and, secondly, the creation of new capacity always from agricultural matrix. On the other hand, new plants fuelled by OFMSW appear to be heavily penalized, for which the incentive tariff has been significantly reduced compared to that provided for in the previous MD 2018.

During the first half of 2022, A2A Ambiente S.p.A. obtained the pre-qualification from the GSE for two biomethane production plants from OFMSW that will be incentivized with the CIC mechanism provided for by the MD 2018. The two plants are scheduled to come into operation by the end of the year. In addition, other projects are being pre-qualified with the aim of benefiting from the extension of the MD 2018 to 2023 under the new biomethane incentive MD scheme, which is expected to be published in autumn 2022.

EU Circular Economy Package

On June 14, 2018, the EU Circular Economy Package was published consisting of:
- 4 Waste Directives (Directive 2018/849 on end-of-life vehicles/waste batteries/WEEE, Directive 2018/850 on landfills, Directive 2018/851 on waste, Directive 2018/852 on packaging);
- 1 Regulation on the approval and market surveillance of vehicles.

The measures are aimed at promoting the application of the waste hierarchy (prevention, reuse, recycling, energy recovery, landfill) also through appropriate legislative and financial instruments, and in this context, some common objectives are set for the European Union:
- recycling of at least 55% of municipal waste by 2025. This portion is destined to rise to 60% by 2030 and to 65% by 2035;
- recycling of 65% of packaging waste by 2025 (70% by 2030) with material-specific targets.

The Directives also introduced the obligation to collect organic waste separately or ensure recycling from the end of 2023 and set a binding target of reducing landfill disposal: Member States will have to ensure that recyclable waste is no longer transferred to landfills in 2030 and that as of 2035, the total portion of municipal waste destined for landfills does not exceed 10%.

Central to the application of the waste hierarchy is the strengthening of Extended Producer Responsibility (EPR), by means of which producers are called upon to participate in the organizational and financial management of the life cycle phase in which the product becomes waste, contributing at least to 80% of the costs of collection, recovery and disposal of packaging placed on the market.

Among the main acts transposing the Directives, particular mention should be made of the following:
- Legislative Decree September 3, 2020, no. 116, on "Implementation of Directive (EU) 2018/851 amending Directive 2008/98/EC on waste and implementation of Directive (EU) 2018/852 amending Directive 1994/62/EC on packaging and packaging waste";
- Legislative Decree September 3, 2020, no. 121, on "Implementation of Directive (EU) 2018/850, amending Directive 1999/31/EC on waste landfills"

Legislative Decree September 3, 2020, no. 116, implementing Directive (EU) 2018/851 amending Directive 2008/98/EC on waste and implementing Directive (EU) 2018/852 amending Directive 1994/62/EC on packaging and packaging waste

In Italy, Legislative Decree 116/2020 implements two Directives of the EU Circular Economy Package, substantially amending part IV of Legislative Decree 152/2006 (TUA), in particular:
- Title I Waste management - Chapter I General provisions
- Title I Waste management - Chapter III Integrated waste management service
- Title II - Packaging management
- Title VI Penalty system and final provisions - Chapter I Penalties

The measure brought forward to December 31, 2021 the obligation to separately collect organic waste or ensure its recycling.

The amendments made effectively eliminate the category of "assimilated waste", referring to the domestic perimeter both the flows in the municipal waste categories (specified in article 183, paragraph 1, letter b-ter of the TUA) and the "waste similar in nature and composition" based on the type (Annex L-quater of the TUA) and the activities (Annex L-quinquies of the TUA) that generate them. The achievement of the recovery obligations introduced by the Directive is calculated on the basis of these flows. This intervention, which could contribute to overcoming the lack of homogeneity in the definition of urban flows among the various territorial areas, seems however to require further operational clarification regarding categories that cannot be univocally classified (e.g. waste from construction and demolition, from canteens and offices located in industrial buildings) and a possible integration of the current perimeter of municipal privatizations.

Special waste is instead listed in article 184, paragraph 3, of the TUA and, in continuity with the past, also include waste from recovery and disposal activities. A number of relevant definitions have also changed, including "waste management", "recovery of material", "temporary storage prior to collection", and the provisions relating to temporary storage, classification, and criteria for admissibility of waste in landfills have been amended.

A revision of the regulations on waste traceability is also planned, with the advent of the RENTRI. The new traceability system will be integrated into the National Electronic Register established following the conversion of Law Decree 135/2018 and will be managed by the National Register of Environmental Managers.

Furthermore, the Extended Producer Responsibility (EPR) is carefully regulated, reinforcing the institution (one of the cardinal principles of the reform) and with a view to progressively opening up consortium systems to competition. Under the new provisions, the EPR systems will have to cover at least 80% of the total cost of managing the waste released for consumption, without prejudice to the definition, after consulting ARERA and therefore in line with the MTR, of the permissible "efficient cost" level.

Legislative Decree 116/2020 finally entrusted to the Ministry of the Environment (today MiTE), with the technical support of ISPRA, the definition of a "National Waste Management Program" (PNGR) that defines the criteria and strategic guidelines to be followed by the Regions and Autonomous Provinces in drawing up regional waste management plans. The PNGR, which is part of the reforms envisaged in the PNRR, was approved on June 24, 2022 by Ministerial Decree no. 257, valid from 2022 to 2028, and provides for: the reconnaissance of EU and national targets, the reconnaissance of urban and special waste management and the plant framework, strategic actions to close the gaps for strategic homogeneous waste streams, criteria and guidelines for the preparation of regional plans, criteria for the definition of macro-areas, and program monitoring mechanisms.

Legislative Decree September 3, 2020, no. 121, implementing Directive (EU) 2018/850, amending Directive 1999/31/EC on waste landfills

Legislative Decree 121/2020 implements another of the Directives of the EU Circular Economy Package and introduces new organic regulations on the landfilling of waste, making amendments to Legislative Decree January 13, 2003, no. 36 on topics such as:

- landfill acceptance criteria for certain classes of waste;
- basic characterisation and acceptance procedures, including arrangements for on-site verification and waste sampling and analysis;
- construction and management criteria for landfill facilities.

Legislative Decree provides for a gradual reduction in the amount of waste sent to landfills (no more than 10% by weight of municipal waste by 2035) and introduces a ban on the landfilling of separately collected waste intended for recycling or preparation for reuse. The landfilling of all waste suitable for recycling or other recovery, in particular municipal waste, will also be banned from 2030, except for waste for which landfilling produces the best environmental outcome.

Piedmont DCR no. 200 - 5472 of March 15, 2022: approval of the Regional Environmental Energy Plan (PEAR)

The Piedmont Region has approved the PEAR, which is divided into four macro-areas, each of which contains guidelines for achieving certain objectives. In particular, the following are noted:

- photovoltaic: the PEAR guidelines state a preference for plants that do not involve land consumption, with the exception of those involving the reuse of areas at least temporarily encumbered by land use constraints, such as post-mortem waste landfills, as well as for systems on roofs and roofing accompanied by remediation actions with respect to the presence of asbestos. With regard to ground plants, in anticipation of a forthcoming sharp increase in applications for authorizations, the Plan guidelines tend to favor solutions that valorize already sealed surfaces that are abandoned and not otherwise usable, such as the yards of disused industrial areas;
- biomethane: preference for biomethane production in plants fuelled by OFMSW. The PEAR also emphasizes the need to promote the simultaneous material and energy recovery achievable through the integration of anaerobic digestion and composting plants, thus respecting the waste hierarchy. In agriculture, the production of biomethane in plants fed primarily with vegetable waste, crop residues, by-products and livestock manure is to be preferred;
- areas and sites that are unsuitable for the installation of plants for the production of electricity from renewable sources: this defines unsuitable and attention areas for the location of wind power plants, biomass-fuelled electricity production plants, hydroelectric plants and ground photovoltaic plants.

Regional Law (Lombardy) no.8 of May 20, 2022: first legislative revision law 2022

The Region of Lombardy has issued the first law revising the regulations in force, which amends article 27, referring to sanctions in the area of civil thermal plants, of Regional Law 24/2006 - Rules for the prevention and reduction of emissions into the atmosphere to protect health and the environment. In particular, the act provides that:

1. failure to comply with the obligation of the person in charge of the plant to keep the plant logbook shall entail the application of a pecuniary administrative sanction ranging from 100 euro to 600 euro;
2. the administrator of a condominium served by a centralized heating system and, where delegated, the third-party responsible, each within the scope of related competence, who fail to inform the municipality or the province of the appointment, on the basis of the powers provided for respectively in articles 27(1)(d) and 28(1)(c) of Regional Law no. 26/2003, shall incur an administrative penalty of between 100.00 euro and 600.00 euro;
3. failure to comply with the obligations of the installer or maintenance technician concerning the registration of the heating system shall result in the application of a pecuniary administrative sanction ranging from 50.00 euro to 300.00 euro;
4. failure to comply with the obligations of the installer or maintenance technician concerning the sending of the declaration of maintenance of the heating systems or even of the registration of the systems shall result in the application of a pecuniary administrative sanction ranging from 10.00 euro to 100.00 euro. The same sanction shall be increased, in the minimum and maximum amounts, by 50%, if sent more than 30 days after the due date and, in the minimum and maximum amounts, by 100%, if sent more than 90 days after the due date.

Lombardy Regional Law no. 9 of May 20, 2022: Simplification Law 2022

With a view to simplification, the Lombardy Region has enacted this law stipulating that:
- in the context of landfills excluded from the location criteria set forth in article 8, paragraph 7, of Regional Law no. 12 of July 12, 2007, permanent safety measures must be implemented consistently with the environmental protection objectives set forth in Legislative Decree 36/2003;
- in case of non-compliance with the obligation to compile ORSO data, the sanctions are lowered from 100.00 euro to 1,000.00 euro (previously from 1,000.00 euro to 10,000.00 euro).

Lombardy Regional Council Resolution no. XI/6408 of May 23, 2022, approving the update of the Regional Waste Management Program (PRGR), including the Regional Program for the Remediation of Polluted Areas (PRB) and the related documents envisaged by the Strategic Environmental Assessment (SEA) "Plan Towards a Circular Economy"

With this DGR, Lombardy approved the update of the PRGR including the PRB.
The PRGR contains development scenarios up to 2027 for both municipal waste and special waste, defining specific targets and implementation tools, which aim to favor effective recycling processes and limit the construction of new landfill volumes. It is envisaged that the Provinces and the Metropolitan City of Milan will identify suitable and unsuitable areas for the location of municipal and special waste recovery and disposal plants. The PRGR is also accompanied by the location criteria to be applied for new plants and modifications of existing plants, to be applied to requests submitted after May 27, 2022. The PRGR also includes a chapter dedicated to the specific competences attributed to ARERA on municipal and assimilated waste as of 2018.

One addition concerns the power of the competent authorities following the identification of areas with an exclusionary criterion. They may check, during renewal or review for renewal purposes, existing permits that provide for the management of waste recovery/disposal plants located in these areas, following a certain procedure.
The following are subject to locational criteria:
1. landfills - (operations: D1, D5);
2. incineration plants - (operations: D10, R1);
3. waste treatment plants (operations: D2, D3, D4, D6, D7, D8, D9, D12, D13, D14, R2, R3, R4, R5, R6, R7, R8, R9, R11, R12);
4. storage (R13), preliminary storage (D15), volumetric adjustment without change of EER codes.

The following are instead not subject (non-exhaustive list):
1. municipal waste separate collection centres;
2. storage (R13), preliminary storage (D15), volumetric adjustment without modification of the EER codes functional to the prevailing industrial and commercial activities, operated within the same settlement, to be assessed on a case-by-case basis by the competent authority;
3. within the perimeter of municipal waste water treatment plants, the treatment of sludge, waste from the treatment of municipal waste water, waste from the treatment of municipal waste water treatment sludge (including ash), liquid waste and biodegradable organic waste;
4. extensions of existing recovery plants for an area not exceeding 10% of the surface area of the plant being extended, exclusively for activities aimed at improving recovery activities in the perspective of the circular economy and only once during the period of validity of this plan update;
5. new waste recovery plants, in the perspective of the circular economy, on the perimeter or in areas adjacent to existing production or waste treatment plants, dedicated exclusively to the final recovery (operations R1 to R11) of the waste decaying from these plants, for a surface area of no more than 50% of the adjacent plant and, in any case, no more than 50,000 square metres.

The PRB aims to outline an updated overview of the critical issues present in the regional territory and to propose a set of actions to be implemented, in the short and medium term, aimed at guaranteeing and improving the performance of reclamation procedures and at pursuing more effectively the general objective of eliminating, containing or reducing polluting substances so as to prevent and limit the risks to health and the environment connected with soil contamination, restoring to new uses and functions portions of the territory that are currently compromised.

7.4 Smart Infrastructures Business Unit

Starting in 2022, update WACC for infrastructure services in the electricity and gas sectors

Resolution 614/2021/R/com defined the criteria for updating the WACC for infrastructure services in the electricity and gas sectors in the period 2022-2027, confirming the main characteristics of the regulatory mechanisms in place (real pre-tax WACC, regulatory period of 6 years divided into two three-year sub-periods, calculation formula based on the Capital Asset Pricing Model). However, significant additions are introduced in the methods for both updating and definition of the individual elements that make it up:

i. trigger mechanism in the first three years: annual update, should there be a change in the WACC, for at least one service, equal to or greater than 50 bps compared with the value in force, considering certain specific market parameters (ref. nominal Risk Free parameters, isr inflation incorporated in the Risk Free, SPREAD and iBoxx BBB index). In this case, the WACC value would be updated for all services;
ii. ke (cost of equity): elimination of the currently existing floor (0.5%) for risk-free assets and the introduction of corrective measures aimed at intercepting actual market conditions (CP - Convenience Premium; FP - Forward Premium and UP - Uncertainty Premium) with a forward-looking and financial approach;
iii. kd (cost of debt capital): a shift was made from industry benchmarks (i.e., collection and analysis of the actual cost of debt of Italian operators) to market benchmarks (i.e., iBoxx indices representing the yield of bonds issued by BBB-rated companies), including a weighting between the cost of existing debt (85%) and that of new debt (15%). A gradual mechanism was also introduced, whereby the new method of calculating Kd is given a weight of 33.3% in the first three-year period 2022-2024 and 66.6% in the second three-year period 2025-2027.
iv. decrease in the cost recognized to cover taxation, by reducing the tax parameter T from the current 31% to 29.5%.

The Authority confirmed the gearing values while for the βasset (parameter that measures the riskiness of the specific sector), it introduced an extraordinary update in force in the three-year period 2022-2024 only for infrastructural services that currently have a value lower than 0.4.

	WACC 2022						WACC 2021
	βasset coefficient	Weight of equity and debt capital (Gearing)	Rate of return on equity (Ke)	Rate of return on debt capital (Kd)	Correction factor (F)	Rate of return on invested capital (WACC)	Rate of return on invested capital (WACC)
Electricity transmission	0.370	0.50	5.08%		0.41%	5.0%	5.6%
Electricity distribution and metering	0.400	0.50	5.39%		0.41%	5.2%	5.9%
Storage	0.506	0.50	6.49%	1.86%	0.41%	6.0%	6.7%
Regasification	0.524	0.50	6.67%		0.41%	6.1%	6.8%
Gas transport	0.384	0.50	5.23%		0.41%	5.1%	5.7%
Gas distribution and metering	0.439	0.44	5.40%		0.45%	5.6%	6.3%

New tariff regulation criteria based on total expenditure (ROSS base)

Resolution no. 271/2021/R/com initiated a procedure aimed at defining a new method for calculating recognized costs that goes beyond the current hybrid approach of rate of return for capital costs and price cap for operating costs, adopting one based on total expenditure, i.e. considering both operating and capital costs together. The process for adopting the new approach (defined as Regulation by Expenditure and Service Objectives - ROSS) must be completed by December 31, 2022 and has the following main objectives:

- realignment of efficiency incentives so that they extend to total efficiency and are no longer limited to operating costs;

- use of capitalization rates set by the regulator, differentiated for each service, to be applied to the total recognized expenditure so as to determine both the recognized capital expenditure (which increases the invested capital) and the recognized operating costs;
- provision of mechanisms to monitor returns on investment in order to assess the extent to which actual returns achieved deviate from those determined by the regulator;
- homogenize the criteria for regulating various infrastructure services, avoiding misalignments in returns on invested capital caused by differences in the treatment of specific operating and capital cost items. In this context, the profiles relating to the definition of the length of the regulatory period will be assessed, taking into account the overlaps between the specific periods of each service and the WACC regulatory periods.

At the end of December, DCO 615/2021/R/com was published in which the rationale of the main lines of intervention characterizing the ROSS-base solution and a timetable for the application of the new methodology to the different sectors are outlined.

2021 final and 2022 provisional reference tariffs for the distribution and metering of natural gas

Resolution 194/2022/R/gas approved the 2022 provisional reference tariffs for natural gas distribution and metering activities, while Resolution 154/2022/R/gas approved, for the same activities, the 2021 final reference tariffs.

In line with the provisions of Resolution 559/2021/R/gas, the above measures recognized, within the depreciation quota of the measure, the second and third of the five installments relating to the amounts to recover lost depreciation of mechanical meters decommissioned and replaced with electronic meters (IRMA).

Value of GAS RAB underlying provisional reference tariffs 2022 millions of euro	Unareti (1)	ASVT	LD Reti (1)	RetiPiù	ACSM-AGAM Group (1)(2)	Total
Centralised Cap.	45	1	10	12	9	77
RAB Distribution	773	11	160	129	143	1,216
RAB Measurement	122	2	23	36	27	210
Total	**940**	**14**	**193**	**177**	**179**	**1,503**

(1) The RAB values of Unareti S.p.A., LD Reti S.r.l. and the ACSM-AGAM Group are affected by the sale, in the first quarter of 2022, of numerous locations, as well as of Serenissima Gas S.p.A., to Romeo Gas S.p.A..
(2) Includes Lereti S.p.A. and Reti Valtellina Valchiavenna S.r.l.. The RAB values of Lereti S.p.A. are expressed net of the 4 locations (Varese, Brizio, Casciago and Lozza) where the assets are owned by the municipalities.

The 2022 provisional tariffs are affected by the decline in the WACC (5.6% vs. 6.3%), as well as by the activation, as part of the price-cap mechanism for updating the recognized operating costs and effective - retroactively - in 2021, of the so-called Y-Factor (+0.9%) in order to cover the source charge caused by the introduction of the so-called Single fee replacing TOSAP/COSAP.

With reference to the DCVER component to cover operating costs relating to metrological verifications, zeroed as from 2018, as from 2020, the Authority has provided for a specific mechanism of advance payment with a subsequent balance to be made once the net costs actually incurred have been defined. The issue of the relevant resolution by the Authority is currently awaited.

Similarly, operating costs not already covered by tariffs relating to remote management/remote metering and concentrators of electronic gas meters will continue to be recognized on an ex post basis until 2022, within a decreasing annual limit (2020: 4.24 euro/PdRsmart; 2021: 3.74 euro/PdRsmart; 2022: 3.24 euro/PdRsmart) and net of a flat-rate deduction for the portion of remote metering/remote management operating costs already included in the reference tariff of metering (as of 2020 0.53 €/PdR). The collection of requests for the recognition of costs for the year 2021 will start by the end of 2022.

With specific reference to Unareti S.p.A., the 2022 provisional tariffs do not take into account the transition to ATEM-based management of the Milan 1 area that occurred as of March 1, 2022 and, consequently, are calculated using the tariff criteria applicable to municipal management. However, the admitted revenues actually recognized under the 2022 equalization mechanism (i.e. at the end of 2023) will be equal to the average, weighted for the days of each management, of the revenues calculated with the municipal criteria and those calculated with the scope criteria.

Determination of the Amounts for the Recovery of the Lost Depreciations of the mechanical meters decommissioned and replaced with electronic meters (so-called IRMA)

Resolution 559/2021/R/gas closed a lengthy procedure aimed at identifying the method of valuing IRMA, generated by a discrepancy in the useful lives used to calculate the residual depreciation of mechanical G4/G6 gauge meters decommissioned as they were replaced with electronic meters in compliance with the provisions dictated by the Authority.

ARERA adopted Resolution 287/2021/R/gas and subsequently, Determination 3/2021 DIEU was issued establishing:

- that the disposals of traditional meters replaced by electronic ones should be represented in the RAB GAS tariff collections using the FIFO method applied to gross historical values and that, as a result, it would be necessary to re-acquire the 2014-2019 disposals data previously reported so as to ensure the uniformity of application of this criterion among operators;
- the technical modalities, the re-acquisition of data and the formulas for calculating IRMA on the entire fleet of G4/G6 mechanical meters existing as of December 31, 2019 and for meters decommissioned in the period 2014-2019.

As a result of the specific data collection for the re-acquisition of the 2014-2019 disposals, the IRMA recognized to the A2A Group's distributors amounted to approximately 6 million euro and will be paid in 5 installments included in the allowed revenues for the years 2020 to 2024, of which the first 3 installments have already been recognized in the tariffs 2020 (restated by the aforementioned resolution), 2021 and 2022.

Tariff regulation for the natural gas distribution and metering service 2020-2025

Resolution 570/2019/R/gas approved the RTDG 2020-2025, which defines the regulatory framework for gas distribution and metering service tariffs for the years 2020-2025 (5th regulatory period). Although the characteristics of the previous regulation are confirmed, the main amendments can be summarized as follows:

- operating costs recognized: update of operating costs recognized from 2020 using the average (50:50) between the actual costs of 2018 and the costs recognized in the same year as the basis of calculation. The update was carried out using the price cap method taking into account, in addition to the inflation, also an X-Factor differentiated by activity (distribution, marketing and metering) and, limited to distribution, operator size (large, medium, small). Compared to the previous period, there has been a considerable decrease in recognized operating costs and an increase in X-Factors relating to distribution and marketing, while the previous level is confirmed for metering;
- capital costs: revision of the β parameter in the calculation of the WACC of metering in order to align the recognized return with that in force for distribution (5.6% for 2022). For calculating the invested capital subject to remuneration, as well as the related amortization, a specific mechanism is defined for the gradual release, over a long period of time that goes beyond the individual regulatory period, of the amount of contributions existing at December 31, 2011, which was not considered in defining tariffs.

Unareti S.p.A. challenged Resolution 570/2019/R/gas with the Regional Administrative Court highlighting the lack of investigation and the significant impact, unforeseen and not adequately justified, on the economic-financial balance. Within the framework of the aforementioned appeal, the verification activity, requested by the claimants (including Unareti S.p.A.), was concluded on March 30, 2022 with the filing of the Report containing the results of the analyses carried out by the Verifiers. Following this, hearings were held between April and June to discuss the cases before the Regional Administrative Court, whose rulings are expected shortly.

Security and quality regulation for the natural gas distribution and metering service 2020-2025

Resolution 569/2019/R/gas approved the RQDG 2020-2025, which defines the regulatory framework regarding technical and commercial quality, of the gas distribution and metering service for the years 2020-2025 (5th regulatory period). In general, the characteristics of the regulation in force were confirmed, including the premium mechanisms for the incentive of security recoveries, for which the Authority, with Resolution no. 463/2020/R/gas, fixed the new levels and introduced some further refinements aimed at monitoring and stimulating the improvement of some specific aspects, such as the pressure and cathodic protection of the networks, the average residual life of the network and the timely elimination of dispersions within the timing established by the technical standards in force (which have become a new

service obligation). As far as commercial quality is concerned, the only significant difference concerns the way in which the supply pressure check is carried out at the request of the user.

During the first months of 2022, the Authority, together with the Special Unit of the Guardia di Finanza, carried out 2 inspections on the safety of the natural gas distribution service at Retipiù S.r.l. and Azienda Servizi Valtrompia S.p.A.. In particular, the inspections focused on compliance with the regulatory provisions on Gas Emergency Assistance and Gas Emergency Assistance Switchboard for the year 2020. To date, we are awaiting the communication of the preliminary findings by the Authority's offices.

Start of management of natural gas distribution service in the Milan 1 area

On December 16, 2021, Unareti S.p.A. signed the service contract for the management of the natural gas distribution and metering service in the Milan 1 - City and Plant area of Milan, following the award of the tender issued by the competent Contracting Authority (Municipality of Milan).

The area management started on March 1, 2022 and from that date, the improved conditions offered by the Company in the tender will also be applicable to the end customers of the area. The transition to area-based management also entails the application of new and specific tariff rules for the calculation of the allowed revenues of the localities included in the area. The main differences with respect to the tariff rules applicable to locations managed on a municipal basis are (i) the increase in the useful life of distribution assets and (ii) the reduction to zero of the X-Factor for 2 annual updates of the parametric unit tariff fee to cover operating costs.

Tariff regulation for the natural gas transport and metering service 2020-2023

Resolution 114/2019/R/gas approved the rules applicable to natural gas transport tariffs for the period 2020-2023 (5th regulatory period - new RTTG). The main introductions are:

- definition of eligible revenues: the method adopted, similar to the previous one, provides for the calculation of eligible revenues as the sum of the (i) return on net invested capital (WACC 2021: 5.7%), (ii) portion of amortization (useful lives substantially unchanged) and (iii) operating costs (calculated from the individual operator's actual costs as presented in the 2017 separate annual accounts). For admission to the tariff recognition of investments relating to specific interventions on the transport network, the provisions of Annex A to Resolution 468/2018/R/gas and subsequent amendments and integrations are valid, as well as compliance with criteria of cost-effectiveness and efficiency in their implementation. Incentive mechanisms for infrastructure development are also foreseen;
- recognition of costs relating to network losses, self-consumption and gas not accounted for (GNC): 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. In addition, Resolution 569/2020/R/gas introduced a mechanism for the partial adjustment of discrepancies between the quantities of GNC recognized and the actual quantities recorded in a given year;
- equalization mechanisms: in addition to the pre-existing mechanisms relating to the equalization of revenues relating to the regional network (between TSO and CSEA) and the variable unit fee (between TSO), a new monthly flow from transport companies other than Snam Rete Gas S.p.A. is introduced for the latter for the equalization of national network revenues relating to the revenues associated with the exit fees, aimed at transferring the share of revenues pertaining to the national network from the transport companies that collect the revenues deriving from the CPu fee to the companies that carry out the transport activity on the national network.

The new RTTG has provided for a new way of managing the Corrective Factors (FC) of the eligible revenues, i.e. elements that ensure, annually and for each operator, equality between the eligible revenues and the revenues actually obtained from the application of the tariffs. Until 2019, these amounts were accrued in 4 annual installments where the amount for a single year was then subtracted directly from the allowable revenues for that year. Beginning in the Fifth Regulatory Period, accrual is eliminated and the management of these differences is assigned to CSEA in the year following the reporting year where allowable revenues are not netted by that amount.

Based on the criteria set out in the RTTG, ARERA Resolution 233/2022/R/gas approved the recognized revenues and the tariff payments for the natural gas transport and metering activity for 2023, while those of 2022 had been approved by Resolution 230/2021/R/gas; in both cases, the approved tariffs are affected by the reduction in the WACC (from 5.7% to 5.1%).

RAB value of Retragas S.r.l. underlying 2022 final tariffs and 2023 provisional tariffs millions of euro	Tariffs 2023	Tariffs 2022
RAB Transport	52.4	45.9
RAB Measure	1.6	1.6
Total RAB	**54.0**	**47.5**

With regard to the evaluation of the 2021 Ten-Year Network Development Plans prepared by the operators and submitted to the Authority, Determination 3/2022 DIEU identified the list of verifiers in charge of carrying out the independent analysis of the interventions. For Retragas S.p.A., the intervention aimed at the methanization of some areas in the Autonomous Province of Trento will be verified. We are currently waiting for the contractual standard to be prepared by Terna S.p.A. and Snam S.p.A. in order to then proceed with its adaptation to the specifics of the company and the evaluator assigned to the project under review and subsequent signature thereof.

Finally, in view of the end of the current regulatory period and taking into account the timing required by European legislation, Resolution no. 617/2021/R/gas initiated the procedure for the formation of measures regarding rates and quality of the natural gas transport and metering service for the Sixth Regulatory Period, starting from 2024, and which will have to take into account the guidelines regarding "Regulation by Expenditure and Service Objectives - ROSS" (see specific paragraph).

Reorganization of gas metering activities at entry and exit points of the transport network

Resolution 512/2021/R/gas concludes the procedure aimed at reorganizing the activity of gas metering at the entry and exit points of the transport network, approving the new text containing the "Regulation of the metering service on the natural gas transport network (RMTG)", which defines the responsibilities and scope of metering and meter reading activities, minimum and optimal requirements of a plant, performance and maintenance nature, and quality levels.

The new regulation is aimed at increasing the responsibility of the various parties involved in the supply chain, defining their roles and introducing - as already provided for in many other cases - an articulated system of penalties and compensation imposed, against specific monitoring by the TSOs, on those responsible for metering activities (i.e. owners of the metering plant) and/or meter reading (TSOs to which the metering plant is connected) in order to provide them with an adequate price signal for non-compliance with certain service quality levels (in some cases, distinguished between minimum and optimal) and thus stimulating interventions aimed at adapting the metering plants, with consequent improvement of their performance, to guarantee higher quality metering data.

In 2022, a coordination activity between carriers will be started in order to proceed with the census of the measurement plants by mid-2022 and then start, from 2023, with the performance monitoring phase (and related reporting, also towards the Authority) and, from 2024, with the incentive system.

2021 final and 2022 provisional reference tariffs for the distribution and metering of electricity

Resolution 193/2022/R/eel approved the 2022 provisional reference tariffs for electricity distribution and metering service for companies serving more than 25,000 PODs, while Resolution 153/2022/R/eel approved the 2021 final reference tariffs.

As ARERA has not yet made available the detailed elements relating to the final 2021 and provisional 2022 reference tariffs for distribution and metering services, as required by Resolution DIEU 12/2020, an estimate of the RAB values is reported electric.

Value of the ELECTRIC RAB underlying the provisional tariffs 2022 millions of euro	Unareti (*)	LD Reti	RetiPiù	Reti Valtellina Valchiavenna	Total
RAB Distribution	691	59	25	16	791
RAB Measure	80	3	2	2	87
Total	**771**	**62**	**27**	**18**	**878**

(*) The RAB Measure of Unareti S.p.A. contains approximately 42 million euro of investments in 2G meters relating to 2021 as a preliminary balance that will be managed using the so-called fixed rate (i.e. Amortization and Remuneration Portion together and fixed for the entire useful life of the 2G assets and equal to 15 years), which, compared to the normal method of tariff recognition of investments, results in a different allocation of the recognition over time.

The 2022 provisional tariffs are affected by the reduction in the WACC (5.2% vs. 5.9%), as well as by the activation, as part of the price-cap mechanism for updating the recognized operating costs and effective - retroactively - in 2021, of the so-called Y-Factor (+0.9%) in order to cover the source charge caused by the introduction of the so-called Single fee replacing TOSAP/COSAP.

With regard to distributors up to 25,000 POD, Resolution 237/2018/R/eel defined the criteria for the recognition of operating and capital costs. In particular, tariffs for distribution activities are calculated using a parametric method, effective from 2018, which provides for the application of a graduation mechanism[10]. According to this methodology, the recognized opex and capex are set taking into account certain relevant quantities such as distributed energy and user density (opex) and, together with the above, the age of the networks (capex), while those for metering activities take into account a conventional profile for the installation of LV electronic meters, an average unit cost of 126 €/meter (2014 values) and an investment turnover factor set at 2% (to be applied from 2015). The last tariffs approved to date are those for the years 2016 and 2017 (see Resolutions 104/2021/R/eel and 187/2021/R/eel).

As of July 1, 2021, in order to remove obstacles to the dissemination of electric mobility, residential users with an installed capacity of up to 4.5 kW and wallboxes with certain characteristics may participate in the tariff experimentation mentioned in Resolution 541/2020/R/eel, which will enable them to withdraw up to 6 kW at night, without any additional cost to their bills.

Infra-period updating of tariff regulation of electricity transmission, distribution and metering services 2020-2023

Resolution 568/2019/R/eel approved the tariff regulation for electricity transmission, distribution and metering services for the 2020-2023 (NPR2) half-period and the related TIT, TIME and TIC[11] integrated texts. The measure, substantially in line with the criteria adopted in the first half-period 2016-2019 (NPR1), defines in particular:

- the initial levels, referring to 2020, of the cost recognized to cover operating costs, a profit sharing with symmetric distribution (50:50) between distribution companies and end users of any increased efficiencies achieved in the previous NPR1 and the productivity recovery rate (X-Factor) for the annual update. The new X-Factor applicable to electricity distribution activities is 1.3% (1.9% in the previous half-period), while the X-Factor applicable to metering activities is 0.7% (1% in the previous half-period);
- a mechanism for distributing net revenues from the joint use of electricity infrastructures for purposes other than those subject to tariff recognition (i.e., use by TELCO), which may be activated only if the amount is greater than 0.5% of the revenue allowed to cover the costs of the distribution service and managed under the equalization mechanisms already provided for by the regulation;
- incentives for aggregations between distribution companies, giving priority to smaller ones, with the possibility of using the instrument of the "Network Contract";
- a mechanism for the recovery of bad debts not otherwise recoverable relating to network tariffs access to which by distributors is subject to the fulfilment of specific conditions (refer to the specific paragraph);
- a revision of the tariff regulation for withdrawals and injections of reactive energy (refer to the specific paragraph).

10 The graduation mechanism is based on the weighted average (weight of the parametric method equal to 10% in 2018; 20% in 2019; 30% in 2020; yet to be defined for the period 2021-2023) between the individual tariff scheme and the parametric one.

11 TIT (Provisions for transmission and distribution services), TIME (Provisions for the metering service), TIC (Economic Conditions for the connection service).

Infra-period updating of quality regulation of electricity distribution and metering services (i.e. TIQE): 2020-2023

Resolution 566/2019/R/eel updated the TIQE for the regulatory half-period 2020-2023, introducing specific measures aimed at reducing service continuity gaps between the various areas of the country, through ad hoc regulatory instruments. In particular, a special voluntary regulation has been defined for the areas with the highest number of interruptions which envisages:

- the payment of a premium at the end of the period (2023), if the target level set by ARERA is reached and a penalty (equal to 1/3 of the premium) if it is not reached;
- the possibility of requesting to postpone the target year from 2023 to 2025, upon presentation by the distributor of a specific Technical Report proving the reasons in consideration of the presence of structural criticalities; if the request is accepted, the trends would be recalculated at the same time.

Resolution 431/2020/R/eel approved Unareti S.p.A.'s application to participate in the special regulation for the Milan area, with the recalculation of trends.

Moreover, with particular reference to the number and duration of interruptions, the Authority has also ordered the start of a regulation for experiments (regulatory sandbox), mutually exclusive with the special regulation, in areas identified by distributors. Without prejudice to the achievement of the target level set for 2023, the distributor has the opportunity to propose an improvement path different from that defined by the ordinary regulation, presenting innovative solutions from a technological point of view for the improvement of service quality. Also in this case it is foreseen to recalculate the trends, deactivated in the years of experimentation.

By the end of the year, the determination and disbursement of premiums and penalties relating to output-based regulation concerning the continuity of the electricity distribution service for the year 2021 is expected, taking into account, among other things, the special regulation provisions mentioned above.

TIQE: Resilience Plans for the electrical network

Title 10 of the TIQE[12] defines the scope of the electricity grid resilience obligations, the content and timing of the implementation of the action plan, and appropriate incentive mechanisms. In detail, all the main distribution companies[13] must prepare, and periodically communicate to the Authority, three-year resilience plans, integrating them through a special section in their Electricity Network Development Plan, according to modalities and timetables differentiated according to size class. These Plans must also be published on the distributor's website by June 30 each year.

A premium/penalty type economic incentive is also provided for resilience enhancement interventions based on:

- specific criteria aimed at identifying which interventions can be considered eligible for the incentive mechanism;
- a method of calculating premiums 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.

In addition to the ceiling already in force for the total net premiums of each distributor, equal to 25% of the net present value of the sum of the expected costs of all interventions, a maximum limit is expected to be applied to the premium of a single intervention, making it equal to the cost of the same in order to avoid the recognition of over-remuneration higher than the cost of the intervention already covered in RAB. Finally, with reference to the methods and timing of payment of the premiums[14] and penalties, the TIQE (article 79 quinquies.3) provides that, by December 31 of each year from 2020 to 2025, the Authority shall determine the premiums and penalties to be paid into the CSEA account "Quality of electrical services" relating to eligible interventions, with date of actual completion in the previous year.

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.

12 Integrated text of output-based regulation of electricity distribution and metering services for the regulatory period 2016-2023 (TIQE 2016-2023), as amended and supplemented by Resolutions 31/2018/R/eel, 668/2018/R/eel, 534/2019/R/eel and 432/2020/R/com. Said Resolution, following the COVID-19 epidemiological emergency, defined the postponement of one semester for the conclusion of only the interventions included in the 2019-21 Plan.

13 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.

14 Resolution 566/2019/R/eel subsequently established that premiums for increasing the resilience of distribution networks will be financed by the MV Users Fund.

Following the publication by the MiTE of the Public Notice of June 20, for the submission of intervention proposals aimed at improving the resilience of the electricity distribution network to be financed under the PNRR, Resolution 283/2022/R/eel was adopted, which postponed to September 30, 2022 the submission to ARERA and the simultaneous publication by the distributor of the 2022-2024 Resilience Plan including the new interventions. Therefore, by June 30, 2022, Unareti S.p.A. only sent the final statement of the progress of the interventions already admitted by the Authority to the premium/penalty incentive mechanism for increasing resilience, both for the interventions concluded in 2021 and for those being realized.

Resolution 121/2022/R/eel initiating proceedings for the implementation of Legislative Decree 210/2021 to be completed by September 30, 2022 suspended the deadline of June 30, 2022 for electricity distribution companies to prepare their network infrastructure development plans.

Pursuant to art. 79 septies.2 of the TIQE, LD Reti S.r.l. and RetiPiù S.r.l., although obliged from 2020 to publish the section dedicated to the Resilience Plan on their website, have opted for deferred participation in the rewards/penalties mechanism, which will therefore take effect from 2022.

Remediation of the old riser columns of the electricity distribution network in condominiums

Resolution 467/2019/R/eel defined an experimental three-year regulation, postponed by one semester following Resolution 432/2020/R/com (January 1, 2020 - June 30, 2023) on the modernization - with or without centralizing the meters - of the old riser columns of the electricity distribution network in condominiums, required of all distributors, regardless of their size in terms of POD served.

In order to overcome any reluctance on the part of condominiums to carry out such interventions, in addition to the definition of a "Model Contract", the Authority has provided an incentive mechanism whereby the distributor:

- will have to pay the condominium an amount to cover the costs incurred by the latter in relation to the demolition/restoration works (and possibly electrical works in the case of centralization) in an amount equal to the lesser of the amount actually spent and a parametric amount calculated on the basis of the number of users and the level of value of the building;
- this amount will be recognised under the tariff mechanisms[15], subject to completion by March 31, 2023[16] of the obligatory census of its old riser columns.

Unareti S.p.A. will carry out most of the interventions in the Milan area, the most critical due to the higher number of "single users" connected to the network through a riser owned by the distributor: the following are estimated, in particular, 9,500 condominium buildings with pre-1970 risers, most of which are composed of a large number of buildings that leads to quantify the presence of about 23,500 buildings with old risers in service. In Brescia, however, approximately 1,900 condominiums are estimated for approximately 2,100 buildings concerned.

In terms of inspections, the company has also defined a general schedule that envisages approximately 550 inspections per month in Milan, and about 290 in Brescia, taking into account that the deadline set by ARERA for the conclusion of the census is March 31, 2023.

Regarding the modernizations, in 2021-22 contracts were stipulated with 18 condominiums (all with centralized meters), of which 5 modernizations were completed and reported with total contributions paid equal to 136,300 euro, while there were 6 for which Unareti S.p.A. completed the works but is waiting for the finishing activities to be finalized by the condominium and the subsequent reporting. The latter will involve the disbursement of total contributions of 78,700 euro.

15 Resolution 566/2019/R/eel subsequently established that premiums for increasing the resilience of distribution networks will be financed by the MV Users Fund.

16 Resolution 566/2019/R/eel subsequently established that premiums for increasing the resilience of distribution networks will be financed by the MV Users Fund.

2G Smart Metering Systems for the metering of low voltage electrical energy and approval of PMS2 by Unareti S.p.A.

In view of the replacement of first-generation (1G) electricity meters that will have completed their regulatory useful life (15 years), Resolution 87/2016/R/eel established the functional requirements and specifications of LV electricity meters - version 2.0, as well as the performance levels of the related second-generation smart metering systems.

Resolution 646/2016/R/eel defines, for distributors > 100,000 PODs, the cost recognition methods, subsequently updated for the period 2020-2022 by Resolution 306/2019/R/eel. The main applicable provisions can be summarized as follows:

- the presence of obligations relating to the start/conclusion of the massive phase of the replacement plan. In particular, for distributors >100,000 PODs, it is assumed that the massive phase will start by 2022 with the objective of replacing at least 90% of the existing meters by 2025. The obligations for distributors < 100,000 PODs were defined by the subsequent Resolution 106/2021/R/eel;
- obligation to prepare detailed plans for the commissioning and public consultation of a 2G smart metering system (PMS2), in the manner defined by the Authority;
- determination of a single threshold of 130 €/meter for the calculation of the maximum capital expenditure condition for admission of the plan to a fast track valuation;
- specific methods for recognizing investments in 2G smart meters, with the possibility of obtaining premiums or penalties based on the degree of consistency between the unit costs actually incurred and those agreed with the Authority. In addition, a maximum number of 2G meters of first installation is provided, recognizable in tariff for each year of the plan (Conventional Plan - PCO, defined according to the tariff profile for the installation of 1G meters). In this context, a corrective mechanism for the PCO has been introduced, which is modulated so as to anticipate from the end to the beginning of the period the tariff recognition of part of the quantity of meters to be replaced;
- presence, starting from the 4th year of the plan, of a penalty mechanism in case of non-compliance with the performance levels set by Annex B to Resolution 87/2016/R/eel (% of readings collected within 24 hours and % of success of remote management operations within 4 hours). The annual penalty is based on the capital expenditure allowed for tariff recognition and the level of non-compliance. There is also provision for a penalizing mechanism in the event of non-compliance with the progress of the PMS2. There are, however, annual and multi-year ceilings on the penalties that may be imposed on the operator.

Resolution No. 106/2021/R/eel defines, for distributors serving fewer than 100,000 POD, the methods for recognizing the costs of 2G smart meters:

- mandatory installation from January 1, 2022 and mandatory commissioning by 2025 of at least 90% of the meters installed on LV active points at December 31, 2020;
- recognition of 2G investments based on an all-inclusive standard unit cost (fixed for the entire plan and equal to 145 euro to be applied to the physical quantity of 2G meters put into service in the reference year, calculated considering a maximum limit to 2G meters put into service to replace 2G meters already installed. Existing invested capital at December 31, 2021 related to 1G systems will be recognized in the tariff until the end of its remaining life, while new 1G investments will not be recognized;
- penalty mechanisms similar to those defined for larger operators are envisaged (i.e., one-off penalties for failure to make progress with the massive roll-out and penalties for under-performance of the 2G smart metering system), albeit with much more simplified application systems.

Finally, there are specific provisions for reporting both the capital and operating costs actually incurred in each year and the physical quantities of meters actually installed.

Pending the start of the replacement plans, the Authority has established the modalities for the recognition of investments in 1G meters for the years 2017-2020 (2018-2021 tariffs), and in 2G meters, carried out outside the replacement plan and relating to "ordinary user management" (see TIME 2020-2023).

As regards the A2A Group, following extensive discussions with the Offices and with Resolution no. 278/2020/R/eel, the Authority approved the 2G Plan proposed by Unareti S.p.A., which contains the replacement of around 1.3 million meters with a massive phase planned for the period 2020-2024 currently underway (the Brescia area was completed in 2021 and installation is now concerning the Milan area).

Tariff regulation of withdrawals and injections of reactive energy

Resolution 568/2019/R/eel[17] intervened on the regulation of reactive energy flows on the grids, making significant changes: In particular, minimum levels of the power factor have been defined for both withdrawals and reactive inputs, in excess of which penalties calculated on the basis of specific unit fees must be paid, to be applied to both HV and HHV end customers and to distribution companies directly connected to the National Transmission Grid, and to MV end customers and LV non-domestic customers with available power greater than 16.5 KW, and to exchange points between MV and LV distribution networks.

ARERA has, however, provided for the right, on the part of Terna S.p.A. and the distribution companies, to sign exceptions to the application of fees for excessive withdrawals and injections of reactive energy if such application determines criticalities in grid management. In compliance with the provisions of Determination 02/2021 DIEU and with a view to optimizing the investment plan to be implemented, Unareti S.p.A. started a technical discussion with Terna S.p.A. aimed at identifying the grid nodes on which to compensate the reactive energy injected/withdrawn for the areas of Milan and Brescia through the installation of power factor correction systems, also evaluating the adoption of an aggregative logic for primary substations with the same voltage level. These analyses took concrete form with the sending to ARERA, at the end of October 2021, of a "Joint Terna/Unareti Report" containing the results of the analyses carried out.

Following an intense consultation activity[18], ARERA published Determination 01/2022 DIEU, in which it defines a plan of activities to be developed in 2022 by Terna S.p.A., instrumental to the application from 2023 of a tariff approach to grid groupings with similar utility behavior, with a report to be sent to the same Authority by September 30, 2022, with the findings. Subsequently, Resolution 232/2022/R/eel provided for the postponement until April 1, 2023 of the application of the tariff fees for reactive energy fed into the F3 band for non-domestic LV end customers with power greater than 16.5 kW and for non-domestic MV end customers, as well as for interconnections between MV and LV networks.

With the above provision, it is also provided that:

I. the distribution companies directly contact up to 10% of the MV end customers with higher reactive energy input into the grid by 02/28/2023 in order to identify the technical actions necessary to mitigate this phenomenon;
II. the sales companies, for LV non-domestic end customers with power greater than 16.5 kW, report, until March 2023, in the bills (or with a separate communication) the monthly readings of the reactive energy injected starting from the first making available to the Integrated Information System (IIS) of the same and, in any case, from September 2022, as well as an informative communication - the text of which will be made available by ARERA - relating to the fees for reactive energy injected. Finally, for non-domestic MV end customers, the same companies have to submit a specific disclosure on the fees for reactive energy fed in by March 2023.

Finally, in order to provide certainty to all stakeholders, Resolution 281/2022/R/eel extended until December 31, 2022 the existing tariff charges for excessive withdrawals of reactive energy applicable to end customers and interconnection points between high-voltage and extra-high-voltage grids, which were not dealt with in Resolution 232/2022/R/eel.

Instruments to protect distributors' credit: general system overheads and network overheads

Since 2016, ARERA, as a result of the insolvencies accounted for by some sales companies and the litigation involving the Standard Network Code for the transport of electricity (i.e. CTTE) on the issue of financial guarantees to be submitted to cover General System Charges (OGS), has undertaken several initiatives aimed at strengthening the credit protection of distributors, in particular, by introducing mechanisms for the reinstatement of credits not otherwise recoverable related to OGS (see Resolution 50/2018/R/eel) and Network Charges (OdR, see Resolution 461/2020/R/eel).

Subsequently, the Authority, also in order to improve the efficiency of these mechanisms and to move from extraordinary mechanisms to an ordinary mechanism, with Resolution 119/2020/R/eel established a single mechanism aimed at guaranteeing the reinstatement of credits not otherwise recoverable relating

17 As amended by Resolution 395/2020/R/eel, which moved by 1 year, i.e. to January 1, 2022, the entry into force of the provisions set forth in Resolution 568/2019/R/eel in light of the emergency from COVID-19. This date was further postponed to December 31, 2022 as a result of Resolution 282/2022/R/eel.

18 This work was carried out within the framework of DCO 515/2021/R/eel and the Standard Electricity Metering Working Group functional to the exchange of reactive energy billing data, the outcome of which was published on January 28, 2022.

to both the OGS and the OdR. This mechanism provides for the possibility of applying for participation on an annual basis, contains criteria for the eligibility of claims that are quite similar to those under the previous mechanisms, but also specifies the eligibility of claims relating to transport contracts that have not been terminated due to the regulatory provisions applicable in cases of corporate crisis. In addition, with specific reference to OdR, there is an exemption (equal to 10%) and a minimum threshold (0.25% of the allowed revenues relating to the distribution and measurement of electricity) to the amounts of which the reinstatement must be requested annually.

Lastly, Resolutions 261/2020/R/eel as amended and 490/2020/R/eel made urgent additions to the CTTE concerning the provision of guarantees and the handling of defaults, with the aim of strengthening the protection of distributors. In particular, limiting provisions have been introduced to the forms of credit rating and acceptable insurance sureties.

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.

Distributors can fulfil the obligation by directly realizing energy efficiency projects that entitle the issue of WC or by purchasing the certificates from other entities that generate them on the 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 following table shows the energy saving targets defined by the MiSE MD May 21, 2021.

		Targets for electricity distributors(1)	Targets for gas distributors(1)	Minimum Target (2)	Period to compensate the residual obligatory portion(2)
		Millions of WC	Millions of WC	(%)	(no. years)
Ministerial Decree January 11, 2017	2020	3.17	3.92	60%	2
Ministerial Decree May 21, 2021	2020	1.27	1.57	60%	2
	2021	0.45	0.55	60%	2
	2022	0.75	0.93	60%	2
	2023	1.05	1.3	60%	2
	2024	1.08	1.34	60%	2

(1) Obliged 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 (60%) may offset the residual portion in the following two-year period (n+2) without incurring penalties.

MD May 21, 2021 amended MiSE MD January 11, 2017 (as updated by MD May 10, 2018), by providing:
- a significant reduction in 2020 obligations, the postponement of the 2020 obligation year deadline to July 16, 2021, and the definition of obligations for the 2021-2024 regulatory period;
- the establishment of a cap for the tariff contribution defined by ARERA, taking into account the trend of WC prices on the market and those recorded in bilateral trades;
- the issuance of WC to the overrun by the GSE to distributors that request it at a value equal to the difference between 260 €/WC and the value of the tariff contribution for the year of obligation, up to a maximum delta of 15 €/WC and setting a floor of 10 €/WC.

The obliged parties can request the WC to the overrun until the minimum obligation is reached and to cover the residual amounts of obligation expiring, provided they are already in possession of a WC amount of at least 20% of the minimum obligation on their ownership account. For the cancellation of these WC, 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 obligation year, and within two

years following the expiry of the obligation. However, it is not possible to proceed with the redemption in the same obligation year in which the WC were issued.

WC cancelled in lieu of the GSE ones are paid the current year's tariff contribution and the refund of the amount paid to the GSE is made through tariff contribution adjustment.

The new MD also introduces a system of incentives for savings through downward auction procedures, which were expected to be defined by MiTE MD by December 31, 2021.

The obligation year 2021 ended on May 31, 2022. After years in which the scarcity of TEE conditioned market outcomes by pushing up quotations, the reduction of obligations introduced with the Ministerial Decree of May 21, 2021 rebalanced supply and demand.

The table shows the obligations of the A2A Group companies for the year 2021, all of which had been met by the end of May 2022, while the targets for the obligation year 2022 (June 1, 2022 - May 31, 2023) have not yet been communicated by ARERA.

Obliged Party	TEE obligation 2021
Unareti S.p.A.	46,979
Lereti S.p.A.	10,449
LD Reti S.r.l.	12,411
RetiPiù S.r.l.	6,205
Total	**76,044**

Resolution 292/2022/R/efr set the tariff contribution for the 2021 compulsory year: the unit tariff contribution is 250 €/TEE while the additional unit fee is 3.44 €/TEE, thus totalling 253.44 €/TEE.

As provided for in the Ministerial Decree of May 21, 2021, the MiTE Directorial Decree of May 3, 2022 adopted the new guidelines for interventions accessing the WC mechanism. In summary, the number of interventions that will be eligible for TEE is extended, and new forms are provided for final projects (among which there is a form dedicated to the connection of new users to efficient district heating systems[19]) and some interpretative doubts on certain types of intervention are clarified (including the installation of turbo-expanders on gas transport and distribution networks).

Charging infrastructure for electric mobility

The Ministry of infrastructure and sustainable mobility is currently reviewing the PNIRE (National Infrastructure Plan for the Recharge of Electric Vehicles), which defines the guidelines for the development of recharging infrastructures (IdR) for electric vehicles in Italy. Given their increasing deployment (the PNIEC estimates 6 million vehicles by 2030) and the consequent increase in IdR, not only will the energy required increase but, through IdR, electric vehicles will be able to provide services to the grids as the batteries have the ability to deliver both feed-in and absorption quickly.

With reference to recharging in the private sector, Resolution 541/2020/R/eel provided for the possibility for domestic users (or other LV users) with contractually committed power between 2 kW and 4.5 kW, connected to a recharging system for electric vehicles, to withdraw up to 6 kW at night, on Sundays and on all public holidays, without additional fees related to the increase in power. This trial was granted for the period July 1, 2021 through December 31, 2023.

In April 2021, the Authority published a clarification, in which it regulates the possibility that, in the same real estate unit, POD intended for the recharging of electric vehicles may be installed in the name of third parties - such as CPO, Charging Point Operators - with respect to the owner of the main POD. Operators are therefore allowed to intercept several end customers through a single POD, exploiting the savings deriving therefrom (sharing of fixed components, synergies on maximum power and connection costs).

19 On July 1, A2A Calore & Servizi filed an appeal with the Regional Administrative Court of Lazio for the annulment of the Executive Decree of May 3, 2022, contesting the unlawful exclusion of co-generated heat from the formula that calculates energy savings for the purpose of issuing WC and believing that, in this way, the provision of the Ministerial Decree of May 21, 2021, which would incentivize the connection of new users to TLR networks, was weakened. For the company, in fact, co-generated heat is the predominant component compared to other types of heat production.

With the approval of Legislative Decree no. 199/2021, there are some changes regarding the installation of publicly accessible IdRs. In particular:

- some interventions have been introduced to simplify the authorization process;
- the possibility was introduced for municipalities to provide for the installation of at least 1 recharging point for every 6 electric vehicles registered;
- the provision was amended of Law Decree of July 16, 2020 (so-called "Simplification Decree") relating to the definition of ad hoc tariffs for electric recharging by ARERA which, within six months of the coming into force of the above-mentioned Legislative Decree, would have had to define tariff measures applicable to IdR accessible to the public in order to encourage the spread of electric vehicles. These measures should also provide for a discount on the components covering general system charges, on condition that they are compatible with EU regulations on state aid, are of a transitional nature and that the entire tariff benefit is passed on to the end customer.

The Ministerial Decree of the Ministry of Economic Development of August 25, 2021 concerning the Granting of contributions for the installation of infrastructures for the recharging of electric vehicles carried out by individuals in the exercise of business, arts and professions, as well as by persons liable to corporate income tax (IRES)" governs the granting and disbursement of capital contributions aimed at supporting the purchase and installation of IdR carried out by companies and professionals (i.e. amount of 90 million euro).

Resolution no. 174/2021 of the Transport Regulatory Authority (ART) placed for consultation the guidelines for the tender procedures/standard tenders for the assignment of, among others, compressed natural gas and liquefied natural gas distribution services, as well as recharging for electric vehicles, which motorway concessionaires are obliged to comply with for both new and existing concessions. ART Resolution no. 53/2022 initiated a second consultation, taking on board some of the Group's comments also highlighted during the hearing held on February 1, 2022. The conclusion of the proceeding was postponed to October 28, 2022. At the same time, ART initiated, with Resolution 59/2022, a proceeding aimed at defining the minimum content of the rights that users may demand from motorway concessionaires and service area operators on the motorway networks: in this case too, A2A E Mobility S.r.l. participated in the cognitive survey, providing its own contribution with regard to the part dedicated to the IdR.

In May 2022, the MiTE placed for consultation the outline of the DM on the allocation of PNRR funds for the development of IdR in order to allocate the 741 million euro earmarked for the development of ultra-fast columns in suburban areas (250 kW, 7,500 IdR) and fast columns in urban areas (100 kW, 13,755 IdR). The resources will be allocated through competitive procedures (one per year in the period 2022-2024), with the first call expected to open in December 2022. In addition, there will be a separate contingent for the allocation of the remaining resources (around 20 million euro), which will be earmarked for the construction of recharging infrastructures with a high degree of innovation (primarily the use of storage systems).

Activities of ARERA in the regulation and control of the Integrated Water Service (SII)

Approval of the Water Tariff Method for the third regulatory period 2020-2023 (MTI-3)

Resolution 580/2019/R/idr approved the Water Tariff Method (MTI-3) for the third regulatory period (2020-2023), defining the rules for calculating the costs eligible for recognition, as well as the limits to the applicable tariff increases (reduced compared to the maximum levels provided for in the previous regulatory period). The subsequent Resolution 639/2021/R/idr defined the rules for the two-yearly update between 2022 and 2023: in particular, the component covering the cost of financial and tax expense fell to 4.8% (vs 5.4% previously in force).

Resolution 229/2022/R/idr revised certain criteria for the 2022-2023 update in compliance with certain orders of the Lombardy Regional Administrative Court concerning the recognition of electricity costs. The tariff method provides for the recognition in year "n" of the costs incurred for the purchase of electricity in year "n-2": this is not a mere footnote however, verification takes place against a cap calculated by ARERA taking into account an average sector cost of electricity. This cap is 0.1543 €/kWh for 2020 (2022 tariffs) and 0.1618 €/kWh for 2021 (2023 tariffs).

The main impacts related to the extraordinary magnitude of energy costs for A2A Group operators are as follows:

- A2A Ciclo Idrico S.p.A. requested with a specific request the recognition in the tariff of the component op_{EE}^{exp} amounting to 4.5 million euro for both years 2022-2023;
- Lereti S.p.A. for the year 2021 (tariffs 2023) requested with a specific request the recognition of the component costs for systemic variations for the occurrence of exceptional events in compliance with the principle of full cost recovery and the maintenance of economic-financial equilibrium. The quantifications for both managed areas are as follows: ATO Varese 0.81 million euro and ATO Como 0.42 million euro.

As already introduced by Resolution 580/2019/R/idr remains confirmed. It had provided:

- modification of the recognition of financial charges on work in progress (LIC): excluding from recognition in the tariff LICs with balances that have remained unchanged for more than 4 years and application to LICs of a lower rate than for assets that have entered service and decreasing over time;
- the drafting, in addition to the Plan of Interventions, of a Plan for Strategic Works (POS) 2020-2027 containing the forecast of infrastructural interventions dedicated to complex works with a useful life greater than/equal to 20 years priority for the quality of service. The LIC of the works contained in the POS benefit from full (and not decreasing) tariff recognition;
- the modification of the regulatory useful lives, for assets that came into operation in 2020, dividing the assets between aqueduct, sewerage, purification and common activities and associating them with the relative macro-indicator of technical and commercial quality;
- the introduction of an incentive for the measures put in place by the operator to make users more aware of their consumption and to encourage the procedures for limitation in case of default and selective disconnection of supply;
- the separation, in the calculation of the adjustments of the other water activities, the activities linked to energy and environmental sustainability objectives, for which the operator is granted a sharing equal to 75% of the difference between revenues and costs incurred. The benefits of this "incentive" will apply in the tariffs 2022 (a+2);
- the application to ordinary LIC, for the years 2020 and 2021, of the rate recognized for fixed assets relating to strategic works.

Pending 2022-2023 tariff approvals:

- A2A Ciclo Idrico S.p.A. and Azienda Servizi Valtrompia S.p.A., in agreement with the Ente di Governo dell'Ambito (EGA) of the Province of Brescia, are applying the same tariffs for 2022 as those approved for 2021;
- Lereti S.p.A., in agreement with the two competent EGA, is applying the following tariff increases approved with the previous tariff arrangement for 2022:
  - Varese Area: + 8.45%;
  - Como Area: + 8.45%.

millions of euro	Constraint to Operator Revenues (VRG)* 2022	RAB 2020 (net residual)* underlying 2022 tariffs
A2A Ciclo Idrico S.p.A.	90.2	322.2
ASVT S.p.A.	9.1	22.1
Lereti S.p.A. - COMO	17.8	46.2
Lereti S.p.A. - VARESE	28.9	41.5

* Provisional VRG and RAB values pending 2022-2023 tariff approvals by the EGA.

Lastly, with reference to the operator Lereti S.p.A., Resolution 52 of the Board of Directors of the Como EGA of December 21, 2021 recognized the company an amount of 15.3 euro million for prior year items relating to the 2010-2011 period to cover the failure to recognize the tariffs, which had been protracted over time, for part of the infrastructures built by the company prior to 2012, but did not accept the same recognition request submitted for the 2001-2009 period. With a subsequent resolution of July 5, the EGA Board of Directors adopted the Guidelines containing the billing methods for the past items that will be charged over 5 years, starting from 2022, in order to graduate their impact on users (to be concluded by 2026, the date of expiry of the service concession with the Municipality of Como).

Appeals toward approvals of 2020-2023 tariff proposals

A2A Ciclo Idrico S.p.A. has lodged an appeal with the Brescia Regional Administrative Court (TAR) for the annulment of the MTI-3 tariff arrangement approved by the Provincial Council, contesting the scope of the costs (capital and operating) recognized in that not all of the municipalities managed by the company were included.

With regard to the Como area, Lereti S.p.A. submitted an appeal to the Regional Administrative Court (TAR) on March 23, 2021 due to the failure to complete the preliminary investigation into prior year items. A similar appeal was prepared against Resolution 52 of the EGA Board of Directors of December 21, 2021, in order to obtain full recognition of all amounts due under the heading of prior year items, including those for the period 2001-2009. The subsequent Resolution approving the Billing Guidelines is also in the process of being challenged.

Start of the process of transferring the aggregated and expired management of A2A Ciclo Idrico S.p.A. and ASVT S.p.A. to Acque Bresciane S.r.l.

Following the request of the Brescia EGA regarding the process of transferring the aggregated and expired management to Acque Bresciane S.r.l., in accordance with the takeover process established by the Authority, during the first half of 2022, A2A Ciclo Idrico S.p.A. and ASVT S.p.A. sent the proposed quantification of the residual value (VR) to the EGA for the validation activity for which it is responsible and subsequent transmission to ARERA.

Resolution 656/2015/R/idr - Annex A defines the take-over procedure and, pursuant to article 12.1, explicitly states that such discipline applies only to safeguarded SII operators that have exercised the service "on the basis of an assignment in accordance with article 172, paragraph 2, of Legislative Decree 152/06" while Resolution 580/2019/R/idr indicates the criteria for the quantification of the residual value.

The take-over procedure consists of the following steps:
- at least 18 months before the expiry of the concession, the EGA initiates the takeover procedures and verifies the full compliance of the capital assets and their appurtenances;
- within 60 days of the start of the EGA procedure, the operator makes a proposal for the quantification of the residual value;
- within 60 days of receipt of the operator's proposal, the EGA decides on the final value of the VR;
- within 60 days of receipt of EGA's proposal, ARERA approves the residual value;
- before 90 days from the takeover date, the incoming operator pays the residual value to the outgoing operator and, after payment, the transfer of assets takes place.

On June 17, the EGA sent ARERA the reports for the determination of the quantified residual value as of December 31, 2021 of the aggregated and expired management of A2A Ciclo Idrico S.p.A. and ASVT S.p.A., respectively, with Resolutions no. 16/2022 of June 10, 2022 and no. 17/2022 of June 10, 2022.

COMPANY	NO. MUNICIPALITIES	VR (millions of euro)
A2A Ciclo Idrico S.p.A.	21 - Aggregate Management* 7 - Expired Management**	63.7
ASVT S.p.A.	15 - Expired Management**	42.2

* With Resolution no. 4 of December 21, 2007, the EGA approved the guidelines that allowed municipalities with economic management to aggregate the SII to the operator operating in the sub-area of reference, i.e. A2A Ciclo Idrico S.p.A..
** Concessions also expired after December 31, 2021.

It is specified that, following the sending of the residual value quantification proposals to ARERA, the companies are now waiting for the final approval by the Authority, following which, subject to payment by the incoming operator, the outgoing operators will transfer the assets to it. Also assessed, in accordance with the provisions of ARERA, will be the remuneration relating to the economic and asset components for the 2022 management period due to the terminating party up to the date of management takeover.

Integration of the contractual quality discipline of the SII (TIMSII)

Resolution 609/2021/R/idr updated the regulation of the measurement of the SII (TIMSII), providing for the introduction of protection obligations for users affected by problems of hidden losses (also taking into account the potential contribution that could derive from the use of new metering instruments equipped with water smart metering devices), the strengthening of provisions regarding the collection of metering data and remote reading, as well as the promotion of measures to allow the owners of residential units (so-called "indirect users" underlying condominium users) to have individual consumption data and information. Specifically, the measure established:
- from January 1, 2022: the introduction of "Metering service effectiveness" indicators, supplementing the M1 indicator of Resolution 917/2017/R/idr (RQTI) and the related obligation to monitor and report to the Authority;
- from January 1, 2023: the introduction of "specific standards" to strengthen the protection of users with regard to the metering service;
- from January 1, 2022: the definition of "hidden losses" as those water losses occurring downstream of the meter on user-responsibility plants. These are losses that are not surfaced and cannot be traced

with the normal diligence required of the user to control its assets, and minimum user protections are in place nationally for such cases;
- by June 30, 2022: in order to increase awareness of consumption in the case of grouped (condominium) users, Managers are required to:
  - communicate to indirect users at least once a year, information on how to contact their Manager and the approved tariff structure (with indication of how to communicate the size of their household);
  - make available to the condominium user or the condominium administrator a calculation tool for the distribution of the single condominium bill on the basis of the property units and their consumption (actual or estimated);
  - formally request from the condominium administrator or the contact person of the grouped users the actual number of members of the household (exclusively in cases where the Manager has not been able to obtain the information even after a formal request, the residential household tariff shall be calculated on the basis of the standard per capita criterion);
- by December 31, 2023: the Manager is required to assign a unique, geolocated identification code to each user contracted.

Revision of the tariff structure applied to end users

In order to harmonize the tariff structure applied to end users throughout the national territory, ARERA Resolution 665/2017/R/idr approved the Integrated Text of Water Service Fees (TICSI) in force since January 1, 2018.

The TICSI introduces the concept of standard per-capita tariff and includes:
- the distinction between resident and non-resident, condominium and non-domestic users;
- the application to resident domestic users of a standard per-capita tariff for a transitional period (2018-2021) and, in any case, until the availability of information, defined on the basis of a typical family of 3 members (with the first facilitated bracket equal to 55 mc/year) and an actual per-capita tariff (facilitated bracket: at least 18.25 mc/year per member) only in the case of self-declaration regarding the number of members of the household;
- the regime tariff structure as from 2022 with the application of the effective per capita tariff to all resident domestic users;
- the rationalization of tariff types for uses other than domestic;
- the application of a trinomy tariff (fixed portion, capacity portion and variable portion) uniform at national level for industrial users related to discharges of waste water authorized to discharge into public sewers. This tariff is designed to intercept with the variable portion, quality in terms of pollution of the discharge, with the capacity portion, the correct allocation of the costs to use the treatment capacity of the plant destined to receive the discharges, and with the fixed portion, the coverage of administrative and metering costs;
- the assessment of the effects of the new tariff structure on the revenues of the Operator, providing for ex ante and ex post checks.

Application of the technical quality incentive mechanism (RQTI): final results 2018-2019

Resolution 183/2022/R/Idr approves the results of the first application of the incentive mechanism of the rewards and penalties related to the technical quality of the SII (RQTI) for the years 2018-2019. The system, launched in 2018 by ARERA, has made it possible to codify the results achieved in recent years by 203 operators covering a total of 84% of the national population. By analysing the data, the Authority was able to assign a premium to those who achieved, maintained and improved their targets and a penalty in other cases.

The amount of resources dedicated to premiums is determined by the collection in the bill of the UI2 component (intended for the promotion of the quality of water, sewerage and purification services), which for 2018 totals about 63.2 million euro and for 2019 about 72.16 million euro. The penalties amounted to 3.9 million euro for 2018 and 5.9 million euro for 2019.

Regarding the application modalities:
- premiums will be disbursed by the CSEA (and have already been collected);
- the penalties, imposed in the event of failure to improve or achieve the objectives, result in amounts that must be set aside and used for the achievement of the established objectives, in accordance with paragraph 29.1 of the RQTI.

The table shows the results of the A2A Group companies:

thousands of euro	PREMIUMS (2018-2019)	PENALTIES (2018-2019)
A2A Ciclo Idrico S.p.A.	357	428
ASVT S.p.A.	1,367	43
Lereti S.p.A. - COMO	n.a. *	n.a. *
Lereti S.p.A. - VARESE	413	2

* ARERA excluded Lereti S.p.A. in the Como ATO from the incentive mechanism due to the delay in sending the technical quality data of the base year (2016-2017), to be carried out pursuant to Resolution 918/2017/R/idr, within the infra-period update of the 2018/2019 tariff preparation.

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. The measures of the National Plan and reported by the EGAs to the ARERA are financed with public resources.

The subsequent DPCM of August 1, 2019 bearing the following title "Adoption of the first draft of the National Plan of interventions in the water sector - aqueducts section" approves 26 interventions for a total amount of 80 million euro for the two years 2019 and 2020: among the interventions also included is that relating to the Municipality of Calvisano (BS) managed by A2A Ciclo Idrico S.p.A. for the construction of the aqueduct, sewerage and purification network.

ARERA drew up an initial list of necessary and urgent interventions, within which the Calvisano intervention has so far benefited from contributions of 5.3 million euro.

Resolution 284/2020/R/idr initiated the procedure for the identification of the second list of necessary and urgent interventions for the purpose of updating the "aqueducts" section of the National Plan. The Authority intends to define a single plan (submitted by the respective EGAs and Regions) based on a multi-year programme for the period 2021-2028, to which the entirety of the residual resources provided for in article 1, paragraph 155, of Law 145/2018. As part of this process, in 2021, the ACSM-AGAM Group presented some strategic projects that still need to be validated by the Lombardy Region.

In view of the continuing health emergency, Resolution 58/2021/R/idr introduces simplification measures to ensure the timely disbursement of resources for the design and implementation of the interventions contained in Annex 1 to the Prime Ministerial Decree DPCM August 1, 2019. With reference to Calvisano, Resolution 582/2021/R/idr authorized the CSEA to disburse the portion of the loan equal to 1.17 million euro (remaining loan equal to approximately 1.1 million euro).

ARERA report 331/2021/I/idr on the criticality of water services in some regions of Southern Italy

With Resolution 331/2021/I/idr, in view of the critical state of the SII in some regions of Southern Italy, the Authority informed the Government and Parliament of the usefulness of regulatory interventions to modify current legislative provisions in order to speed up the award of the management. In some areas of the country, in fact, significant criticalities confirming the persistence of the water service divide precisely where the infrastructural deficit is greater (areas in which the EGAs are not even constituted or, if constituted, are not operative, areas with the presence of unit-based small municipal management or in house managers to whom the service has been awarded, however who show planning and operational difficulties in the realization of the infrastructures). The presence of fully operational EGAs as well as the completion of the procedures for awarding the service to an integrated manager are, moreover, necessary conditions for the allocation of PNRR resources.

Therefore, ARERA suggested an intervention by the legislator aimed at setting a peremptory deadline for the conclusion of the award processes and, once the terms have expired, to award, for a period of 4 years, in any case renewable, to a company subject to public control that, on the basis of the discipline of public contracts, can make use of entities with adequate industrial and financial capabilities for the provision of the service.

The Report was followed up with the proposal of an amendment, later deleted, to the text of the Draft Law Concorrenza 2021.

In the meantime, AGCM has also returned to the point, signalling to the Government and Parliament the advisability of an intervention of similar content in the context of its competition reform proposals for the drafting of the Annual Law for the Market and Competition year 2022.

Activities of ARERA 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 real tariff regulation. The powers concern, in fact, the preparation of measures on connection and disconnection from the networks, withdrawal rights, 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 in order to increase customer awareness and change consumer behaviour.

Resolution 548/2019/R/tlr defined, for the period January 1, 2021 - December 31, 2023, the regulation of the technical quality (RQTT) with reference to the safety and continuity of the service, introducing obligations on emergency response, the management of interruptions (with a specific general quality standard) and dispersions as well as obligations to record information relating to safety and quality for annual communications to the Authority. The aim is to guarantee a greater degree of protection for users and to encourage the spread of the service through a progressive increase in the performance of the sector with the definition of minimum standards at national level.

Resolution 478/2020/R/tlr defined the regulation of metering (TIMT) for the period January 1, 2022 - December 31, 2024, introducing service obligations and quality standards for the metering of energy supplied to users by defining minimum reading frequencies, obligations for the communication of readings by Operators, the introduction of the obligation to self-read, the definition of calculation methods for estimating and reconstructing consumption and rules for archiving data, postponing the definition of the minimum requirements of the meters to a subsequent provision[20].

Resolution 537/2020/R/tlr extended, from July 1, 2021, also to the district heating sector the system of protections for the handling of complaints and the out-of-court settlement of disputes with end users already in place in the other regulated sectors. Two levels of protection have been introduced: a basic level that provides for the extension of the contact center service of the Energy and Environment Consumer Desk to district heating, and a second level that allows end users to activate a conciliation procedure before the Authority's Conciliation Service.

Annex A of Resolution 463/2021/R/tlr updated for the period from January 1, 2022 to December 31, 2025 the regulation on the criteria for determining connection fees and procedures for exercising the right of withdrawal (TUAR). The Authority, confirming the provisions of the current TUAR, has rationalized and harmonized the contents of the various integrated texts (TITT, RQTT and TIMT) that will be applied from January 1, 2022. Annex B to the same Resolution approves the Consolidated Text for the size classification of district heating and cooling service operators for the period January 1, 2022 - December 31, 2025 (TUD), defining different obligations for operators based on their size thresholds, which remain unchanged but are determined only by conventional power. The classification of the user (relevant for the payment of compensation or exclusion from regulation), on the other hand, will take place exclusively on the basis of contractual power. Finally, all the data collections to be sent to ARERA regarding the contractual relationship with the user (including metering) and prices are combined into a single deadline of June 30, while the data collection on technical quality is moved to September 30 of each year.

Resolution 526/2021/R/tlr updated for the period January 1, 2022 - December 31, 2025 the provisions regarding the commercial quality of district heating and cooling services (RQCT). In order to rationalize the regulations, the provisions regarding the estimate for connection, the obligation to inform the user in the event of a request for deactivation or disconnection have been transferred to the RQCT, while the definitions of emergency intervention have been transferred to the RQTT and the TITT. The minimum elements to be recorded for works estimates have been supplemented, including the start and end dates of any suspensions for activities (authorizations or works) by the applicant and the dates on which the authorizations were requested and obtained, also in order to reduce possible disputes regarding

20 DCO 244/2022/R/tlr followed up on the provisions of Resolution 478/2020/R/tlr concerning the minimum requirements for meters. The consultation proposes that the new provisions enter into force as of January 1, 2023, while still allowing for a transitional period of 6 months in order to allow for the installation of meters in the availability of operators, even if they do not fully comply with the proposed minimum requirements, in order to allow for stock optimization and avoid stranded costs.

compliance with the quality standard. Finally, the application of a specific standard to "disconnections" and "execution of complex work" with related automatic compensation and escalation mechanism has been envisaged.

Resolution 80/2022/R/tlr launches a fact-finding investigation into the development of prices and costs in the sector. The aim of the investigation is to acquire information useful for assessing the pricing methodologies applied by operators (based on the avoided cost or cost-plus criterion) and evaluating the appropriateness of introducing ex-ante tariff regulation in the district heating sector. By May 31, 2022, the companies of the A2A Group submitted a series of data concerning the prices charged to customers and the costs/revenues related to their activities. The Authority set September 30, 2022 as the deadline for the closure of the proceedings.

Lastly, it should be noted that in June, the GSE published the Procedures for the qualification of efficient district heating and cooling systems pursuant to Legislative Decree 199/2021 in order to define rules and procedures to qualify efficient district heating networks as defined in Legislative Decree no. 102/2014 implementing EU Directive 2012/27/EC.

Sanctioning measure of the AGCM against certain operators active in the water meters market (I835)

On October 29, 2019, the AGCM commenced preliminary investigation proceedings against the companies G2 S.r.l., Itron Italia S.p.A., Maddalena S.p.A. and WaterTech S.p.A. (subsequently extended to Sensus Italia S.r.l.) to ascertain an alleged agreement restricting competition, implemented in connection with public tenders for the supply of water meters to SII operators in violation of article 2 of Law 287/90 and article 101 of the Treaty on the Functioning of the European Union (TFEU). In particular, it was alleged that there was a sharing arrangement between these companies (which, at least since 2015, would have limited competition between them) through the concerted definition of the modalities of participation in public procedures.

The proceeding ended on February 1, 2022 with the ascertainment and sanctioning of the conduct charged against the companies (single, complex and continuous horizontal secret cartel and per object), which allegedly conditioned a substantial number of tenders called between 2011 and 2019 by various SII operators active in Italy, including A2A Ciclo Idrico S.p.A. which immediately took steps to put in place the most appropriate measures to protect its interests.

8

Scenario and Market

8.1 Macroeconomic scenario

Overview

During the first half of 2022, global economic activity showed signs of slowing down due to the resurgence of the pandemic caused by the spread of new variants and, subsequently, the rising geopolitical tensions culminating in Russia's invasion of Ukraine. After a brief period of détente at the beginning of the year, the economic repercussions of the conflict in Ukraine and the new closure measures taken in China are two key growth-averse factors putting pressure on global supply chains. Their dysfunction and tensions in the commodities markets are fuelling inflation. Commodity prices remained volatile and subject to supply-side risks, while financial conditions tightened, reflecting, globally, the normalization of monetary policy and rising yields. Overall, estimated global GDP growth slowed considerably in the first quarter of 2022, to 0.5%.

As for the advanced economies, GDP in the US decreased by 0.4% in the first quarter of the year. However, although unexpected, this weak result showed relatively solid domestic demand with negative contributions from net exports and changes in inventories. In China, GDP growth showed resilience in the first quarter of the year, despite the worst resurgence of Covid-19 cases since the start of the pandemic. It is expected, however, that the drastic mobility restrictions implemented as part of the zero-Covid strategy will have an impact on activity in the second quarter of 2022, which is expected to be lower than the 4.8% recorded in the first quarter.

In the first quarter of 2022, the Eurozone economy grew by 0.6%, thus standing at a higher level than in the pre-pandemic period. According to preliminary estimates by Eurosystem experts, modest positive growth is expected in the second quarter, with the favorable impact of the lifting of pandemic-related restrictions partially offset by adverse factors caused or amplified by the conflict in Ukraine and new pandemic-related measures in China. Although consumption of services picked up, increases in energy and food prices dampened consumer confidence and household spending.

As far as Italy is concerned, the full quarterly economic accounts estimate GDP growth in the first quarter of 2022 of 0.1% in cyclical terms, i.e. compared to the previous quarter, and 6.2% in trend terms. The recovery was mainly driven by domestic demand and in particular by investments against a negative contribution from foreign demand.

According to the preliminary estimate released by Eurostat, inflation in the Eurozone rose to +8.6% in June, a level not seen since the creation of the Economic and Monetary Union, compared to +8.1% in the previous month and +1.9% in the corresponding month of the previous year. The energy component showed the highest growth (+41.9% in June compared to +39.1% in May). In the average of the first half of the year, the inflation assumption was +7.1%.

In Italy, according to preliminary ISTAT estimates, inflation accelerated again in June, rising to a level of +8.0%, which had not been recorded since January 1986 (when it was +8.2%). Inflationary tensions continue to spread from energy carriers to other commodity sectors in both goods and services. In the average of the first half of the year, the inflation assumption was +6.3%.

The Governing Council of the ECB decided to discontinue net asset purchases under the Asset Purchase Programme (APP) as of July 1, 2022. As regards the Pandemic Emergency Purchase Programme (PEPP), the Governing Council intends to reinvest the principal repaid on maturing securities under the programme at least until the end of 2024. In line with the sequence of its monetary policy measures, the Governing Council intends to raise the ECB's key interest rates by 25 basis points at its July monetary policy meeting, up from the 0.0% threshold set on March 10, 2016. At its June meeting, the Federal Reserve raised the target range for the federal funds rate by 0.75% (for the first time since 1994) in an attempt to halt the run-up in inflation, placing it between 1.5 and 1.75%.

The year 2022 saw the single currency progressively weaken against the dollar, due to the divergence of monetary policy between the European Central Bank and the Federal Reserve, with the EUR/USD exchange rate rising from 1.13 in January and February to 1.06 dollars in May and June. On average for the half-year 2022, the EUR/USD exchange rate was 1.09 dollars, down 9.3% compared to the same period of the previous year.

Outlook

In the forecast released in April by the International Monetary Fund, the global economic outlook worsened significantly from the forecast released in January, largely due to the Russian invasion of Ukraine, which caused a tragic humanitarian crisis in Eastern Europe, increased pressure on commodity prices, and triggered sanctions to pressure Russia to end hostilities. In addition to the war, new more far-reaching shutdown measures to counter the pandemic in China, including those of major production centres, have also slowed down activity and could cause new bottlenecks in global supply chains. Beyond the immediate humanitarian impacts, the war will severely slow down the global recovery by further increasing inflation. Global growth is estimated at 3.6% in 2022 and 2023, 0.8 and 0.2 percentage points lower than the January forecast, respectively.

The US economy, after falling by 0.4% in the first quarter of the year, is expected to return to positive, albeit moderate, growth rates in the short to medium term, in the presence of high inflation, a substantial tightening of monetary policy and a lower fiscal stimulus. The Federal Reserve has projected that the US economy will grow +1.7% in both 2022 and in 2023. As far as China is concerned, it is expected that the continuation of the drastic mobility restrictions implemented as part of the zero-Covid strategy and the associated changes in consumer behaviour may affect the business later this year. The Russian economy is expected to go into a deep recession this year. This outlook reflects the economic sanctions imposed on Russia, the impact of which is further amplified by the broader-ranging boycotts carried out by the private sector, leading to a disruption of production and logistics.

The economic risks for the Eurozone have risen considerably following Russia's invasion of Ukraine. High uncertainty, rising costs and tightening financing conditions are expected to weigh on investments in the coming quarters. Nonetheless, looking beyond these weaker short-term growth prospects, there are grounds for economic activity in the euro area to regain momentum in the second half of the year. This assessment is reflected in the macroeconomic projections made by Eurosystem experts for the Eurozone in June, which forecast GDP growth at 2.8% in 2022 and 2.1% for both 2023 and 2024. This outlook, compared to the March projections, has been revised downwards significantly for 2022 and 2023, while it has been revised upwards for 2024.

As far as Italy is concerned, according to ISTAT, the outlook for the coming months is characterized by high risks such as further price increases, declining international trade and rising interest rates. The Italian economy is expected to grow, albeit at a slower pace than in 2021 and compared to previous forecasts. On average for the year, GDP is expected to increase by +2.8% in 2022 and +1.9% in 2023. The unemployment rate is expected to decline gradually from 9.3% on average in 2021 to 8.2% in 2023.

The macroeconomic projections for the Euro Area drawn up in June by Eurosystem experts forecast that overall inflation will remain high and persistent in the short term, averaging +6.8% in 2022. This reflects high oil and gas prices, rising food commodity prices and global supply shortages. In the longer term, exceptional trends in food and energy prices are expected to diminish. This, together with the normalization of monetary policy, should reduce overall inflation to +3.5% in 2023 and +2.1% in 2024.

Inflation prospects in Italy have also been revised upwards, and are estimated at +5.8% this year, and +2.6% in 2023 (source: ISTAT).

With regard to the level of interest rates, the European Central Bank (ECB) and the Federal Reserve (FED) have taken different monetary policy paths. After the increase of the ECB reference rate by 25 basis points at the July monetary policy meeting, the Governing Council plans to raise the reference rates again in September. The extent of this rise will depend on the updated medium-term inflation outlook. Over a longer period, the Governing Council appropriately foresees a gradual but stable path of further interest rate increases, in line with the commitment to achieve the 2% inflation target in the medium term. On the other hand, the Federal Reserve, after raising interest rates by 0.75% at its June meeting, expects interest rates at 3.4% at the end of this year and 3.8% in 2023. For 2022, it means a half-point increase at each meeting until the end of the year.

The macroeconomic projections, formulated by the main analysts, indicate a EUR/USD exchange rate fluctuating in a range between 1.00-1.10 in the two-year period 2022-23, in a context characterized by expectations of a faster pace of monetary tightening from the Federal Reserve and galloping inflation in both Europe and the United States.

8.2 Energy market trends

Electricity

As far as the national electricity market is concerned, in Italy in the period January-May 2022, there was a net requirement of 130,098 GWh (source: Terna), up +2.8% compared to the same period of 2021; in seasonally adjusted terms, and corrected for calendar and temperature, the change is equal to +2.9%. The above requirements were met 55% from non-renewable sources, 32% from renewable sources and the remainder from imports. In the first five months of 2022, there was an increase in exports (+30.9%) compared to the same period in 2021.

Net electricity production in the first five months of 2022 amounted to 113,692 GWh, up 3.8% compared to the corresponding period of the previous year. Specifically, as regards renewable production sources, photovoltaic (+10.5%), wind (+6.7%) and geothermal (+0.7%) are on the increase; on the other hand, the hydroelectric source showed a drastic drop (-39.7%) due to the low water supply of the period. Thermoelectric production increased, showing +14.1% compared to the corresponding period of the previous year, which stood at 78,761 GWh. National production, excluding pumping, accounted for 87.4% of the demand for electricity, while net imports satisfied the remainder. In the first five months of 2022, energy production from renewable sources was 41.6 TWh, a decrease of -12.0% compared to 2021.

The average value of the PUN Base Load in the first half of 2022 shows an increase of +271.6% compared to the first half of 2021, reaching 248.6 €/MWh. The dynamic is mainly driven by a significant rise in gas costs exacerbated by the Russia-Ukraine conflict. The PUN in January 2022 stood at 224.5 €/MWh, peaked at 308.1 €/MWh in March, dropped slightly in the following months, and then rose again in June to 271.3 €/MWh. Average prices on the rise also for the price in the hours of high load (PUN Peak Load) with a value that stood at 267.4 €/MWh (+261.6% compared to the first half of 2021). The average price during off-peak hours (PUN Off-Peak) was 238.2 €/MWh, up 277.9% compared with the same period of the previous year. For all of 2022, forward curves indicate Base Load PUN prices with average values close to 333.0 €/MWh.

Natural Gas

In the average of the first half of 2022, natural gas consumption in Italy stood at 39,132 Mcm, showing a decrease of -1.6% compared to the corresponding period of 2021 (source: Snam Rete Gas). Consumption in the thermoelectric sector increased by 7.4% compared to the first half of 2021, driven by the low hydraulicity of the period, and amounted to 12,794 Mcm. Consumption in the industrial and civil sectors decreased, by -8.7% and -5.4% respectively, due to the crisis triggered by the conflict in Ukraine the former and seasonality the latter.

On the supply side, lower demand during the period under consideration and the increase in prices led to a decrease in imports to 36,076 Mcm (-1.8%), which represented 95.9% of domestic demand net of the trend in stocks. Domestic production, which satisfied the remainder, fell by -1.8% to 1,530 Mcm.

As far as prices are concerned, the upward trend of the average price of gas at the PSV continues, which, after peaking in March at 126.6 €/MWh, and a fall back in April and May, rose again in June to 102.7 €/MWh. Specifically, the average price of gas to the PSV for the first half of 2022 amounted to 97.8 €/MWh, up 348.4% compared to the first half of 2021. For all of 2022, forward curves indicate prices with average values close to 134.2 €/MWh. The price dynamics on the main European hubs were similar: the average price of gas at the TTF in the first half of 2022 was 95.6 €/MWh, up 342.0% compared to the same period in 2021.

The trend in the respective prices resulted in a PSV-TTF differential of 2.2 €/MWh for the reporting period, significantly up compared to the differential of the first half of 2021 (0.2 €/MWh). Gas prices on the main European markets tend to confirm a continuation of the upward trend during the second half of the year, with the expected price of gas at the TTF lower than the PSV: the forward curves predict a positive PSV-TTF differential of about 3.3 €/MWh.

Oil and coal

In the first six months of 2022, oil prices continued their upward trend, rising to an average of 104.4 $/bbl, or 60.5% more than in the first six months of the previous year. In June 2022, Brent crude prices reached their highest level since 2012 and stood at 117.4 $/bbl. In the first half of 2022, the upward trend in prices stated in €/bbl was accentuated (+77.5%) by the depreciation of the euro versus the dollar, which decreased by -9.3% compared with the same period in 2021 (1.09 USD/EUR). For 2022, oil forward curves indicate prices with average values close to 104.9 $/bbl.

The Energy Information Administration (EIA) reported that global oil demand in the second quarter of 2022 averaged 98.65 million barrels per day, broadly in line with the first quarter. The EIA expects global oil demand to increase by about 2.2 million barrels per day to 99.6 million barrels per day in 2022, lower growth than previous estimates, reflecting lower global GDP forecasts, Covid-related restrictions in China during the first half of 2022, and geopolitical uncertainties. Global oil demand is then expected to grow by a further 2.0 million barrels per day in 2023.

OPEC crude production of member countries averaged 26.3 million barrels per day in second quarter of 2022. The EIA predicts that OPEC crude production will reach an average of 28.7 million barrels per day in 2022 and will rise further to 29.3 million barrels per day in 2023. U.S. crude oil production averaged 11.75 million barrels per day in the second half of 2022. EIA's forecast is for an increase that will average 11.9 million barrels per day in 2022 and rise to 12.8 million barrels per day in 2023 - the highest U.S. crude oil production on record. Given Russia's role in global crude oil production, forecasts regarding production volumes and the possible use of strategic reserves could undergo significant variations in relation to the evolution the crisis in Ukraine.

Coal also accelerated its growth, which, starting in January at 170.5 $/tonne, stood at 371.0 $/tonne in June. The average price for the first half of 2022 was 284.4 $/tonne, up 261.7% compared to the same period last year (78.6 $/tonne). The depreciation of the euro against the dollar increases the upward trend in prices expressed in euro (+301.7%). For all of 2022, forward curves indicate prices with average values close to 315.2 $/tonne.

9

Result sector by sector

9.1 Result sector by sector

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. 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 centers to convert waste in order to make it suitable for the recovery of materials.
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.
The Waste Business Unit includes the activities carried out abroad for the provision of know-how and technologies for the realization of waste pre-treatment plants.

Smart Infrastructures Business Unit

The Smart Infrastructures Business Unit develops and manages the infrastructures functional to the wide range of services provided by the Group, focusing on technology and innovation.
In particular, the Business Unit's activity mainly concerns the development and technical-operational management of electricity distribution networks, natural gas transport and distribution networks and the related metering service, characterized by important technological evolutions thanks to the use of smart meters. It manages the entire integrated water cycle (water collection, aqueduct management, water distribution, sewerage management, purification). The activity 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).
The Smart Infrastructures Business Unit also develops infrastructures in the field of telecommunications, designs solutions and applications aimed at creating new models of cities and territories and improving the quality of life of citizens.
It should be noted that from January 2021, the Business Unit develops and manages public lighting and traffic regulation systems; finally, it builds and manages a network of recharging infrastructures functional to the electrification of transport.

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 (e.g. administrative and accounting services, legal services, procurement, personnel management, information technology, communications, landline and mobile telephone service etc.) whose costs, net of amounts recovered from accrual to individual Business Units based on services rendered, remain the responsibility of the Corporate.

1 Total installed capacity of 9.5 GW.

The following is a summary of the main economic data by sector:

Results by sector first half 2022

millions of euro	Generation and Trading	Market	Waste	Smart Infrastructures	Corporate	Eliminations and adjustments	Total
Revenues from the sale of goods and services	7,856	3,814	698	747	152	(3,576)	9,691
Other operating income	34	8	16	39	7	(7)	97
Total revenues	**7,890**	**3,822**	**714**	**786**	**159**	**(3,583)**	**9,788**
Labour costs	46	29	177	55	74	-	381
Gross operating margin - EBITDA	**221**	**8**	**207**	**285**	**(13)**	**-**	**708**
Depreciation, amortization, provisions and write-downs	114	68	32	133	26	-	373
Net operating income - EBIT	**107**	**(60)**	**175**	**152**	**(39)**	**-**	**335**
Capex	**63**	**31**	**104**	**241**	**24**	**-**	**463**

Results by sector first half 2021

millions of euro	Generation and Trading	Market	Waste	Smart Infrastructures	Corporate	Eliminations and adjustments	Total
Revenues from the sale of goods and services	2,312	1,495	604	593	141	(1,197)	3,948
Other operating income	66	8	8	25	6	(8)	105
Total revenues	**2,378**	**1,503**	**612**	**618**	**147**	**(1,205)**	**4,053**
Labour costs	45	29	178	55	71	-	378
Gross operating margin - EBITDA	**150**	**120**	**164**	**264**	**(10)**	**-**	**688**
Depreciation, amortization, provisions and write-downs	98	24	59	127	24	-	332
Net operating income - EBIT	**52**	**96**	**105**	**137**	**(34)**	**-**	**356**
Capex	**37**	**33**	**109**	**215**	**27**	**(8)**	**413**

9.2 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:

221
mln €
EBIDTA
+47.3% compared to 2021

63
mln €
CAPEX
37 mln in 2021 (+70.3%)

125
GWh
PRODUCTION OF COAL-FIRED PLANTS
(+68.9% vs 2021)

6,352
GWh
THERMOELECTRIC PRODUCTION FROM OTHER FACILITIES
(+5% vs 2021)

238
GWh
PHOTOVOLTAIC AND WIND PRODUCTION
(+57.6% vs 2021)

1,369
GWh
HYDROELECTRIC PRODUCTION
(-35.9% vs 2021)

248.6
€/MWh
SINGLE NATIONAL PRICE
(+272% vs 2021)

+0.8
€/MWh
CLEAN SPARK SPREAD
(-2.7 €/MWh in 2021)

Operating figures

Net electricity production GWh	06 30 2022	06 30 2021	CHANGE	% 2022/2021
Net thermoelectric production	**6,477**	**6,126**	**351**	**5.7%**
- CCGT	5,918	5,639	279	4.9%
- Olio	434	413	21	5.1%
- Coal	125	74	51	68.9%
Net production from Renewable Sources	**1,607**	**2,286**	**(679)**	**(29.7%)**
- Hydroelectric	1,369	2,135	(766)	(35.9%)
- Photovoltaic	195	139	56	40.3%
- Wind	43	12	31	n.s.
TOTAL NET PRODUCTION	**8,084**	**8,412**	**(328)**	**(3.9%)**

In the period under review, the Group's electricity output stood at 8,084 GWh, with a change compared to the half-year of the previous year of -328 GWh (-3.9%).
The first half of the year was characterized by low rainfall, which led to a major water crisis, one of the most serious in the last 70 years, with negative effects on hydroelectric generation and its weight in the total net production from renewable sources. The depletion of river flows also made it difficult to cool thermoelectric power plants, leading in some cases to the interruption of operation of some plants (for the A2A Group, the Sermide thermoelectric power plant in the second half of June).
It should also be noted that the acquisition of two wind and photovoltaic portfolios (3New and 4New), located in Italy and Spain, was finalized in June. With this transaction, A2A consolidates its position as an operator in renewables and its presence in the country.

In particular, thermoelectric production for the period amounted to 6,477 GWh (6,126 GWh as at June 30, 2021), an increase of 5.7% attributable to the higher demand for energy as a result of lower production from other sources and a drop in imports. The growth is linked to the higher output of some combined cycle plants (Piacenza, Sermide and Mincio), and the San Filippo del Mela plan under the essentiality regime. The greater energy requirements and peaks in demand in the period under review, also led Terna to request the temporary reactivation of the Monfalcone coal-fired plant.
Production from renewable sources in the first half of 2022 was down by 29.7% compared to the same period of the previous year: the drop in hydroelectric production (-35.9%) was partly offset by the significant contribution of new photovoltaic and wind power renewable sources thanks to the contribution of the companies acquired in 2021 and 2022 (Octopus, 3New and 4NeW).

Economic figures

millions of euro	01 01 2022 06 30 2022	01 01 2021 06 30 2021	CHANGE	% 2022/2021
Revenues	7,890	2,378	5,512	231.8%
Gross Operating Margin - EBITDA	221	150	71	47.3%
% of Revenues	2.8%	6.3%		
Depreciation, amortization, provisions and write-downs	(114)	(98)	(16)	16.3%
Net Operating Income - EBIT	107	52	55	105.8%
% of Revenues	1.4%	2.2%		
Capex	63	37	26	70.3%
FTE	1,048	1,046	2	0.2%
Labour costs	46	45	1	2.2%

Revenues in the first half amounted to 7,890 million euro, up by 5,512 million euro (+232%) compared to the corresponding period of the previous year. The significant change was mainly caused by the increase in the prices of electricity and gas; the higher volumes sold and brokered made a marginal contribution.

The Gross Operating Margin of the Generation and Trading Business Unit amounted to 221 million euro, an increase of 71 million euro compared to June 30, 2021 (+47%). Net of the non-recurring items recorded in the two comparison periods, equal to -12 million euro in the first half of 2022 (impact

Sostegni Decree) and +2 million euro in the corresponding period of 2021, ordinary Gross Operating Margin increased by 85 million euro.
The positive change is mainly attributable to:

- the extraordinary results achieved in the ancillary services market ("MSD"), thanks to the opportunities that emerged as a result of Terna's requests for critical grid conditions in the first half of the year;
- remuneration of the capacity market, thanks to the award of production capacity in auctions held by Terna to ensure the security of the system with resources that are always available;
- excellent performance of the trading portfolio;
- positive effects of the scenario on the industrial electricity portfolio, although considerably mitigated compared to those that the price surge could have produced, by the hedging policies adopted by the Group;
- contribution of photovoltaic and wind plants.

The positive impacts were partly offset by:

- lower hydroelectric production;
- negative effects of the energy scenario on the gas portfolio;
- higher charges for hydroelectric fees due to both the variable and free energy to be paid and the fixed component for some plants.

Depreciation, amortization, provisions and write-downs totalled 114 million euro (98 million euro at June 30, 2021). The change is mainly related to depreciation and amortization of capex made in the period July 2021 - June 2022 and newly acquired companies in the renewable segment, as well as higher allocations to the provision for risks, net of releases.

As a result of the above changes, net operating income amounted to 107 million euro (52 million euro at June 30, 2021).

Capital expenditure in the period under review amounted to approximately 63 million euro and included extraordinary maintenance work of more than 21 million euro, of which 12 million euro at thermoelectric plants and 7 million euro at the Group's hydroelectric plants and 1 million euro at the photovoltaic plants. Furthermore, development work totalling 41 million euro was carried out, mainly aimed at guaranteeing the coverage of peak demand and the balancing of fluctuating energy requirements in the electricity grid (upgrade gas turbines at the combined-cycle plants in Cassano and Chivasso and projects for endothermic engines in Cassano) to contribute to the adequacy and safety of the national electricity system. Finally, investments were made in wind and photovoltaic plants, aimed at accelerating the growth of the Group's renewable sources.

In the first half of 2022, FTEs amounted to 1,048 units, broadly in line with the same period of the previous year (1,046 FTEs as at June 30, 2021).

9.3 Market Business Unit

The following is a summary of the main quantitative and economic data relating to the Market Business Unit:

8
mln €
EBIDTA
-93.3% compared to 2021

31
mln €
CAPEX
33 mln in 2021

10,456
GWh
ELECTRICITY SALES
(+21.7% vs 2021)

1,526
Mcm
GAS SALES
(+3.2% vs 2021)

1,428
(#/1000) POD
RETAIL MARKET
ELE CUSTOMERS
FREE MARKET:
1,080 POD
(+25.4% compared to 2021)

1,573
(#/1000) PDR
RETAIL MARKET
GAS CUSTOMERS
FREE MARKET:
992 PDR
(+11% compared to 2021)

Operating figures

Electricity	06 30 2022	06 30 2021	CHANGE	% 2022/2021
Electricity Sales				
Electricity Sales Free Market (GWh)	9,206	7,776	1,430	18.4%
Electricity Sales under Greater Protection Scheme (GWh)	383	557	(174)	(31.2%)
Electricity Sales Safeguard Market (GWh)	867	261	606	232.2%
Total Electricity Sales (GWh)	**10,456**	**8,594**	**1,862**	**21.7%**
POD Electricity				
POD Electricity Free Market (#/1000)	1,080	861	219	25.4%
POD Electricity under Greater Protection Scheme (#/1000)	348	414	(66)	(15.9%)
Total POD Electricity (#/1000)	**1,428**	**1,275**	**153**	**12.0%**

Gas	06 30 2022	06 30 2021	CHANGE	% 2022/2021
Gas Sales				
Gas Sales Free Market (Mcm)	1,260	1,138	122	10.7%
Gas Sales under Protection Scheme (Mcm)	266	341	(75)	(22.0%)
Total Gas Sales (Mcm)	**1,526**	**1,479**	**47**	**3.2%**
PDR Gas				
PDR Gas Free Market (#/1000)	992	894	98	11.0%
PDR Gas under Greater Protection Scheme (#/1000)	581	692	(111)	(16.0%)
Total PDR Gas (#/1000)	**1,573**	**1,586**	**(13)**	**(0.8%)**

The quantities are stated gross of losses.
The data related to the POD and PDR does not include the numbers relating to large customers.

In the first half of 2022, the Market Business Unit recorded 10,456 GWh of electricity sales, up 21.7% compared to the same period of the previous year. The increase is attributable to the acquisition of new customers, the contribution of the Gradual Protection Service and higher sales to large customers.
Gas sales, equal to 1,526 Mcm, increased by 3.2% compared to the first six months of 2021 thanks to the large customers sector.
With reference to the mass-market segment (electricity and gas), the number of supply points served in the first half of the year exceeded 3 million units, of which more than 2 million related to the free market, which recorded an increase of about 175 thousand units compared to the end of 2021 thanks to the positive contribution of commercial development and the low churn rate for the period.

Economic figures

millions of euro	01 01 2022 06 30 2022	01 01 2021 06 30 2021	CHANGE	% 2022/2021
Revenues	3,822	1,503	2,319	154.3%
Gross Operating Margin - EBITDA	8	120	(112)	(93.3%)
% of Revenues	0.2%	8.0%		
Depreciation, amortization, provisions and write-downs	(68)	(24)	(44)	183.3%
Net Operating Income - EBIT	(60)	96	(156)	(162.5%)
% of Revenues	(1.6%)	6.4%		
Capex	31	33	(2)	(6.1%)
FTE	932	898	34	3.8%
Labour costs	29	29	-	0.0%

The revenues amounted to 3,822 million euro (1,503 million euro at 30 June 2021). The exceptional growth recorded is mainly attributable to higher unit prices for both electricity and gas, and to a very limited extent to higher quantities sold.

EBITDA of the Market Business Unit in the first half of 2022 amounted to 8 million euro (120 million euro at June 30, 2021).
Net of the non-recurring items recorded in the two comparison periods (1 million in euro in the first half of 2022, zero impact in the corresponding period of the previous year), Ordinary EBITDA decreased by -113 million euro, of which -116 million euro related to the retail segment and +3 million euro related to the Energy Solution segment.

Approximately 80% of the reduction, concentrated in the first quarter of the year, is attributable to the decline in unit margins in the energy retail segment, both electricity and gas, due to:

- different distribution over time of the margins of fixed-price contracts compared to the previous year, with the same overall contractual margin, particularly penalising in the first quarter of the year and recovering in the course of the year under review (for contracts with a duration coinciding with the calendar year) or in future years (for contracts providing for supply beyond the current year);
- negative impacts linked to consumption by end customers that in part differ from the contractual profiles, due to the effect of an extraordinarily high and highly volatile price context;
- imbalance charges, also emphasised by the current year's energy price level.

Operating expenses increased compared to the first six months of the previous year, consistent with the increased commercial activity in the period.

These effects were partly offset by the positive contribution of commercial development, both in terms of the increase in the mass-market customer base and volumes sold to large customers, and in terms of commercial unit margins, which in the period under review showed a positive trend net of the impacts described above.

Depreciation, amortization, provisions and write-downs totalled 68 million euro (24 million euro as at June 30, 2021): the change is attributable to higher provisions for bad debts related to credit exposure to customers due to the exceptional increase in turnover.

As a result of the above changes, net operating income amounted to negative -60 million euro (96 million euro at June 30, 2021).

In the first half of 2022, the Market Business Unit capex amounted to 31 million euro, involving:

- 26 million euro for the energy retail segment for capitalised charges for the acquisition of new customers and for evolutionary maintenance and development work on the hardware and software platforms, aimed at supporting billing and customer management, and the full-digital start-up NEN;
- 5 million for the Energy Solution segment for energy efficiency projects.

In the period under review, FTEs stood at 932 units (898 FTEs at June 30, 2021). The change is due to the increased recruitment during the period under review and in 2021 for the strengthening of traditional and innovative business areas, in line with development objectives (acquisition and management of new customers).

9.4 Waste Business Unit

The following is a summary of the main quantitative and economic data relating to the Waste Business Unit:

207
mln €
EBIDTA
+26.2% compared to 2021

104
mln €
CAPEX
109 mln in 2021

919
GWht
HEAT SOLD
(-0.1% vs 2021)

1,068
GWh
ELECTRICITY SOLD
(+1% vs 2021)

1,708
Kton
WASTE DISPOSED OF
(-2.6% vs 2021)

OF WHICH:

492
Kton
MATERIAL RECOVERY DISPOSALS
(+2% vs 2021)

740
Kton
ENERGY RECOVERY DISPOSALS
(-7% vs 2021)

Operating figures

	06 30 2022	06 30 2021	CHANGE	% 2022/2021
Waste collected (Kton)	919	928	(9)	(1.0%)
Residents served (#/1000)	3,972	4,172	(200)	(4.8%)
Electricity sold (GWh)	1,068	1,057	11	1.0%
Heat sold (GWht)*	919	920	(1)	(0.1%)

(*) quantities at the plant entrance.

In the six-month period under review, the quantity of waste collected, at 919 tonnes, decreased slightly (-1%) compared to the same period of the previous year attributable to the loss of the Varese concession. Electricity quantities increased by +1% year-on-year due to the contribution of Agripower, a company consolidated from April 2021, while the quantities of heat required by the district heating segment were in line with the same period in 2021.

Waste disposed of (Kton)	06 30 2022	06 30 2021	CHANGE	% 2022/2021
Urban waste disposal	**1,282**	**1,366**	**(84)**	**(6.1%)**
- WTE	668	720	(52)	(7.2%)
- Landfill	-	1	(1)	(100.0%)
- Treatment plants	614	645	(31)	(4.8%)
Industrial disposals	**426**	**388**	**38**	**9.8%**
- WTE	44	37	7	18.9%
- Landfill	-	5	(5)	(100.0%)
- Treatment plants	382	346	36	10.4%
TOTAL	**1,708**	**1,754**	**(46)**	**(2.6%)**

The quantities reported are net of intra-group disposals.

Net waste disposed of decreased by -2.6%, as a result of lower disposals in waste-to-energy plants, mainly due to the reduced availability of the Brescia waste-to-energy plant (more days of shutdown for maintenance).
In particular, there was an increase in waste destined for material recovery (growth in paper and bulky items).

Economic figures

millions of euro	01 01 2022 06 30 2022	01 01 2021 06 30 2021	CHANGE	% 2022/2021
Revenues	714	612	102	16.7%
Gross Operating Margin - EBITDA	207	164	43	26.2%
% of Revenues	29.0%	26.8%		
Depreciation, amortization, provisions and write-downs	(32)	(59)	27	(45.8%)
Net Operating Income - EBIT	175	105	70	66.7%
% of Revenues	24.5%	17.2%		
Capex	104	109	(5)	(4.6%)
FTE	6,509	6,420	89	1.4%
Labour costs	177	178	(1)	(0.6%)

In the first half of 2022, the Waste Business Unit recorded revenue of 714 million euro, up 16.7% compared to the same period in 2021 (612 million euro as at June 30, 2021) mainly due to higher revenue from the sale of electricity and the sale of heat. Higher revenues from waste disposal and material recovery and the contribution of the companies acquired during 2021 also contributed to the increase.

The Gross Operating Margin of the Waste Business Unit equalled 207 million euro (164 million euro at June 30, 2021), up 43 million euro compared to the first half of the previous year.
Net of the non-recurring items recorded in the two comparison periods (+2 million euro in the first half of 2022 and +1 million euro in the first half of 2021), ordinary Gross Operating Margin increased by 42 million euro.

The municipal waste treatment segment mainly contributed to the excellent result for the period (+44 million euro compared to the first six months of 2021), thanks to the following:

- very positive trend in electricity and heat transfer prices of waste-to-energy plants due to the current scenario;
- increase in the price of delivering waste similar to municipal waste;
- contribution of biomass-fuelled plants, due to both the incremental contribution of Agripower-consolidated from April 2021 - and the effect of the energy scenario.

The industrial waste treatment segment recorded an increase of approximately 1 million euro over the corresponding period of the previous year, mainly due to the larger quantities treated.
On the other hand, the waste collection sector made a negative contribution to the result (-3 million euro), primarily penalized by the increase in the cost of fuel consumed by the vehicles used and the loss of the concession in the Municipality of Varese.

Depreciation, amortization, provisions and write-downs equalled 32 million euro (59 million euro as at June 30, 2021). The negative change is the combined effect of higher depreciation related to investments made in the period July 2021-June 2022 and releases of excess provisions made in the current year.

As a result of these changes, Net Operating Income totalled 175 million euro (105 million euro at June 30, 2021).

Investments for the first half of 2022 amounted to 104 million euro and regarded:

- development work amounting to 78 million euro, of which 39 million euro relating to waste-to-energy plants (in particular 21 million euro for the construction of the new Parona plant and 12 million euro for the flue gas purification line of the Brescia waste-to-energy plant) and 38 million euro to treatment plants (approximately 28 million euro for the OFMSW plants of Lacchiarella and Cavaglià and 3 million euro for the new sludge plant of Parona);
- 26 million in maintenance work on waste-to-energy plants (13 million euro), treatment plants (8 million euro) and the collection sector (5 million euro).

In the first half, the FTEs of the Waste Business Uni amounted to 6,509 units (6,420 FTEs in the same period of the previous year). The increase is attributable to the change in the scope of consolidation (TecnoA, consolidated from December 2021) and to the recruitments made in the half-year under review and in the previous year to strengthen certain services in Collection and facilities of the Treatment segment.

9.5 Smart Infrastructures Business Unit

The following is a summary of the main quantitative and economic data relating to the Smart Infrastructures Business Unit:

285
mln €
EBIDTA
+8% compared to 2021

241
mln €
CAPEX
215 mln in 2021 (+12.1%)

1,485
M€
RAB GAS
(+1.3% vs 2021)

827
M€
RAB ELECTRICITY
(+9.8% vs 2021)

511
M€
RAB WATER SERVICES
(+24.3% vs 2021)

1,766
GWht
HEAT SOLD
(-3.1% vs 2021)

Operating figures

Networks

	06 30 2022	06 30 2021	CHANGE	% 2022/2021
Electricity distributed (GWh)	5,656	5,632	24	0.4%
Gas distributed (Mcm)	1,732	1,856	(124)	(6.7%)
Water distributed (Mcm)	36	36	-	0.0%
RAB Electricity (M€) (*)	827	753	74	9.8%
RAB Gas (M€) (*)	1,485	1,466	19	1.3%
RAB Water (M€) (*)	511	411	100	24.3%

(*) Provisional figures, underlying the calculation of allowed revenues for the period.

The distributed quantities of electricity of the Smart Infrastructures Business Unit amounting to 5,656 GWh, were substantially in line with the previous year, while the quantities of gas distributed, amounting to 1,732 million cubic metres, were down by -6.7%.
The volumes of water distributed in the six months amounted to 36 million cubic metres, in line with the quantities as at June 30, 2021.

In the first six months of 2022, the RAB for electricity, gas and water services were up 9.8%, 1.3% and 24.3% respectively, thanks to the increase in investments made.

Heat

GWht	06 30 2022	06 30 2021	CHANGE	% 2022/2021
SOURCES				
Plants in:	**874**	**880**	**(6)**	**(0.7%)**
- Lamarmora	224	245	(21)	(8.6%)
- Famagosta	43	51	(8)	(15.7%)
- Tecnocity	32	33	(1)	(3.0%)
- Other plants	575	551	24	4.4%
Purchases from:	**1,121**	**1,229**	**(108)**	**(8.8%)**
- Third parties	230	294	(64)	(21.8%)
- Other Business Units	891	935	(44)	(4.7%)
TOTAL SOURCES	**1,995**	**2,109**	**(114)**	**(5.4%)**
USES				
Sales to end customers	1,766	1,823	(57)	(3.1%)
Distribution losses	229	286	(57)	(19.9%)
TOTAL USES	**1,995**	**2,109**	**(114)**	**(5.4%)**
Electricity from cogeneration	199	189	10	5.3%

Note:
- The figures only refer to district heating and include cold sales. Sales relating to heat management are not included.
- Purchases include the quantities of heat purchased from the Waste Business Unit.

The heat sales of the Smart Infrastructures Business Unit in the first half of 2022 amounted to 1,766 GWht, a decrease of -3.1% compared to the volumes sold in the corresponding period of the previous year, which is attributable to the milder temperatures during the period under review.

Economic figures

millions of euro	01 01 2022 06 30 2022	01 01 2021 06 30 2021	CHANGE	% 2022/2021
Revenues	786	618	168	27.2%
Gross Operating Margin - EBITDA	285	264	21	8.0%
% of Revenues	36.3%	42.7%		
Depreciation, amortization, provisions and write-downs	(133)	(127)	(6)	4.7%
Net Operating Income - EBIT	152	137	15	10.9%
% of Revenues	19.3%	22.2%		
Capex	241	215	26	12.1%
FTE	3,047	3,051	(4)	(0.1%)
Labour costs	55	55	-	0.0%

The Smart Infrastructures Business Unit's revenue for the period amounted to 786 million euro (618 million euro as at June 30, 2021, +27%). The change is related to higher revenues related to district heating due to unit price dynamics.

The Gross Operating Margin of the Smart Infrastructures Business Unit in the first half of 2022 was 285 million euro (264 million euro at June 30, 2021).
Net of non-recurring items (+16 million euro in the first half of 2022; +4 million euro in the corresponding period of the previous year), the Ordinary EBITDA of the Business Unit reached 269 million euro, up 9 million euro (+4%) with respect to the first six months of 2021.
It should be noted that non-recurring items in the current year include 15.3 million euro for past tariff items related to the 2010/2011 years of the water cycle of the ACSM-AGAM Group.

The change in margins is distributed as follows:
- electricity and gas distribution networks (-16 million euro): decrease related to lower revenues allowed for regulatory purposes following the resolutions of the sector authority (ARERA) concerning the remuneration of capital, electricity loss equalisation, lower revenues from connection fees, and higher operating costs (mainly charges for updating the gas fee related to ATEM Milan 1 and energy costs);
- district heating: +23 million euro, primarily due to an increase in unit margins as a result of the scenario effect;
- water cycle: -3 million euro for higher operating costs (reimbursements water losses and electricity costs);
- public lighting: +5 million euro for the update of the fee to the Municipality of Milan and higher revenues from TEE (Energy Efficiency Certificates).

Depreciation, amortization, provisions and write-downs equalled 133 million euro (127 million euro as at June 30, 2021). The change is due to higher depreciation and amortization for capex during the period July 2021 - June 2022 and higher allocations.

As a result of the above changes, Net Operating Income amounted to 152 million euro (137 million euro at June 30, 2021).

Investments in the period in question amounted to 241 million euro 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 of remote control, the refurbishment of the medium and low voltage network, the maintenance and upgrading of primary plants and capex in the launch of the 2G smart meter project (91 million euro);
- in the gas distribution subsector, 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 (61 million euro);
- in the integrated water cycle sector, maintenance and development work carried out on the water transport and distribution network, as well as works and restoration works on the sewer networks and purification plants (40 million euro);
- district heating and heat management segment: development and maintenance of plants and networks for a total of 34 million euro.
- in the public lighting sector for new projects (8 million euro);

- in the Smart City segment, mainly laying fibre optics, radio frequencies and data centres (5 million euro);
- in the e-mobility sector for the installation of new electric energy recharging stations (2 million euro).

In the first half of 2022, FTEs amounted to 3,047 units, substantially in line with the previous year (3,051 units in the corresponding period of 2021).

9.6 Corporate

Economic figures

millions of euro	01 01 2022 06 30 2022	01 01 2021 06 30 2021	CHANGE	% 2022/2021
Revenues	159	147	12	8.2%
Gross Operating Margin - EBITDA	(13)	(10)	(3)	30.0%
% of Revenues	(8.2%)	(6.8%)		
Depreciation, amortization, provisions and write-downs	(26)	(24)	(2)	8.3%
Net Operating Income - EBIT	(39)	(34)	(5)	14.7%
% of Revenues	(24.5%)	(23.1%)		
Capex	24	27	(3)	(11.1%)
FTE	1,605	1,504	101	6.7%
Labour costs	74	71	3	4.2%

The Gross Operating Margin, corresponding to the Corporate structure costs not charged back to the various Group companies in the period under review, amounted to -13 million euro (-10 million in the first half of 2021).
Net of non-recurring items (-2 million euro in the first half of 2022; -3 million euro in the corresponding period of the previous year), the Ordinary EBITDA of the Corporate Business Unit reached -11 million euro, down -4 million euro with respect to the first six months of 2021.

The negative change in margins is due to the greater weight in the year of costs not charged back compared to total expenses incurred by the Corporate.

Depreciation, amortization, provisions and write-downs equalled 26 million euro (24 million euro as at June 30, 2021).

After depreciation, amortization, provisions and write-downs there was a Net operating loss of 39 million euro (a net operating loss of 34 million euro as at June 30, 2021).

Capex in the first half of 2022 totalled 24 million euro, including 18 million euro for information systems and 3 million euro for buildings.

In the year under review, FTEs amounted to 1,605 units, an increase of 101 units compared to the half-year of the previous year, due to additions to strengthen some areas of activity, in line with the Group's development needs and objectives.

10

Risks and uncertainties

10.1 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 by Consob, 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 adopted 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 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 ISO 9001, ISO 14001 and ISO 45001 certifications of Group companies.

Set out below is a description of the main risks and uncertainties to which the Group is exposed.
The geo-political tensions related to the crisis between Russia and Ukraine and the health emergency, having possible repercussions on more than one type of risk, are discussed in this opening section.

Impacts of the Russia-Ukraine conflict

The ongoing conflict between Russia and Ukraine has exacerbated an energy market crisis already underway in 2021, linked to the post-pandemic recovery and severe commodity shortages, leading to a further increase in energy commodity prices and their volatility. In addition to the direct impacts on the production and sale of electricity and gas, such a price increase lead to a general increase in inflation with particular reference to the prices of oil derivatives and foodstuffs, as well as tensions on financial markets, on the solvency of some counterparties and on the security of the IT infrastructure for a possible increase in cyber-attacks. In addition, recent government measures have introduced extraordinary subsidies on the economic results of energy companies, earmarking them, in particular, to finance measures to protect domestic companies and households. This context is constantly evolving and further forms of levies are not excluded in the course of 2022.
Should the national supply situation become critical and an emergency be declared, network operators could decide to interrupt the supply of gas and energy to specific industrial entities with certain characteristics, addressing interruptible customers first. Extraordinary measures would also be triggered, ranging from the use of strategic storage to setting temperature thresholds for heating and cooling.
The A2A Group, as part of its industrial activity of generating energy carriers and marketing them on a wholesale basis, is managing the growing volatility of the price of gas both by monitoring the limits of exposure to commodity risk and by optimising its buying and selling strategies. It should also be noted that the Group, in its procurement activities, operates mainly on platforms. The A2A Group has also initiated joint analyses with the electricity grid operator to define possible ways to maximize electricity production from fuels other than natural gas. A2A has, however, equipped itself with gas storage space, which it is promptly filling in order to hold forms of flexibility to reduce the impact of any stress on gas imports into Italy and guarantee winter supplies to users. A2A's gas portfolio is currently balanced: gas volumes used by thermoelectric power plants that have not already been purchased in advance by

hedging the spark spread are purchased daily on the market. Should there not be sufficient liquidity on the market to buy gas on a daily basis, recourse would have to be made to the balancing market operated by the GME and/or in some cases, failing to fully cover requirements, to the Unbalancing market. The expected effects of this situation are mainly of a financial nature as they would lead to an increase in the guarantees to be provided to Snam and GME.
With reference to the generalized increase in inflation, the A2A Group is experiencing cost increases in the performance of its operating activities (e.g. site costs, waste transport costs, waste treatment process costs); it is also noteworthy that some materials are difficult to obtain within the ordinary timeframe. In order to cope with this situation, automatic price list adjustments are being made where possible, stocks of materials that are more difficult to obtain are being increased and the supplier portfolio is being expanded.
With reference to the solvency of certain counterparties, the increase in commodity prices determines - as noted in the first six months of 2022 - an increase in credit exposures to customers (even assuming constant volumes): credit risk is managed through a Credit Policy with the objective of managing counterparty risk through preliminary checks, insurance coverage, requests for guarantees, waivers as well as managing payment terms, interest and repayment plans. The Net Financial Position felt the effects of the conflict: the increase in commodity prices coupled with higher demand for installment plans from customers led to an increase in net working capital, particularly in the Market Business Unit. This growth was calmed by proactive management of the same. To date, no deterioration related to the increase in credit delinquency has been reported.
With reference to possible tensions in the financial markets, it should be noted that the Group's solid liquidity position, also supported by both committed and uncommitted back-up lines (at June 30, 2022 equal to 2.1 billion euro), is allowing it to manage positions in the commodities market in addition to temporary increases in working capital due to price growth and installment plans granted to customers. During the first half of the year, which was characterized by a complex and volatile market environment, A2A successfully issued two bonds for a total of 1.1 billion euro, thus anticipating the funding needs of the coming months. In addition, medium-term bilateral credit lines were signed, as well as a 410 million euro revolving credit line for back-up purposes, all demonstrating the Group's ability to access capital and banking markets. Lastly, in relation to the high level of alertness for cyber attacks, the Group has activated a channel with the top management of the National Security Agency to exchange information, accelerating the program to secure endpoints with advanced malware protection tools; an assessment was also conducted to determine the degree of vulnerability of A2A's services exposed on the Internet and the degree of exposure to the attack techniques and tactics of Russian criminal groups and hackers.

Health emergency COVID-19 virus

With reference to the rise of the Coronavirus emergency, it should be noted that crisis management measures have been put in place, as well as the identification of appropriate prospective mitigations linked to the risk of temporal extension of the emergency.

Since 2018, the A2A Group has had a Group crisis plan that identifies the organizational system, activities and procedures necessary to deal with the events that led to the declaration of crisis, with the aim of protecting human resources inside and outside the A2A Group, containing material and immaterial damage and guaranteeing the correct management of communication flows externally and the continuity of the services offered, quickly organizing normal operating conditions and safeguarding the company's reputation. It should be noted that the A2A Group is managing the COVID-19 health emergency in full application of the provisions of the above procedure with the establishment and management of special Crisis Committees. These committees, which meet to coordinate crisis management activities, make it possible to direct the company's actions in line with the provisions of the various Prime Ministerial Decrees issued and carry out preventive activities by defining mitigation plans to be activated if the emergency situation worsens.

The main monitoring and mitigation actions identified are described below:
- definition of the minimum functional services to be monitored by the plant managers and the list of managers necessary to manage the plants and related back-up, also with reference to contractors; this activity has been completed and can be activated in the event of personnel unavailability;
- actions involving personnel aimed at avoiding assemblages and ensuring the safety of people (preparation of the procedural documents according to the provisions of health protocols, adoption of PPE, sanitization of premises, etc.); the segregation of the personnel of external companies was also guaranteed;
- preparation of a plan of equipment and PPE requirements for use in disposable mode;
- adoption of organizational and technological solutions to ensure that certain critical processes can be carried out remotely and methods for the execution of emergency intervention.

Achievement of the objectives defined in the business plan

Reference is made to the risks connected with failure to achieve or partial achievement of the development and profitability objectives outlined in the Business Plan, which could have both an economic and financial impact as a result of lower growth in the Group's margins and a reputational impact as a result of failing to meet the expectations of stakeholders with regard to sustainability commitments.

The 2022-2030 Plan outlines ambitious growth targets, mainly in terms of the circular economy (recovery of materials and energy, exploitation of heat otherwise dispersed, preservation of water resources) and energy transition (support for growth in renewable energy sources, exploitation of the electricity generation of combined cycle plants, increase in the customer base, support for the electrification of consumption). The main risk factors affecting the various areas of development include: possible critical issues related to authorizations and adverse territorial contexts, the presence of major competitors capable of hindering the achievement of market shares in domestic and foreign markets, uncertainties on the legislative and regulatory evolution related to the deregulation of domestic energy markets, and commercial risks related to the targets defined in the Plan adopted to increase the customer base. In addition, since the last months of the year 2021, there has been a twofold phenomenon: on the one hand, there are difficulties in the procurement of certain materials that are used both in the ordinary operation of the plants as well as in maintenance, and at the construction sites of the development initiatives; on th e other hand, there has been a significant and generalized increase in the prices of materials, equipment, machinery and supplies. At the same time, the suppliers of these materials require Group companies to adjust their existing contracts with upward revision of the relevant prices.

A further important topic is the possible reiteration of the essentiality regime of the San Filippo del Mela thermoelectric power plant. Should Terna reiterate its request for the continuation of the plant's essentiality regime until at least the year 2025, issues would arise concerning the technical upgrading of the plant and the compatibility with the realization of reconversion projects for the site as an alternative to electricity generation.

To support the realization of development initiatives, mainly organizational measures are highlighted, with corporate structures focused on the analysis of the markets and development areas covered by the Plan, on the management of technical and engineering aspects, on the maintenance of relations based on transparency and collaboration with the territories, bodies and institutions involved, as well as commercial development initiatives that also envisage the use of innovative communication channels and methods. Of note is the ongoing recruitment of professionals with strong scientific-technological (STEM) skills. To support the path of sustainable growth, training activities are underway and focal points have been identified to support the process of increasing integration of sustainability principles in business processes, contribute to the definition of the objectives of the Sustainability Plan, promote and enhance new sustainability projects and encourage the circulation of information on these issues.

Legislative and regulatory risks

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 changed 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 Ecological Transition) 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 Competition, 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.
Regulatory Affairs and Competition also 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.
The organizational structure also oversees regulatory risk for the ACSM-AGAM and AEB Groups in order to monitor and manage its 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 which, in article 11-quater, provided for an overall reorganization of the subject, giving the Regions an increasingly important role (for the Lombardy Region, reference is made to the Regional Law no. 5/2020 as amended by subsequent Regional Law no. 19/2021);
- the outcome of the appeals filed by some operators and a trade association for the annulment of the Ministerial Decree MiSE of June 28, 2019 and all related acts of ARERA and Terna that implemented the capacity market regulations;
- the annual renewal of the essentiality regime for the San Filippo del Mela power plant, which does not allow a medium-term vision of the site's future;
- tenders concerning the granting of concessions for the gas distribution service;
- the termination of the SII concessions held by the Group companies operating in the sector and their transfer for consideration to the Single Area Operator (with particular reference in the immediate future to the municipalities managed on a transitional basis by A2A Ciclo Idrico in the province of Brescia and to most of the municipalities of ASVT expiring on December 31, 2021);
- the certification of energy savings and the consequent issue of White Certificates by the Energy Services Manager;
- the impact on the development of district heating due to the lack of a specific incentive tool and the start of regulation of the sector by ARERA only for aspects relating to commercial and technical quality and not also for support for investments;
- the provisions of the 2017 Competition Law on the termination of price protection schemes for electricity and gas customers, the date of which was further extended for electricity household customers to January 1, 2024.

Potential risks include the possible reiteration in 2023 of the mechanisms for extracting extra profits from energy operators implemented by the government in 2022, respectively, with:

- article 15bis of LD Sostegni Ter, which introduced a two-way refund mechanism on the price of electricity fed in from certain types of renewable plants (including existing hydro);
- and subsequently by article 37 of the LD Taglia-Prezzi (as amended by LD Aiuti), which introduced a tax of 25% on the increase of the balance between active and passive transactions for the period from October 1, 2021 to April 30, 2022 compared to the balance of the corresponding period in 2021. The contribution is due in cases where the above-mentioned increase exceeds 5 million euro and is not due if the increase is less than 10%.

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 and moral suasion on the consumer protection side) the Board of Directors of A2A S.p.A. approved during the meeting of June 20, 2019, the adoption of the Antitrust Compliance Programme with the consequent appointment of a person responsible for its implementation and during the meeting of January 20, 2020, adoption of the Antitrust Code of Conduct. Finally, on June 23, 2020 an Antitrust Guideline was adopted, which regulates the rules of conduct that A2A Group employees must observe in order to avoid antitrust violations (document available on the company Intranet). Meanwhile, training sessions continued for personnel of the various Business Units.

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".

Financial risks

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, 2022, the Group had cash and cash equivalents totalling 1,571 million euro, as well as committed and unused credit lines totalling 1,535 million euro.
The management of liquidity risk is pursued by the Group also by means of a Bond Issue Program (Euro Medium Term Note Programme) sufficiently large and partially unused as to enable the Group to timely resort to the Capital market. At June 30, 2022, this program amounts to 6 billion euro, of which 1,800 million euro still available.
The Group's ability to obtain loans in the banking or financial markets depends, among other things, on prevailing market conditions and the Group's rating at the time of the need for financing. There is no guarantee that the Group will be able to access financing on equal or better terms than it currently has.

Risks associated with compliance with debt covenants

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 Half-yearly Financial Report illustrates in detail these risks related to the A2A Group. The same section also lists the loans that contain financial covenants. At June 30, 2022, there was no situation of non-compliance with the covenants of the A2A Group companies.

Interest rate risks

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. Exposure to this risk concerns both the portion of existing debt at variable rate, and possible new debt. 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 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. The section "Other Information/Interest Rate Risk" of the consolidated Financial Report illustrates the effects on the change in financial charges and in the fair value of derivatives resulting from a change in the forward curve of interest rates of +/- 50 bps.

Risks associated with industrial and business activities

Macroeconomic context risks

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.

The first part of the year 2022 is strongly affected by the economic consequences of the conflict between Ukraine and Russia, with a generalized increase in commodity prices, inflation, and tensions in the financial markets, credit and supply chain; this situation could lead to a major slowdown in European economies, with significant impacts on national incomes. This is particularly true for Italy, also in connection with the strong dependence for the supply of raw materials from the countries involved in the conflict.

The current situation in the energy markets in which the production facilities operate, particularly thermoelectric power plants, shows signs of consolidation of the economic recovery underway also as a result of the gradual easing of the restrictive measures adopted at the time at national and international level to address the COVID-19 emergency. However, it cannot be ruled out that the overall economic situation could experience further deterioration in the future, with reference to a possible resurgence of the pandemic as well as a prolongation of the ongoing geopolitical crisis in Eastern Europe, with a potential increase in the recovery time of the production system.

To ensure this, it should be pointed out that all the measures undertaken in the past for combined-cycle plants are still active and in operation, with the aim of guaranteeing their operating flexibility, efficiency and availability at times when such requirements are requested of them.

For the years to come, macroeconomic projections foresee the continuation of the gradual recovery in international trade and a moderate expansion in domestic demand, which should lead to a gradual recovery in GDP. Tensions over the reduction or interruption of gas and oil supplies from Russia, linked to the conflict with Ukraine, may adversely affect the post-pandemic recovery path of economies with particular impact on western economies. The more or less pronounced effects will depend on the intensity and duration of the crisis.

Risks related to commodity and energy prices

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), and the prices of CO2 emissions allowances (EUA). Significant, unexpected and/or structural changes in commodity prices, especially in the medium term, may result in a reduction in the Group's operating margins and cash flows.

To mitigate these risks, the Group has approved an Energy Risk Policy that regulates the procedures by which commodity risk is 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 mitigated 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 and 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.

Social-environmental context risk

Possible opposition (the so-called "Not In My Back Yard" phenomenon) to the presence of plants promoted by certain stakeholders and amplified through the use of social networks, due to a negative perception of certain activities (such as waste recovery and disposal) in the areas served could hinder the regular operation of existing plants as well as the authorization process for new plants (for example, waste recovery or disposal plants and the conversion of thermoelectric plants), and therefore the growth planned by the Group in certain business areas.

To mitigate this risk, the Group has set up organizational structures dedicated to monitoring institutional relations, with local communities and the territory, in order to establish and maintain collaborative dialogue with the various stakeholders. Within this framework, the Group, in order to build consensus around its initiatives, participates in technical round tables with institutional counterparts, especially at local level, as well as through the organization of multi-stakeholder forums designed to promote dialogue with the local community. 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.

Risks related to climate change

The A2A Group has a system in place for identifying, assessing and managing climate change risks that is integrated into the Group's Enterprise Risk Management process.

Climate risks and opportunities are identified on the basis of three time horizons: short-term, corresponding to the current and next year; medium-term, corresponding to 5 years; and long-term, corresponding to 10 or more years, until 2030. The choice of these horizons was based on the analysis of the climatic, economic, energy and regulatory reference context.

The climate risks identified for the A2A Group are the result of a materiality analysis carried out considering the risk categories outlined by the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD), and the businesses operated and the services offered by the Group.

With reference to physical climate hazards (both chronic and acute), hazards related to temperature regimes, wind, precipitation and solid masses can generate impacts for Group companies in connection with the reduction or suspension of services and damage to company assets and/or persons.

In particular, the Group's hydroelectric and thermoelectric power generation, the electricity requirements of users, sales of gas and heat for winter heating and the continuity of electricity and drinking water distribution services provided by the Group may be impacted by unfavorable changes in weather and climate parameters, such as scarcity and changes in rainfall patterns, particularly mild temperatures in winter and heat waves in summer.
Changes in the availability of water resources can also lead to conflicts between various stakeholders as well as restrictions on the operation of hydroelectric plants.
These factors can have an unfavourable impact on the Group's production, sales and reputation and, consequently, have negative economic and financial impacts.
As part of the operating activities of the electricity grids, the issue of continuity of service during periods of special climatic conditions, with specific reference to particularly violent and concentrated heat waves and/or precipitation, affecting the areas served, generating reputational risks as a result of prolonged interruptions in the provision of the service.

Several actions are underway to mitigate these risks:

- to ensure optimum exploitation of water resources available for energy, the Group has established organizational structure dedicated to the development of analyses and engineering models to support the programming, both medium and short-term, of hydroelectric plants; moreover, investments are planned both to optimize the use of the available and derived water resources for hydroelectric purposes (pumping);
- with reference to the reduction in demand for thermal energy by end users compared to as planned, the Group has set up company organizational structures dedicated to constantly updating demand forecasts in relation to expected temperature trends. In addition, long-term investments have been planned to reduce the costs of heat production thanks to heat recovery and to develop district heating networks with a view to optimizing distribution methods and expanding the customer base. Studies are also carried out on investment support policies for the development and extension of networks in the area of efficient district heating, as well as studies on heating technology alternatives and participation in round tables with local authorities on environmental objectives;
- with reference to the operation of the electricity grids, in addition to the usual maintenance activities, the Group planned and launched the strengthening of the interventions to rationalize the meshing of the grids, the construction and commissioning of new primary substations, a three-year plan to increase the resilience of the grid in agreement with ARERA. There are also remote operational controls, advanced technical safety tools, emergency intervention teams as well as specific safeguards for infrastructure, which are more exposed to risks of interruption in the delivery of services;
- in order to guarantee, even in the long term, the supply of drinking water on an ongoing basis, the A2A Group monitors and maps leaks from the water network in order to identify the priority of investments to contain them and is studying the interconnection of aqueducts and the search for new sources of water supply.

Extreme weather phenomena such as floods and landslides can have a negative impact on the Group's assets (such as canals, dams, plants) as well as on third-party infrastructures necessary for the continuity of the Group's activities (e.g. electricity transmission lines). These factors can result in direct damage to assets and/or indirect damage due to the interruption of production activities. To mitigate this risk, the Group implemented emergency management plans and procedures. In addition, insurance policies have been taken out to cover direct and indirect damage caused by natural phenomena.

Finally, the Group is exposed to the risks associated with the transition to a low-carbon economy, which is expressed through regulatory amendments, possible conflicts for the use of resources, technological innovation, changes in consumption styles and stakeholder expectations. If these factors were not sufficiently taken into account in the definition of the Group's strategic choices, they could lead to economic and financial impacts due, for example, to the depreciation of industrial assets and possible reputation impacts. In this context, changes in the regulatory framework of the Emission Trading Scheme (EUAs) could lead to unfavorable impacts for the Group.

To contribute to the decarbonization process, the Group is committed to reducing its CO2 emissions - both direct and indirect. In fact, the Board of Directors approved a target for the Group's overall emissions to be achieved by 2030, which was recognized as a Science Based Target, i.e. in line with the level of decarbonization required to achieve the objectives of the Paris Agreement (limiting global warming to values well below 2 °C above pre-industrial levels and continuing efforts to limit warming to 1.5 °C). The main strategies adopted by the Group to achieve this objective include: ending the use of coal and fuel oil, increasing the efficiency of thermoelectric power plants fired with natural gas (combined cycles) and reducing emissions, adopting a strategic plan that calls for a significant increase in energy production from renewable sources, consistent with the target, and using energy entirely from renewable sources for consumption. The implementation of the decarbonization plan and the achievement of its

goals cannot be separated from the strategic energy choices made at government level to manage the energy crisis induced by the Russia-Ukraine conflict.

Operating risks due to the ownership and operation of electricity generation, cogeneration, waste treatment and recovery plants and distribution networks and plants

The Group manages production sites, infrastructure and services that are operationally and technologically complex (power plants, dams, waste recovery and disposal plants, cogeneration plants, electricity, gas and heat distribution networks, waste collection and urban hygiene services, integrated drinking water supply service, etc.). Accidental mechanical and/or electrical failures, structural failures, fires, terrorist attacks, and labour unrest could result in damage to assets and, in the worst cases, compromise the Group's production capacity, as well as the possibility of guaranteeing the continuity of services provided. Added to this is the potential difficulty in procuring materials and supplies for routine maintenance of plants and infrastructure. To cope with this difficulty, a management of material stocks and supplier fleets is implemented to ensure the availability of the necessary supplies.

All these factors can also lead to cost increases, damage to third parties, as well as penalties imposed by the competent authorities.

In order to mitigate these risks, the Group realizes preventive management strategies aimed at reducing the probability of their occurrence and/or mitigating their impact. In addition, the Group has investments in place to ensure constant technological updating and adequate levels of plant maintenance, emergency management plans and procedures and a crisis management procedure that provides for the establishment of interdisciplinary management committees, organized at both Group and Business Unit level and coordinated among them. Activity is also in progress to structure the Business Continuity Plan for the A2A Group.
It should be noted that, to date, no critical points have been found in the provision of services in connection with the persistence of the health emergency.

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 three years), inspections are carried out on the plants and measures to improve the safety of assets and loss prevention are recommended/verified.

Information technology and operational technology risks

The A2A Group's activities are managed through IT (Information Technology) and OT (Operational Technology) systems and networks that support the main business processes, whether operational, administrative or commercial. In particular, the Group uses IT systems to record, process and summarize financial information and results of operations for internal reporting purposes and to comply with regulatory, legal and tax requirements. In addition, the Group collects and stores at Data Centers, sensitive data, including intellectual property, business information and personal information of customers, service providers and employees. The functioning of these information and technology systems and networks, as well as the processing and storage capacity of this data in a secure manner, are fundamental to the Group's activities.

Increased threats to the security of information infrastructure, including from the use of personal tools as a result of the remoteness of work, and increasingly sophisticated forms of cybercrime pose a risk to the security of the Group's systems and networks and to the confidentiality, availability and integrity of its data. A security breach could expose the Group, its customers, service providers and employees to risks of misuse of information or systems, compromise of confidential information, loss of financial resources, data manipulation and destruction and operational disruption. All of these factors could adversely affect the Group's reputation, competitive position, business and results; safety violations could also result in litigation, fines and disqualification penalties, as well as operational and other costs.

In order to mitigate this risk, numerous actions are in place within the Group: internal policies and procedures, tools for segregating access to information, specific policies on the use of mobile devices, assessments of the vulnerability of systems and applications, specific software for detecting malware, training activities to increase employee awareness, periodic IT Security risk assessment activities to identify the most critical applications. In addition, corporate reorganizations were implemented to ensure, among other things, integrated and holistic management of corporate security for all assets, both physical and digital; continuous enhancement of the Security Operations centre to increase the effectiveness of threat monitoring; and specific interventions to mitigate emerging risks, also as a result of the substantial use of remote working modes.
Any inadequacies, fragmentations, unavailability and/or malfunctioning of the applications could compromise the Group's ability to operate within the set times and methods. These factors could result

in a loss of reputation with customers as well as economic and financial impacts. In order to mitigate this risk, activities are underway to renew existing platforms or to rationalize the applications in use, particularly for Customer Relationship Management and billing platforms supporting commercial activities. In particular, an assessment was carried out to identify obsolete but modernizable and recoverable applications and platforms to be replaced in order to rationalize the "ICT Enterprise Architecture".

There is also the risk of possible relevant and prolonged interruptions to information systems and company infrastructures as a result of potential events (natural or otherwise) affecting them, with potentially even critical consequences on the Group's ability to maintain the continuity of its systems. To mitigate this risk, the Group has developed and is in the process of finalizing its Disaster Recovery plan, which includes the implementation of a Group cloud strategy to make corporate information systems more usable and resilient. The plan is based on the presence of two Data Centres with high levels of security in terms of service continuity as well as the implementation of data backup solutions.
Lastly, the project aimed at guaranteeing the company's business continuity is nearing completion: critical processes have been identified and a Business Continuity Management System - SGCO - is being created, also with the aim of obtaining ISO 22301 certification.

Health and safety risks

The occurrence of such risks may occur both in the event of accidents or serious or very serious injuries affecting employees and workers of contractors and/or third parties and in the event of occupational illnesses. These risks are related to the Group's activities such as, for example, those related to operational services in the territory and the performance of operating and maintenance processes at the plants.

The occurrence of such risks may lead to loss of reputation, as well as criminal, civil and/or administrative proceedings for violations of regulations, and/or sanctions, costs for compensation and/or increase in insurance premiums and, in the worst cases, interruption of plant operations, with consequent negative economic and financial impacts for the Group.

In order to mitigate these risks, the Group has set up organizational structures dedicated to the management of Health and Safety aspects at the parent company as well as at the Business Units, the individual companies and the main plants. The Group also maintains Health and Safety Management Systems certified in accordance with ISO 45001 for the parent company A2A and most of its Subsidiaries. The group's main companies operating in the municipal collection and hygiene sector, which are particularly exposed to the risk of road accidents, are certified according to the ISO 39001 standard on road safety. In addition to specific compulsory training plans for each role and company assignment, Leadership in Health and Safety – LiHS training programs have been implemented and progressively extended also 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.

In relation to the COVID-19 pandemic, given the current regulatory framework, the Group is scrupulously adopting the requirements and protocols required by current regulations and guidelines issued by the competent bodies as well as favoring remote work.

Environmental risks

The emergence of such risks may occur as a result of accidents in production processes and of the particular characteristics of the business carried out by the Group, which may lead to reactions by the public opinion about presumed repercussions on the environment and/or on the health of resident populations. These risks are related, for example, to the disposal of production residues, emissions from production processes, the management of waste collection, storage, treatment and disposal activities, water purification, the management of the emptying and maintenance of water reservoirs for electricity production, etc. All these factors can potentially lead to loss of reputation, criminal, civil and administrative proceedings, penalties, environmental reclamation and restoration costs and, in the worst cases, interruption of plant operations with consequent negative economic and financial impacts for the Group.

It is also noted that any amendments to the existing legislation could entail costs and investments to ensure compliance with the new requirements as well as operational impacts on certain industrial activities.

In order to mitigate these risks, the Group, in addition to implementing technical and technological systems for the prevention and reduction of pollution at the various industrial sites in compliance with sector regulations and in accordance with the best available techniques, has set up organizational structures dedicated to the management of environmental aspects at the parent company as well as at the Business Units, individual companies and the main plants. The Group also keeps the Environmental Management Systems certified according to the ISO 14001 standard active for the parent company A2A and for the main companies. For some sites, there are also registrations under the European EMAS Regulation.

With specific reference to the management of the Group's landfills, including those under post-operational management, it should be noted that monitoring of the values of pollutants in the water table is carried out on a regular basis and summary reports are sent to the relevant bodies. There are frequent checks carried out by as well as the execution of internal audits and by external certifiers for the maintenance, among others, of compliance with the UNI EN ISO 14001 standard.

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. The Group is also active in monitoring the regulations in progress and is also present on the technical panels set up by the associations in order to highlight any critical issues related to regulatory developments.

11

Certification of the condensed half-yearly financial statements pursuant to art. 154-bis, paragraph 5 of Legislative Decree no. 58/98

11 Certification of the condensed half-yearly financial statements pursuant to art. 154-bis, paragraph 5 of Legislative Decree no. 58/98

1. 1.The undersigned, Renato Mazzoncini, as CEO of A2A S.p.A., and Fabio Luigi Colombo, as Financial Reporting Manager of A2A S.p.A. also considering the provisions of article 154-bis, paragraphs 3 and 4, of Legislative Decree no. 58 of February 24, 1998, hereby attest:

   - the adequacy in relation to the characteristics of the company and
   - the effective application

   of administrative and accounting procedures for the preparation of the condensed half-year financial statements in the first half-year of 2022.

2. It is also certified that:

   2.1 The condensed half-year financial statements:

   a) have been 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, July 29, 2022

Renato Mazzoncini (CEO)	Fabio Luigi Colombo (Financial Reporting Manager)

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Independent Auditors' Report

12 Independent Auditor's Report

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Review report on the half-yearly financial report (Translation from the original Italian text)

To the Shareholders of
A2A S.p.A.

Introduction

We have reviewed the half-yearly financial report, comprising the consolidated balance sheet, the consolidated income statement, the consolidated statement of comprehensive income, the statement of changes in group equity and the consolidated cash flows statement and the related notes of A2A S.p.A. and its subsidiaries (the "A2A Group") as of June 30, 2022. The Directors of A2A S.p.A. are responsible for the preparation of the half-yearly financial report 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 this half-yearly financial report 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 half-yearly financial report 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 half-yearly financial report.

Conclusion

Based on our review, nothing has come to our attention that causes us to believe that the half-yearly financial report of A2A Group as of June 30, 2022 is 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, August 2, 2022

EY S.p.A.
Signed by: Paolo Zocchi, Statutory Auditor

This report has been translated into the English language solely for the convenience of international readers

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