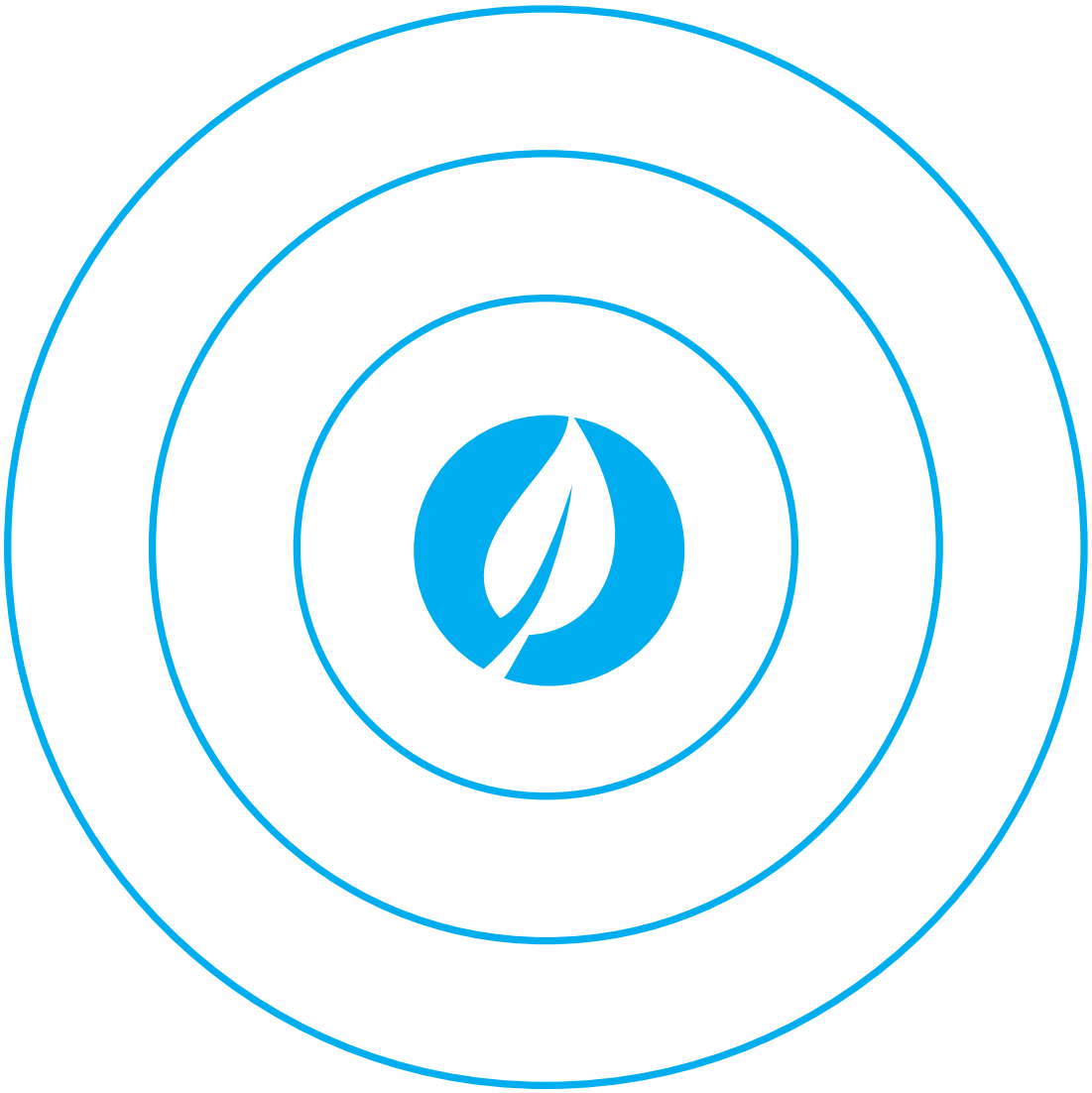
a2a
LIFE COMPANY



2022

Report on Operations

a2a LIFE COMPANY

Report on Operations

2022

these Financial Statements are available at the website
gruppoa2a.it

Contents

Letter to Shareholders and Stakeholders

4

Corporate boards

7

1 Key figures of the A2A Group

Business Units 10
Geographical areas of activity 12
Group structure 14
Financial highlights at December 31, 2022 15
Shareholdings 18
A2A S.p.A. on the Stock Exchange 19
Alternative Performance Indicators (APM) 21

2 Responsible sustainability management and sustainable finance

Responsible sustainability management and sustainable finance 28

3 Scenario and Market

Macroeconomic scenario 34
Energy market trends 36

This is a translation of the Italian original "Relazione sulla Gestione 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 **gruppoa2a.it**

4
Consolidated results and report on operations

Summary of results, assets and liabilities and financial position	40
Significant events during the year	49
Significant events after December 31, 2022	55
Impacts of the Russia-Ukraine conflict	56
Climate change	59
Taxonomy	62
Outlook for operations	63
Proposal for the allocation of net profit for the year ended December 31, 2022 and the distribution of a dividend	64

5
Analysis of main sectors of activities

Summary of results sector by sector	68
Results sector by sector	72
Generation and Trading Business Unit	74
Market Business Unit	77
Waste Business Unit	80
Smart Infrastructures Business Unit	83
Corporate	87

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

Generation and Trading Business Unit	95
Market Business Unit	100
Waste Business Unit	108
Smart Infrastructures Business Unit	119

7
Risks and uncertainties

Risks and uncertainties	140

8
Other information

Other information	150

Letter to Shareholders and Stakeholders

The letter to stakeholders is a time for our Group to take stock and plan. Once again this year, we had to face an emergency context and learn important lessons, achieving a new vantage point from which to look at our more distant goals.

In a world recovering from a two-year pandemic, a war has arrived in the heart of Europe, bringing uncertainty and instability. The geopolitical events of 2022 highlighted the EU's energy dependency and raised inflationary pressures, fuelling the risk of a global recession. The energy sector was one of the hardest hit; right after a global, cross-cutting emergency like the pandemic, we found ourselves at the centre of a crisis strongly focused on our business. Faced with this phenomenon that poses crucial challenges for our business - from the development of new energies, to the cost of raw materials, to customer relations - we have chosen to focus on the essentials, on what really counts for a company with the identity of a Life Company: **trust** and **consistency**.

Credibility with customers, loyalty with partners, reliability with shareholders, and respect for communities have been our cornerstones. In the urgency of difficult times, it is necessary to be able to recognise which aspects are important to protect. The relationship of **trust** with our stakeholders, strong because it is cultivated daily, has been a priority in dealing with market volatility and geopolitical changes.

We have chosen to **be consistent** with our commitments to achieve the sustainability targets set out in our Strategic Plan with 16 billion in planned investments to 2030 and, in November 2022, we updated the path to adapt it to the new external conditions, without losing sight of the goal and safeguarding the targets we have set ourselves.

On the **Circular Economy** front, we invested over 1 billion euro in '21-'22, confirming the soundness of our Plan and focusing on closing the waste cycle, recovering materials, energy and heat, and developing bioenergy. In 2022, we inaugurated two plants for the treatment of the organic fraction of municipal solid waste (MSWOF) in Lacchiarella and Cavaglià, for the production of 13 million cubic metres per year of biomethane. The material treatment and recovery plants produced more than 392 thousand tonnes of secondary raw material to be put back on the market. Separate waste collection in the municipalities served contracted in 2022 (-6% of municipal waste collected compared to 2021). However, the proportion recovered as material or energy remained unchanged, respectively 70% the former and 30% the latter.

In the context of the **Energy Transition**, in which 11 billion euro are being invested in the '21-'30 Plan, 2022 will surely go down in history as the black swan of the path towards sustainability of the national energy system. In this context, the decarbonization process undertaken by the Group (such as the closure of the Monfalcone coal-fired power plant in 2020) clashed with the need to ensure a stable and constant supply of energy to the country; for this reason, in 2022, we had to reactivate the San Filippo del Mela and Monfalcone plants. This obviously led to an increase in direct emissions generated by the Group (+21% compared to 2021), while indirect emissions related to energy purchases were almost zero, thanks to the confirmation of renewable energy purchase contracts at Group sites. Despite this context, we wanted to reaffirm in the latest Strategic Plan update our commitment to the ecological transition by declaring our intention to **achieve Net Zero for Scope 1 and Scope 2 emissions by 2040** and initiated an internal working group focused on identifying strategic and technological solutions to achieve this goal. In particular, during 2022, we consolidated our position among the leading operators in the generation of electricity from renewable sources in Italy through the acquisition of new wind and photovoltaic portfolios, located in Puglia, Sicily and Sardinia, and in Spain.

Also in this area, we continued to invest in supporting the electrification of consumption, which will see, by 2030, the construction of 16 new primary substations and the laying of 2,500 km of new grids.

We also wanted to emphasise in the Strategic Plan how crucial it is to pursue a **transition that is not only ecological, but also fair and shared**. More than 1,500 people have joined our Group, 41% of whom are under 30, giving many young people the chance of a secure job (more than 97% of contracts are permanent) with a net increase of 307 new colleagues.

Involvement was at the heart of employee relations in 2022: the first Group Engagement Survey was carried out to measure the level of well-being and involvement of A2A employees, and the Group's first 'physical' Convention was held, a fundamental moment of sharing. We also launched our second Corporate Intrapreneurship initiative: the Call For Sustainability, which saw the spontaneous participation of over 3,000 colleagues and the submission of 342 innovative ideas for the ecological transition.

Bearing in mind the complex macroeconomic context, we have tried throughout 2022 to support our customers by not only offering different solutions according to the type of customer and the service rendered, but also by actively engaging with them, including being the first to produce communication campaigns aimed at raising awareness of good practices and responsible behaviour in terms of energy efficiency and resource conservation.

We have also strengthened the involvement of the main stakeholders in the territories in which we operate by holding 9 listening forums; moments of discussion with our local stakeholders organized with the aim of creating synergies on the actions necessary for ecological transition. The meetings, in 6 regions, resulted in 30 project proposals, contributing to the development of shared value ideas and initiatives in line with the Group's objectives.

We are the first utility in Italy to achieve ISO 22301 certification in 2022 on the ability to invest in continuous improvement of business resilience and business processes.

Consistency, combined with strategic thinking, has guided us in the decisions to be taken during the complex times that the energy sector has faced during the past year, and like every year, this document allows us to analyse and recount the results, both positive and negative, achieved by our Group, but above all it allows us to highlight the commitment that all our colleagues and we put into making the Life Company every day.

To them, to the citizens, to the customers, to our shareholders, to the institutions, from our side and on behalf of the entire Board of A2A, our most sincere thanks.

Chairman of the Board of Directors
Marco Patuano

General Manager
Renato Mazzoncini

Corporate boards

Board of Directors

Chairman

Marco Emilio Angelo Patuano

Deputy Chairman

Giovanni Comboni

Chief Executive Officer 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

Statutory 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

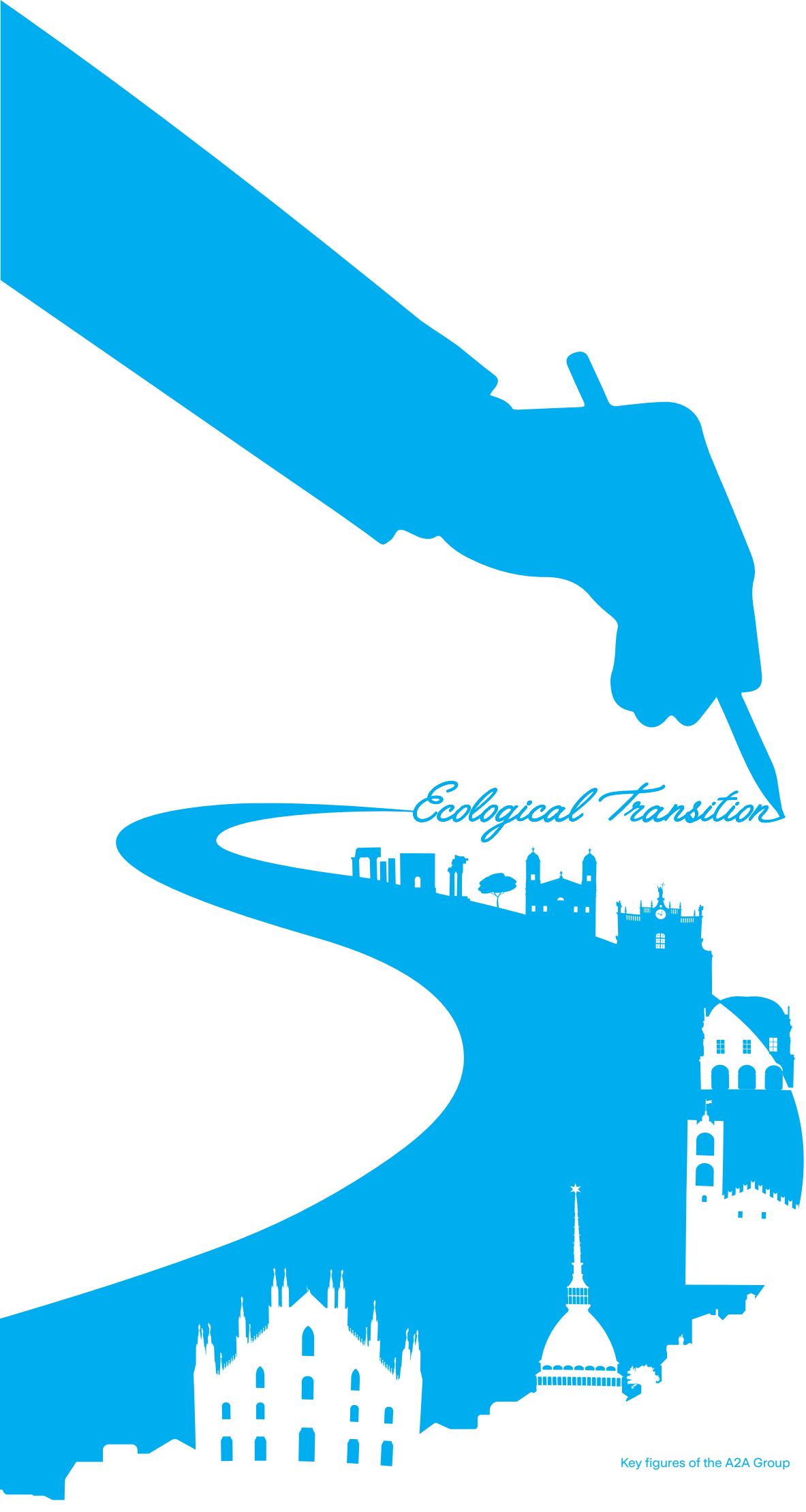
Smart Infrastructures

- 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.



1
Key figures of the A2A Group

1.1
Business Units

1.2
Geographical areas of activity

1.3
Group structure

1.4
Financial highlights at December 31, 2022

1.5
Shareholdings

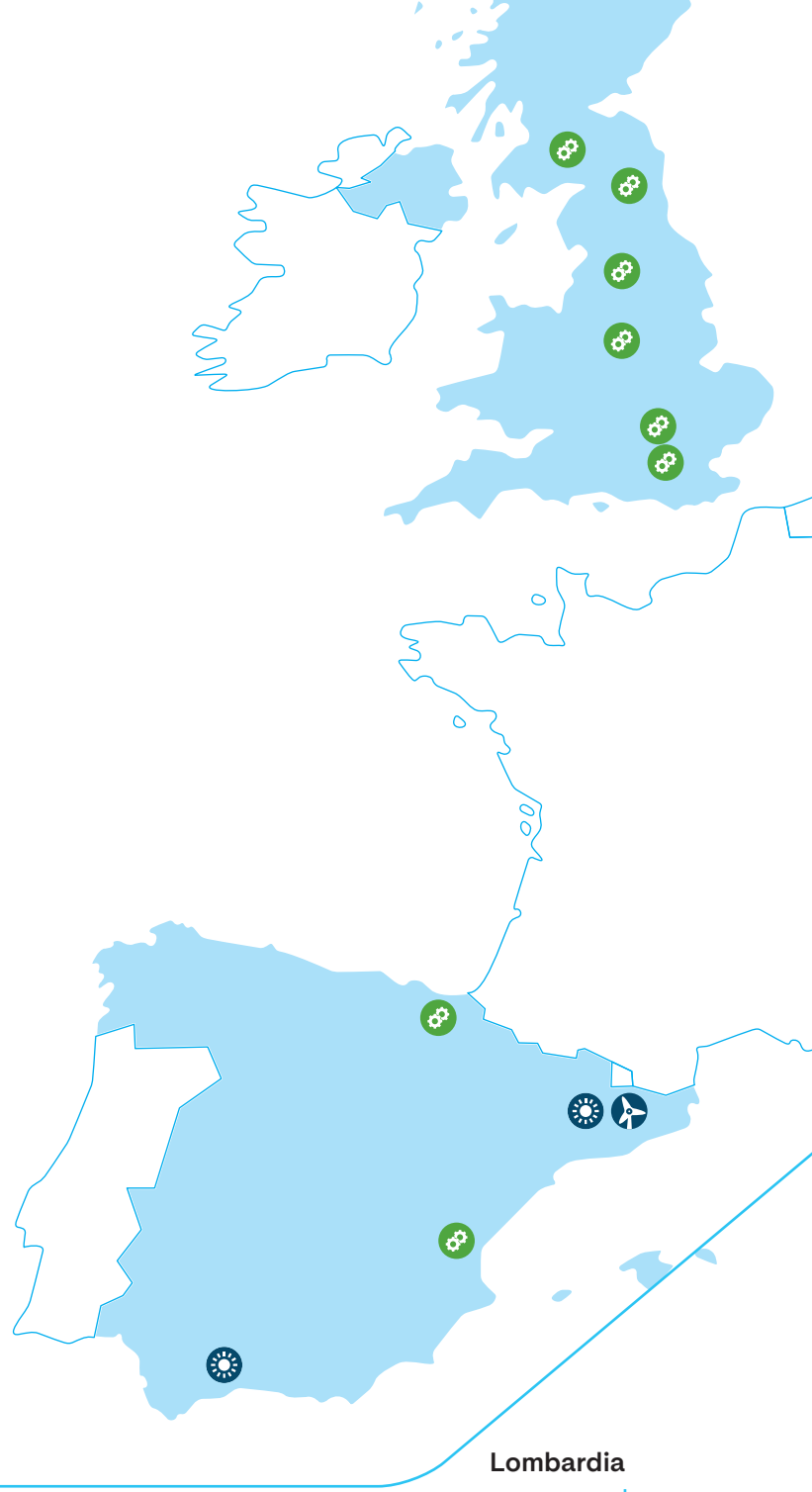
1.6
A2A S.p.A. on the Stock Exchange

1.7
Alternative Performance Indicators (APM)

1.2
Geographical areas of activity

Thermoelectric plant
Hydroelectric plant
Photovoltaic plant
Wind plant
Biomass plant
District heating plant
Waste treatment plant
Technological partnerships plant

Updated at 12.31.2022



Lombardia

Milano

Brescia

Sondrio

Bergamo

Pavia

Varese

Como

Mantova

Lodi

Cremona

Monza

Lecco

1.1
Business Units

1.2
Geographical areas of activity

1.3
Group structure

1.4
Financial highlights at December 31, 2022

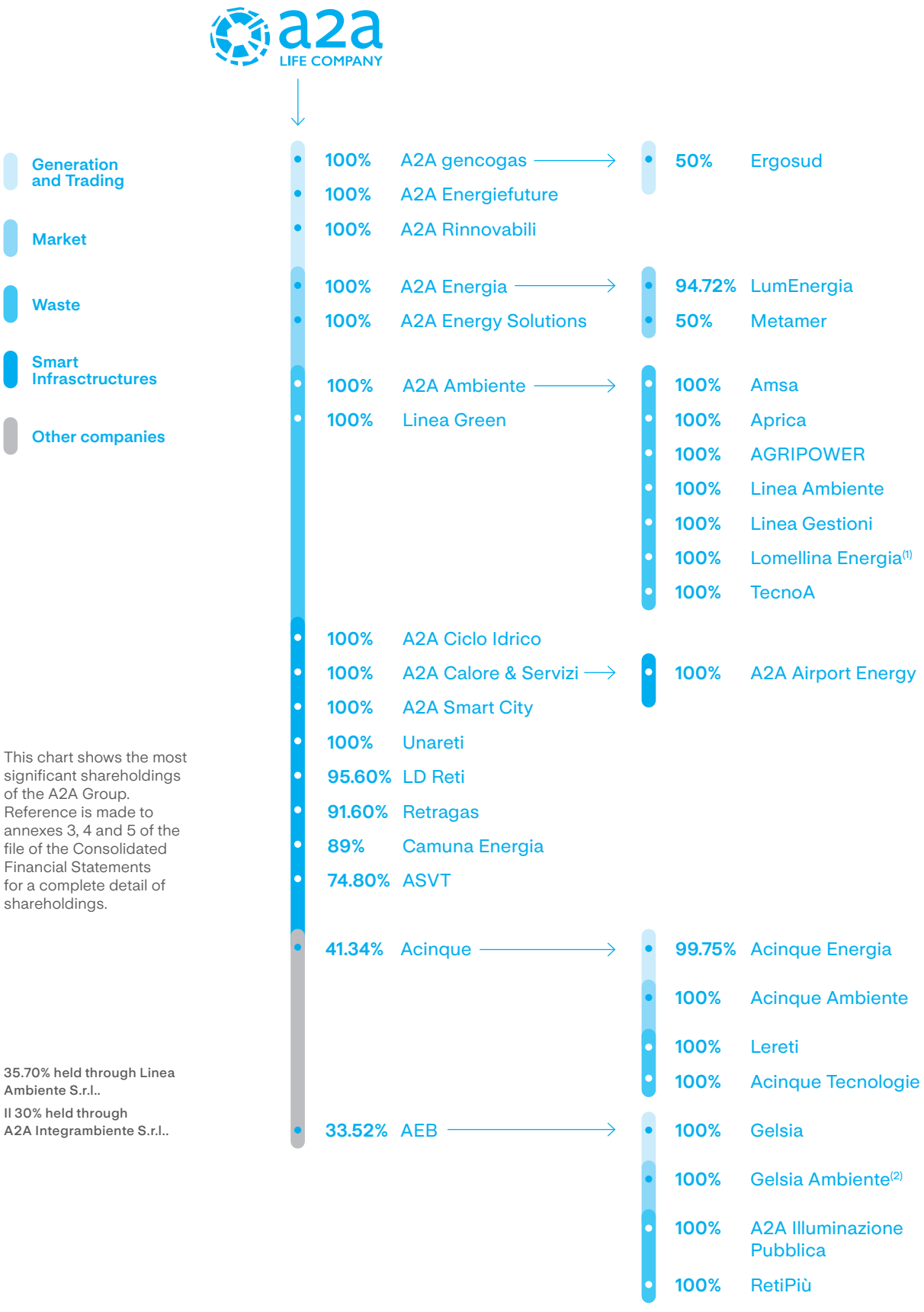
1.5
Shareholdings

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

1.7
Alternative Performance Indicators (APM)

1.3

Group structure



This chart shows the most significant shareholdings of the A2A Group. Reference is made to annexes 3, 4 and 5 of the file of the Consolidated Financial Statements for a complete detail of shareholdings.

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

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

1.1 Business Units
1.2 Geographical areas of activity
1.3 Group structure
1.4 Financial highlights at December 31, 2022
1.5 Shareholdings
1.6 A2A S.p.A. on the Stock Exchange
1.7 Alternative Performance Indicators (APM)

1.4

Financial highlights at December 31, 2022 (**)

23,166
mln €
Revenues

1,505
mln €
Gross Operating Income

401
mln €
Result of the year

0.0904
€ per share
Dividend

Income statement figures

millions of euro	01 01 2022 12 31 2022	01 01 2021 12 31 2021
Revenues	23,166	11,549
Operating expenses	(20,896)	(9,400)
Labour costs	(765)	(721)
Gross Operating Income - EBITDA	**1,505**	**1,428**
Depreciation, amortization, provisions and write-downs	(818)	(768)
Net Operating Income - EBIT	**687**	**660**
Result from non-recurring transactions	157	-
Financial balance	(88)	(70)
Result before taxes	**756**	**590**
Income taxes	(344)	(36)
Net result from discontinued operations	36	(4)
Minorities	(47)	(46)
Group result of the year	**401**	**504**
Gross Operating Income/Revenues	**6.5%**	**12.4%**

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

Balance sheet figures

millions of euro	12 31 2022	12 31 2021
Net capital employed	8,725	8,416
Equity attributable to the Group and minorities	4,467	4,303
Consolidated net financial position	(4,258)	(4,113)
Consolidated net financial position/Equity attributable to the Group and minorities	0.95	0.96
Consolidated net financial position / EBITDA	2.8	2.9

Financial data

millions of euro	01 01 2022 12 31 2022	01 01 2021 12 31 2021
Net cash flows from operating activities	1,260	1,135
Net cash used in investing activities	(1,142)	(1,595)
Free cash flow (Cash Flow Statement figure)	118	(460)

Energy scenario

	12 31 2022	12 31 2021
Average of the PUN (Single Nationwide Price) Base load (Euro/MWh)	303.1	125.0
Average of the PUN (Single Nationwide Price) Peak load (Euro/MWh)	333.6	139.8
Average price of gas to the PSV* (Euro/MWh)	121.9	45.8
Average price of emission certificates EU ETS** (Euro/tonne)	81.3	53.4

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

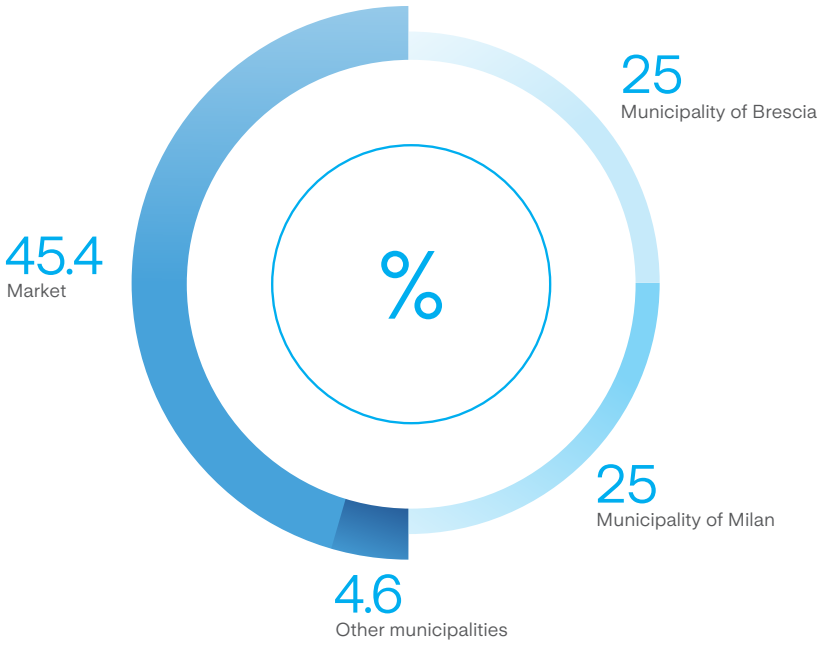
1.1 Business Units
1.2 Geographical areas of activity
1.3 Group structure
1.4 Financial highlights at December 31, 2022
1.5 Shareholdings
1.6 A2A S.p.A. on the Stock Exchange
1.7 Alternative Performance Indicators (APM)

Group's key operational indicators

	12 31 2022	12 31 2021
Generation and Trading		
Thermoelectric production (GWh)	15,636	14,078
Hydroelectric production (GWh)	2,729	4,231
Wind production (GWh)	251	22
Photovoltaic production (GWh)	387	291
Electricity sold to wholesale customers (GWh)	14,791	14,043
Electricity sold on the Power Exchange (GWh)	18,726	18,909
Market		
Electricity sold to retail customers (GWh)	20,737	18,426
POD Electricity (#/1000)	1,491	1,368
of which POD Electricity Free Market	*1,128*	*923*
Gas sold to retail customers (Mcm)	2,677	2,711
PDR Gas (#/1000)	1,579	1,567
of which PDR Gas Free Market	*1,043*	*929*
Waste		
Waste collected (Kton)	1,785	1,861
Residents served (#/1000)	3,965	4,065
Waste disposed of (Kton)	3,368	3,423
Electricity sold by waste-to-energy (GWh)	2,121	2,082
Smart Infrastructures		
Electricity distributed (GWh)	11,238	11,422
Gas distributed (Mcm)	2,726	3,132
Water distributed (Mcm)	75	76
RAB Electricity (M€)	827	753
RAB Gas (M€)	1,482	1,466
RAB Water Cycle (M€)	511	411
Heat sales (GWht)	2,877	3,178
Cogeneration production (GWh)	429	297

1.5

Shareholding (*)



(*) Sources: Shareholders' Register updated at dividend payment date (25 May 2022) and communications received in accordance with Art. 120 of Legislative Decree February 24, 1998, no. 58 ("TUF").

Key figures of A2A S.p.A.

	12 31 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)	-	-

1.1 Business Units
1.2 Geographical areas of activity
1.3 Group structure
1.4 Financial highlights at December 31, 2022
1.5 Shareholdings
1.6 A2A S.p.A. on the Stock Exchange
1.7 Alternative Performance Indicators (APM)

1.6

A2A S.p.A. on the Stock Exchange

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

Market capitalisation at December 30, 2022 (millions of euro):	3,900
Share capital at December 30, 2022 (shares):	3,132,905,277
Price at December 30, 2022 (€/share)	1.25

	2022
Average market cap (millions of euro)	4,292
Average daily volumes (shares)	9,966,105
Average price (€/share)	1.37
Maximum price (€/share)	1.74
Minimum price (€/share)	0.95

Source: Bloomberg.

A2A stock is also traded on the following platforms: Aquis, BlockMatch, CBOE, Chi-X, ITG Posit, Tradegate, 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
Euronext Vigeo Index: Eurozone 120
Standard Ethics Italian Index
Bloomberg Gender Equality Index
Solactive Climate and Energy Transition Index

Source: Bloomberg and company information.

In 2022 A2A obtained the following ESG ratings:

Assessment	Rating ESG
CDP Climate Change	A-
CDP Water	A-
FTSE ESG Rating	3.7/5
ISS ESG	B-
MSCI	BB
Refinitiv	B+
Standard Ethics	EE+
S&P CSA	77/100
Sustainalytics	21.0/40
Vigeo	64/100

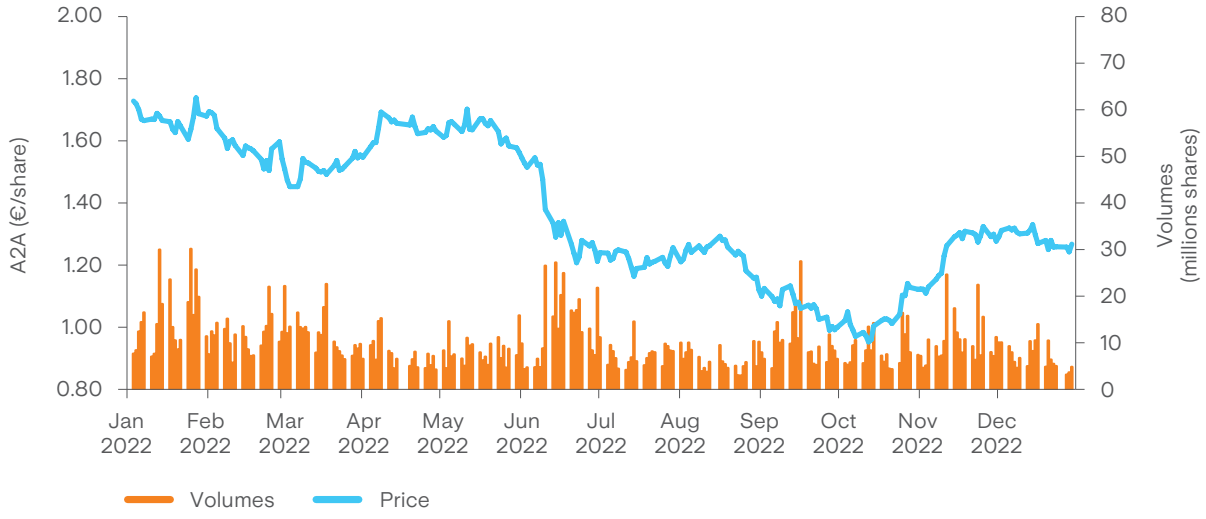
Debt Rating

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

Source: Rating Agencies.

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

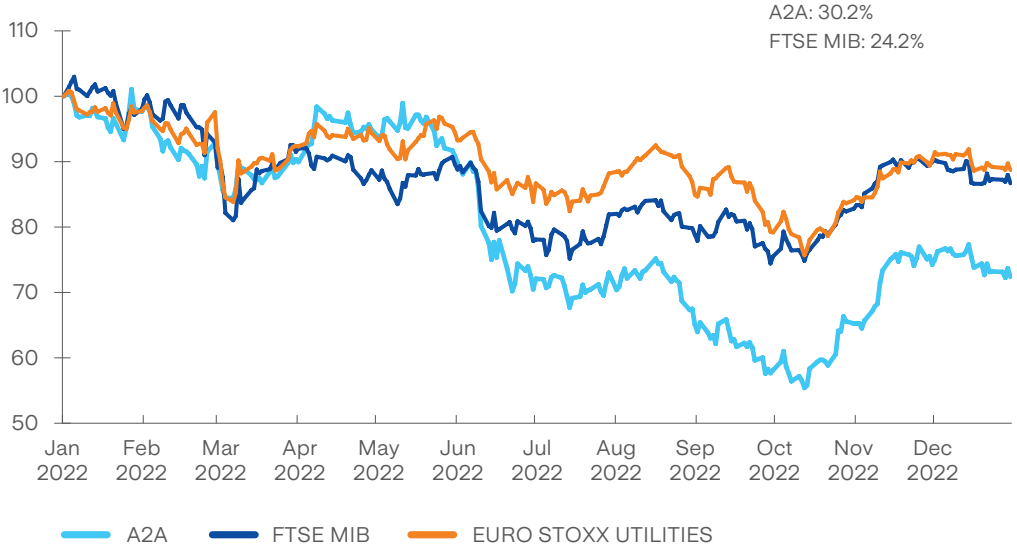
A2A: price and volumes



A2A vs FTSE MIB and EURO STOXX UTILITIES

(Price December 30, 2021 = 100)

Historical volatility in 2022
A2A: 30.2%
FTSE MIB: 24.2%



Source: Bloomberg.

In 2022, global equity markets were heavily penalized by the outbreak of the conflict between Russia and Ukraine and the significant rise in inflation, mainly driven by increases in energy prices, which prompted central banks to adopt repeated restrictive monetary policies: in particular, the ECB raised rates in July for the first time since 2011 to the current 2.5%, while the FED increased its benchmark rate to 4.25% with seven consecutive hikes.

The FTSE MIB lost 13.3%, making it one of the worst in Europe. Very heavy declines also for the American stock exchange (Nasdaq -33% and S&P 500 -20%) and the Chinese stock exchange (-14% also impacted by the anti-Covid policy). A positive exception was the UK stock exchange (+1%), where the weight of the oil & gas and mining sectors, the sectors with the best annual performance in Europe (+24% and +4% respectively), is significant.

The performance of companies in the utilities sector was affected by the rising interest rate environment and was heavily penalized by the high volatility of commodity prices, as well as by government interventions to mitigate high energy prices.

A2A (-27.6%) underperformed the FTSE MIB index, but recorded the best performance among Italian multi-utilities, thanks to a significant recovery in the last months of the year supported by corporate results and the update of the Strategic Plan.

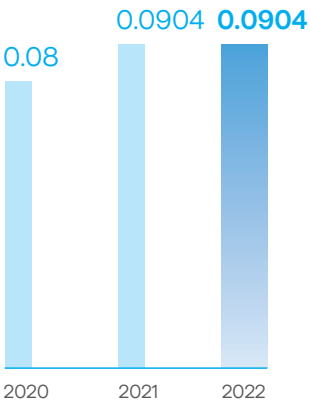
1.1 Business Units
1.2 Geographical areas of activity
1.3 Group structure
1.4 Financial highlights at December 31, 2022
1.5 Shareholdings
1.6 A2A S.p.A. on the Stock Exchange
1.7 Alternative Performance Indicators (APM)

1.7

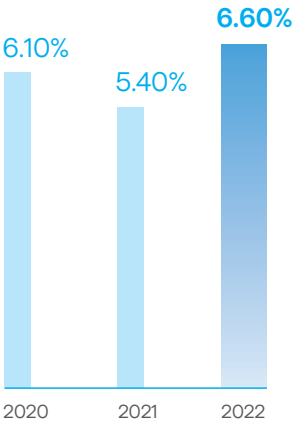
Alternative Performance Indicators (APM)

Dividend

euro per share

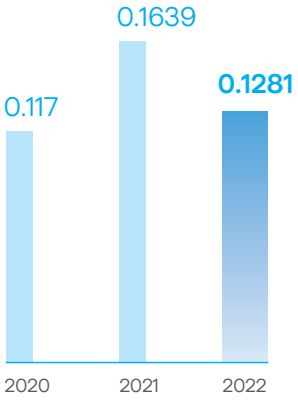


Dividend Yield



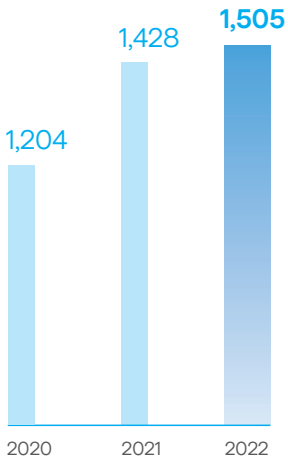
Earnings per share

euro per share



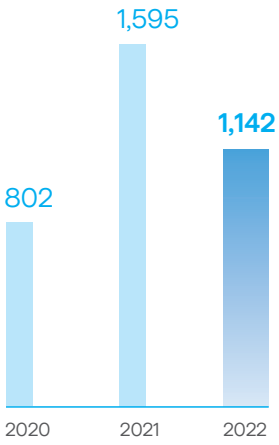
Gross Operating Income

millions of euro



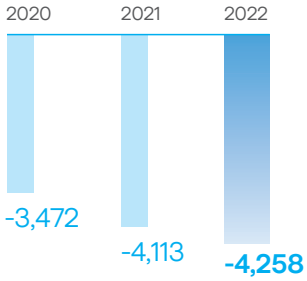
Net Investments

millions of euro



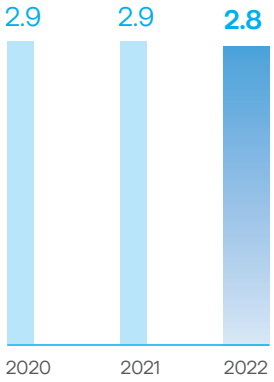
Net Financial Position

millions of euro

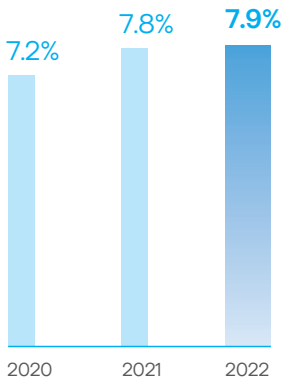


Net Financial Position/EBITDA

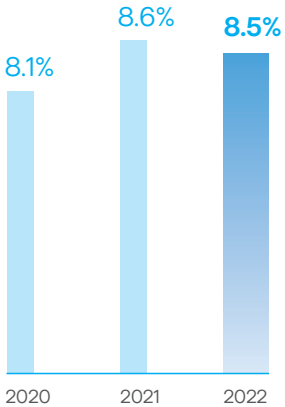
millions of euro



ROI



ROE



1.1 Business Units
1.2 Geographical areas of activity
1.3 Group structure
1.4 Financial highlights at December 31, 2022
1.5 Shareholdings
1.6 A2A S.p.A. on the Stock Exchange
1.7 Alternative Performance Indicators (APM)

Alternative Performance Measures (APM)

In this Report on Operations, a number of Alternative Performance Measures (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 and 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/31-62-1426), 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 and Other Current Assets/Liabilities

Net Working Capital is determined as the algebraic sum of:

- inventories;
- trade receivables
- trade payables;

Other current assets/liabilities include:

- other current assets;
- 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) and 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 "Total Net Financial Position".

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

Net financial position/Net debt

Net financial position/Net 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/31-62-1426 of July 15, 2020.

1.1 Business Units
1.2 Geographical areas of activity
1.3 Group structure
1.4 Financial highlights at December 31, 2022
1.5 Shareholdings
1.6 A2A S.p.A. on the Stock Exchange
1.7 Alternative Performance Indicators (APM)

Capex in tangible and intangible assets

Capex 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.

Special Items

Special Items are non-recurring events that occurred during the year and had an effect on the consolidated income statement.

Ordinary Net Result (Ordinary Net Profit)

The **Ordinary Net Result** is calculated by excluding the impact of Special Items from each item in the Income Statement.

ROI

ROI, or return on net invested capital, is the ratio of net operating margin to net invested capital. It aims to measure the ability to generate wealth through operations and thus to remunerate equity and debt capital.

ROE

ROE, i.e. return on equity, is the ratio of ordinary net result to equity. It is intended to measure the profitability obtained by risk investors.

2

Responsible sustainability management and sustainable finance

2.1

Responsible sustainability management and sustainable finance

In a year of strong economic, geopolitical and social contrasts, A2A has kept sustainability and its purpose as a Life Company at the center of its strategy and daily operations.

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). 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 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.

The Integrated Report 2021 was awarded the Oscar di Bilancio for Integrated Reporting with the following reason: *"An accomplished and mature integrated report that also testifies to the company's continuous improvement efforts in this field. Comprehensive, rich in information, but with great readability and ease of linking, including hypertext. The connectivity between the different layers of indicators is enhanced within the document, including through the adoption of an integrated approach, an accompanying document and multimedia and interactive tools, thus creating a dialogue between information in the report and online. The focus on illustrating strategies, risks and opportunities should also be emphasised. Pleasant graphic choices."*

Environmental

In 2022, energy production was characterized and influenced by the strong macroeconomic imbalances resulting from the post-pandemic economic crisis and the beginning of the war in Ukraine. In this context, the decarbonization process undertaken by A2A for its own plants (such as the closure of the Monfalcone coal-fired power plant in 2020) clashed with the need to ensure a stable and constant supply of energy to the country; for this reason, the San Filippo del Mela and Monfalcone plants, fuelled by fuel oil and coal respectively, resumed operations in 2022. As a result, direct CO2 emissions - Scope 1 emissions - related to energy production increased.

Despite the contingent situation, the Group wished to reaffirm its commitment to the decarbonization pathway and on November 22, 2022 A2A approved the update to the 2021-2030 Strategic Plan, which confirmed the target of zero direct and indirect emissions (Scope 1 and 2) generated by the Group to 2040. Through the further development of renewable energies, carbon capture solutions and the phase-down of carbon-intensive businesses, the Group will be able to achieve the ambitious Net Zero target of 2040 10 years ahead of EU targets. In 2022, in fact, the Group started working on the definition of a specific roadmap to achieve this goal and on the testing of carbon capture technologies. A2A Ambiente and A2A S.p.A. were awarded Hercules funding under the European Horizon research funding schemes. This project involves the small-scale realisation of an experimental prototype for CO2 capture using calcium oxide (CaO) at the Silla 2 waste-to-energy plant in Milan.

The Group has also published a commitment document to support the decarbonization of its entire value chain in which the four thematic areas outlining the pathway to Net Zero are made explicit. Specifically:

- Accelerating the energy transition (increasing production from RES, optimizing existing energy production facilities);
- Invest responsibly (research and development geared towards CCS - Carbon Capture and Storage - projects or low environmental impact investments);
- Promote positive-impact engagement (use admissions criteria for suppliers based on the possibility of guaranteeing environmentally friendly products and services in tenders);
- Implement sustainable business practices (replacement of company fleet or promotion of low-impact transport solutions in the home-work commute of employees).

Social

In 2022, a path of dialogue with the main stakeholders of the territories in which A2A operates has been set up, enriching the programme with 3 new geographical areas in southern Italy (Apulia, Sicily and Calabria) together with the 6 'historical' appointments (Bergamo, Brescia, Sondrio, Milan, Friuli Venezia-Giulia and Piedmont). The 2022 activity led to the identification, based on the results of the first cycle in 2021, of the main barriers to ecological transition in each territory and to the proposal of shared, concrete and 'tailor-made' territorial solutions to overcome them. Furthermore, in December 2022, A2A organized the national forum 'In the interest of future generations', an event dedicated to the reform of Article 9 of the Constitution. At the event, the paper prepared by Francesco Clementi, Professor of Comparative Public Law at the Sapienza University of Rome, on the introduction of the new paragraph to protect the environment, biodiversity and ecosystems, in the interest of future generations, was presented. The conference created an important opportunity for reflection and debate on the implications and importance of this reform, promoting a space for dialogue and confrontation between young people, institutions and business.

A2A has included Generation Z in all these engagement programmes but has also realized a targeted and concrete

project for the participation of young people in the sustainability debate: the drafting of the Group's first Sustainability Report dedicated to young people. The report, covering data from the year 2021, was written and produced together with a selection of Gen Z talents who were immersed in the sustainable reality of A2A for a week. The selected talents, with the support of Giffoni Innovation Hub and Deloitte, were accompanied on a path to understanding A2A's Integrated Report 2021 with the unprecedented task of reinterpreting it in their own language and making it as usable as possible for their peers. The results of this experience were recounted during the Giffoni Film Festival 2022 in a listening and debate space dedicated entirely to the new generations. Also presented at the Giffoni Film Festival was 'In viaggio con Azzurra', a short film dedicated to children and safeguarding the planet. The protagonists are some teenagers and Azzurra, the comic-strip character born from an idea of A2A and icon of a generation sensitive to environmental issues. She tells the story of the "sustainable journey" of four young people who decide to reach a concert on foot and wants to emphasise the importance of individual behaviour for the benefit of the whole community.

Throughout the year 2022, as far as educational activities were concerned, schools were provided with a content-rich educational offer that also met 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".

Webinars for teachers continued and 26 Intercultura scholarships were made available for deserving young people for STEAM language study programmes abroad.

Educational visits to A2A plants were attended by 2,740 students and teachers. In addition, a 40-hour certified PCTO (Percorsi per Competenze Trasversali e per l'Orientamento) was launched, involving 15,303 high school students to learn the new skills needed for professions in the energy sector.

Finally, in 2022, following the reform of the third sector and the entry into force of the RUNTS (Registro Unico Nazionale del Terzo Settore), Banco dell'Energia was transformed from a non-profit committee to a Foundation Philanthropic Body. In 2022, the Bank consolidated its commitment to continue promoting the "Together to Fight Energy Poverty" Manifesto. In the last months of 2022, the engagement activities started at the end of 2021 were followed up, which led to new stakeholders joining, reaching 60 signatories. The year 2022 was full of new projects for the Bank: the "Energy in the Suburbs" initiative was followed up in other Italian territories (Rome and Reggio Calabria). Finally, in December 2022, the project "Conscious and sustainable access to energy" was presented in collaboration with the Italian Red Cross, which will affect more than 400 beneficiaries living in six different Italian cities, and the project "Condomini Solidali" to support the Social Housing structures dedicated to the elderly of the Community of Sant'Egidio in Rome. At December 31, 2022, Banco dell'Energia has collected and donated more than 6.5 million euro and helped more than 10,000 families.

Governance/finance

In 2022, the company has also been confirmed in nine ESG ethical indices (MIB ESG, FTSE4Good Index, ECPI ESG Equity, Ethibel Sustainability Index Excellence Europe, EURO STOXX Sustainability Index, Euronext Vigeo Index, Eurozone 120, Standard Ethics Italian Index, Solactive Climate Change Index, Bloomber Gender Equality Index).

In June 2022, Standard Ethics, an independent rating agency that measures corporate sustainability, announced that it has raised A2A's Corporate Rating to 'EE+' from the previous 'EE' with a 'Positive' outlook, positioning A2A as the company in its sector with the highest rating. This important achievement won us the Best ESG rating Award from Milano Finanza at the ESG Awards ceremony.

In 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, which represents the set of guidelines that strengthen the link between the Group's financial strategy and sustainable strategy, 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's longer-term strategy, linking debt instruments to one or more of the Group's sustainability objectives.

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, three 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. This important goal contributes to the achievement of UN SDGs 7 and 13, and
- two new Green Bonds (600 million euro and duration of 4 years the first, 650 million euro and duration of 8 years the second) 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).

As a result of these operations, the share of ESG debt in total gross debt at December 31, 2022 was 58%.

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, with 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.

3

Scenario and Market

3.1
Macroeconomic scenario

Overview

During 2022, global economic activity was affected by several factors that dampened its growth pace, especially in the second half of the year. Russia's war on Ukraine has destabilized energy commodity markets and fomented uncertainty about food security especially in emerging economies. In conjunction with the conflict in Ukraine, the closure measures taken in China with the zero-Covid strategy have also put pressure on global supply chains. The combined effect of the above and tensions in the commodity markets fuelled inflation. Commodity prices proved volatile and prone to supply-side risks, while financial conditions deteriorated, reflecting the global tightening of monetary policy and rising yields. According to the World Bank's preliminary estimate, estimated world GDP growth is expected to average 2.9% in 2022 compared to a growth of 5.9% in the previous year.

In advanced economies, conditions deteriorated sharply due to declining confidence, high inflation and the rapid tightening of monetary policy. In the US, which is undergoing one of the most aggressive rounds of monetary policy tightening in recent history, growth has slowed to 1.9% in 2022. In the UK, high consumer inflation, rising mortgage costs and tight financial conditions are exerting a strong drag on private consumption and investment, which has led to a contraction of GDP since Q3. In China, a number of factors negatively impacted economic activity such as the drastic mobility restrictions implemented as part of the zero-Covid strategy as well as the continuing weakness in the residential construction sector. GDP growth in 2022 stood at 3.0% (8.1% in 2021), which is the lowest level in more than 40 years and significantly below the authorities' target of 5.5%. In Russia, the economy has entered a severe recession with GDP 2022 expected to be -5.5%.

Economic activity in the Eurozone, after strong growth in the first half of the year, slowed down sharply in the third quarter and is expected to continue in the fourth quarter. High inflation and tighter financing conditions curbed spending and production by reducing households' real incomes and pushed up costs for businesses. Macroeconomic projections for the Eurozone, formulated by Eurosystem experts in December, forecast annual GDP growth in real terms of 3.4% in 2022.

As far as Italy is concerned, GDP showed an increase in the first three quarters of the year. According to the Bank of Italy's estimates, economic activity weakened in the fourth quarter compared to the previous period; this was due to the effects of persistently high energy prices and the dampening of the recovery in the sectors most affected by the pandemic, such as trade, transport and accommodation services. By 2022 as a whole, GDP is expected to have increased by almost 4%.

According to the estimate released by Eurostat, inflation in the Eurozone stood at +9.2% in December, the highest level since the creation of the Economic and Monetary Union, compared to +10.1% in the previous month and +5.0% in the corresponding month of the previous year. In December, the largest contribution to inflation came from food, alcohol and tobacco (+2.79%), followed by the energy component (+1.83%). The average inflation for the year is equal to +8.4%.

In Italy, inflation reached new highs in the autumn months, driven by the energy component, which continues to spread to other commodity sectors in both goods and services. According to ISTAT estimates, inflation stood at +11.6% year-on-year in December (up from +11.8% in the previous month). In the average year, the inflation assumption for 2022 is +8.2%.

At its meetings in October and December, the Governing Council of the ECB further raised key interest rates, by 0.75 and 0.5 percentage points respectively, bringing the overall increase started in July to 2.5 percentage points; it announced that rates would still have to rise significantly and at a steady pace to support a timely return of inflation to the medium-term target while ensuring price stability. At its December meeting, the Council also announced the criteria according to which it will normalize the Eurosystem holdings of securities for monetary policy purposes. At its last two meetings in November and December, the Federal Reserve raised the target federal funds rate by 75 and 50 basis points to between 4.25 and 4.5%.

The year 2022 saw the single currency progressively weaken against the dollar, due to the monetary policy divergence between the European Central Bank and the Federal Reserve, with the EUR/USD exchange rate starting from average values of 1.13 in January and February and reaching a low of 0.98 in October, before returning to 1.06 in December. On average for 2022, the EUR/USD exchange rate was 1.05 dollars, down 11.0% from the previous year.

Outlook

In the World Bank's January forecast, the outlook for the global economy deteriorated in the face of heightened geopolitical uncertainty, high and steadily rising inflation, and strained financial conditions. The deterioration is generalized and per capita income growth will be slower than during the previous decade. Global growth is expected to slow abruptly in 2023 to 1.7% (1.3 percentage points below previous forecasts), making it the weakest in almost three decades after the recessions of 2009 and 2020, before recovering to 2.7% in 2024. The US, Europe and China are experiencing a period of marked weakness and the resulting fallout is exacerbating adverse situations in emerging markets and developing economies. Further negative shocks such as higher inflation, more restrictive policies, financial tensions, greater weakness in major economies or increasing geopolitical tensions could push the global economy into recession.

The US economy is expected to slow down further over the next two years as the Federal Reserve monetary policy moves into restrictive territory, holding back growth to +0.5% in 2023 and +1.6% in 2024, according to the latest World Bank forecast. The latter, as far as China is concerned, expects growth to rise to

4.3% in 2023 and 5.0% in 2024: this is 0.9 percentage points below previous forecasts mainly due to longer-than-expected pandemic-related disruptions in production cycles, weaker external demand and prolonged weakness in the real estate sector.

The outlook for the Eurozone deteriorated slightly and signalled weaker growth than previously projected. Eurosystem experts expect a short and mild recession at the turn of the year. In a context where the war in Ukraine continues to produce economic consequences fuelling strong inflationary pressures, consumer and business confidence remains subdued, real disposable income is being eroded, and sharply increased cost pressures are reducing output, particularly in energy-intensive sectors, the rate of real GDP growth is expected to fall sharply from 3.4% in 2022 to 0.5% in 2023 and then rise again to 1.9% in 2024. Compared to the September projections, the outlook for GDP was revised downwards by 0.4 percentage points for 2023 while it remains unchanged for 2024.

As regards Italy, according to the Bank of Italy, economic activity, sustained for most of 2022 by the robust dynamics of consumption and investments, weakened in the last months of the year and will remain weak also in the current quarter to gradually recover from the spring; growth should gain momentum from 2024 as inflationary pressures and uncertainty diminish. On average for the year, GDP is expected to increase by 0.6% in 2023 and 1.2% in 2024. The unemployment rate is expected to decline gradually from 8.2% on average in 2023 to 7.9% in 2024.

Against a backdrop of exceptional uncertainty, Eurosystem experts significantly revised upwards their inflation projections for the Eurozone from an average of 8.4% in 2022 to 6.3% in 2023, and then downwards to 3.4% in 2024. The decline in inflation over the time horizon reflects the effects of declines related to the energy component, the gradual impact of the normalization of the ECB monetary policy, the weaker outlook for growth and lower food commodity prices.

As far as Italy is concerned, the consumer price index of 8.2% in 2022 is expected to stand at 6.5% in 2023, before falling to 2.6% in 2024. This descent is strongly dependent on the assumption of a progressive decline in commodity prices, the effects of which would only be partly offset by the acceleration of wages.

The Governing Council of the European Central Bank (ECB), after raising key interest rates by 2.5 percentage points during 2022, assessed that they will still have to rise significantly and at a steady pace to support a timely return of inflation to the medium-term target. However, future rate decisions will continue to be made on the basis of the evolution of the inflation and growth outlook. The Council also decided to relax the conditions applied to the targeted longer-term refinancing operations (TLTRO3). The portfolio of the financial asset purchase program (FPA) will be reduced at a measured and predictable pace, averaging 15 billion euro per month from the beginning of March until the end of the second quarter of 2023. In contrast, the reinvestment of maturing bonds under the Pandemic Emergency Program (PEPP) will continue at least until the end of 2024 and will be conducted in a flexible manner. After raising the target range on federal funds to between 4.25% and 4.5%, the Federal Reserve also specified that interest rates would rise to a higher level than previously planned in order to bring inflation back to a level compatible with the 2% target.

Macroeconomic projections by leading analysts point to a EUR/USD exchange rate fluctuating in a range between 1.05-1.15 in the two-year period 2023-24 in an environment characterized by a particularly restrictive monetary policy in both the United States and Europe and providing support for the respective currencies.

3.2
Energy market trends

Electricity

As far as the national electricity market is concerned, in Italy in 2022 there was a net requirement of 316,827 GWh, down 1.0% compared to the 2021 requirement (source: Terna); in seasonally adjusted terms, and corrected for calendar and temperature, the change is equal to -1.5%. The above requirements were met 55.3% from non-renewable sources, 31.1% from renewable sources and the remainder from imports. In 2022, there was an increase in exports (+16.4%) compared to 2021.

Net energy production in 2022 was 276,373 GWh, down 1.3% compared to the previous year. In 2022, production from Renewable Energy Sources (RES) decreased 13.1% year-on-year to 98.4 TWh. Specifically, the photovoltaic source is up 11.8%, while wind (-1.8%) and geothermal (-1.6%) are down; the hydroelectric source is down -37.7% due to the low hydraulicity of the period. Thermoelectric production increased, showing +6.1% compared to 2021 and stood at 193,287 GWh. National production, excluding pumping, accounted for 87.2% of the demand for electricity, while net imports satisfied the remainder.

The average value of the PUN Base Load in 2022 shows an increase of +142.5% compared to 2021, reaching 303.1 €/MWh. The dynamic is mainly driven by a significant rise in gas costs, to which the price of energy is correlated, exacerbated by the Russia-Ukraine conflict; low levels of domestic supply, particularly hydroelectricity in the North, also support the PUN growth. The PUN in January 2022 stood at 224.5 €/MWh, reaching a high of 543.2 €/MWh in August, as tensions related to the reduction in Russian gas supplies escalated. The progressive reduction in gas prices in the subsequent period led to a PUN of 294.9 €/MWh in December. Average prices on the rise also for the price in the hours of high load (PUN Peak Load) with a value that stood at 333.6 €/MWh (+138.7% compared to 2021). The average price during off-peak hours (PUN Off-Peak) was 286.3 €/MWh, up +145.4% compared with the previous year. For all of 2023, forward curves indicate Base Load PUN prices with average values close to 171.9 €/MWh.

Natural Gas

The dynamics observed in the Italian gas market in 2022 are part of the scenario marked by the Russia-Ukraine conflict, reflecting the direct and indirect effects produced on international demand, flows and raw material prices. In 2022, Italy's natural gas consumption fell to 68,959 million cubic metres (-9.5%), falling below the levels of 2020, which was characterized by the start of the Covid-19 health emergency. The downturn affected the entire year, being more pronounced in the last four months when the recessionary effects triggered by the Russian-Ukrainian crisis were compounded by mild weather conditions (source: Snam Rete Gas). Consumption in the industrial and civil sectors decreased, with volumes of 11,921 million cubic metres (-15.2% on 2021) and 28,770 million cubic metres (-13.6%) respectively. Consumption also decreased in the thermoelectric sector, more moderately, to 25,103 million cubic metres (-3.4%).

On the supply side, in correspondence with lower demand and a substantially unchanged national production, there was a drop in natural gas imports, down to 68,658 million cubic metres (-4.2%), which accounted for 95.7% of national demand net of storage trends. Domestic production, which satisfied the remainder, stood at 3,107 million cubic metres (-0.5%).

Regarding prices, the average price of gas to the PSV for 2022 rose to record levels and stands at 121.9 €/MWh, up +165.9% compared to 2021. The PSV, with a value of 86.0 €/MWh in January 2022, continues the upward trend that began in the last quarter of 2021 and has characterized a good part of the year; in August, the highest value of the year was recorded at 233.5 €/MWh. Prices then decreased in October, due to full storage and mild temperatures, to the previous year's levels and recovered in December to a value of 116.6 €/MWh. The price dynamics on the main European hubs were similar: the average price of gas to the TTF for 2022 amounted to 120.5 €/MWh, up +163.7% compared to 2021.

The trend in the respective prices resulted in a PSV-TTF differential of 1.41 €/MWh for the reporting period, a significant increase compared to the differential of 2021 (0.15 €/MWh). Gas prices on the main European markets are expected to decrease in 2023, with an expected average price of gas to the TTF of 60.6 €/MWh and to the PSV of 61.9 €/MWh; the respective forward curves show a positive PSV-TTF differential around 1.35 €/MWh.

Oil and coal

In 2022, oil prices had an average value of 98.8 $/bbl, up +39.6% compared to the previous year. The upward momentum is concentrated in the first half of the year, reaching in June 2022 the highest level since 2012 and standing at 117.4 $/bbl. Starting in July, the trend reversed to reach an annual low of 81.4 $/bbl in December. In 2022 the upward dynamic of prices expressed in €/bbl (+56.6%) is emphasised by the depreciation of the euro against the dollar, down 11.0% compared to 2021 (1.05 USD/EUR). For the year 2023, oil forward curves indicate prices with average values close to 84.7 $/bbl.

The Energy Information Administration (EIA) reported that global oil demand in 2022 averaged 99.4 million barrels per day. The EIA expects global oil demand to increase by about 1.1 million barrels per day to 100.5 million barrels per day in 2023. Global oil demand is then expected to grow further to 102.2 million barrels per day in 2024 driven mainly by growth in non-OECD countries, especially India and China. However, these predictions are subject to many uncertainties including

future global economic development trends, continuing geopolitical tensions, and how the effects of the pandemic are still being managed in various countries including China.

OPEC crude production of member countries averaged 26.7 million barrels per day in 2022. The EIA predicts that OPEC crude production will reach 28.9 million barrels per day in 2023 and will rise further to 29.5 million barrels per day in 2024. US crude oil production averaged 11.9 million barrels per day in 2022; increased production in the Permian region drives the projected growth in US production with the EIA estimating an average of 12.4 million barrels per day in 2023 and 12.8 million barrels per day in 2024: the highest US crude oil production ever recorded. 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, starting from January prices of 170.5 $/ton, peaking in July at 395.1 $/ton and then falling back and closing in December at 227.7 $/ton. The average price for the year 2022 was 292.8 $/ton, up 137.4% compared to the previous year (123.3 $/ton). The depreciation of the euro against the dollar increases the upward trend in prices expressed in euro (+166.6%). For 2023, forward curves indicate prices with average values close to 144.9 $/ton.

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4

Consolidated results and report on operations

4.1

Summary of results, assets and liabilities and financial position

Results

It is noted that the consolidation scope at 31 December 2022 changed compared to 31 December 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. A2A Rinnovabili S.p.A. also acquired, through its subsidiary 3 New & Partners S.r.l., 100% of 3 New & Partners Rinnovabili S.r.l. (a company incorporated in November 2022) resulting in the line-by-line consolidation of Daunia Calvello S.r.l. and Daunia Serracapriola S.r.l., companies that hold a portfolio of wind farms in Italy;
- acquisition and line-by-line consolidation by A2A Calore & Servizi S.r.l. of 100% of A2A Airport Energy S.p.A., a company engaged in the production and sale of electricity, heat and cooling.

Moreover, the economic figures at December 31, 2022 are not consistent with the previous year due to the following extraordinary transactions in 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 in December 2021;
- acquisition and line-by-line consolidation by LGH S.p.A. (now merged into A2A S.p.A.) of 100% of the shares in Agripower S.p.A., a company specialising in the development and management of power generation plants from biogas, as of April 2021;
- acquisition by A2A Rinnovabili S.p.A. and line-by-line consolidation of 15 companies with 17 plants and 173 MW of installed photovoltaic capacity, previously managed by Octopus Renewables, as of April 2021;
- acquisition and line-by-line consolidation by A2A Rinnovabili S.p.A. of Gash 1 S.r.l. and Gash 2 S.r.l., two project companies with authorization to build two photovoltaic plants, as of April 2021;

The results of the A2A Group at December 31, 2022 are set out below together with comparative figures for the previous year.

millions of euro	01 01 2022 12 31 2022	01 01 2021 12 31 2021	Change	% 2022/2021
Revenues	**23,166**	**11,549**	**11,617**	**100.6%**
of which:				
- Revenues from the sale of goods and services	*22,946*	*11,352*	*11,594*	*102.1%*
- Other operating income	*220*	*197*	*23*	*11.7%*
Operating expenses	(20,896)	(9,400)	(11,496)	122.3%
Labour costs	(765)	(721)	(44)	6.1%
Gross Operating Income - EBITDA	**1,505**	**1,428**	**77**	**5.4%**
Depreciation, amortization and write-downs	(726)	(679)	(47)	6.9%
Provisions	(92)	(89)	(3)	3.4%
Net Operating Income - EBIT	**687**	**660**	**27**	**4.1%**
Result from non-recurring transactions	**157**	**-**	**157**	**n.s.**
Net financial balance	(90)	(72)	(18)	25.0%
Affiliates	2	2	-	n.s.
Result before taxes	**756**	**590**	**166**	**28.1%**
Income taxes	(344)	(36)	(308)	n.s.
Result after taxes from operating activities	**412**	**554**	**(142)**	**(25.6%)**
Net result from discontinued operations	36	(4)	40	n.s.
Minorities	(47)	(46)	(1)	2.2%
Group result of the year	**401**	**504**	**(103)**	**(20.4%)**

4.1 Summary of results, assets and liabilities and financial position
4.2 Significant events during the year
4.3 Significant events after December 31, 2022
4.4 Impacts of the Russia-Ukraine conflict
4.5 Climate change
4.6 Taxonomy
4.7 Outlook for operations
4.8 Proposal for the allocation of net profit for the year ended December 31, 2022 and the distribution of a dividend

In 2022, the **Revenues** of the Group amounted to 23,166 million euro, up 101% compared to the previous year. The change is mainly related to the bullish dynamics of commodity prices that characterized the current year and is attributable to:

- nearly 60% to the wholesale energy markets, in particular electricity price increases; the contribution related to the growth of sold and intermediated volumes is residual;
- more than 40% to retail markets mainly due to higher electricity, gas and heat unit prices.

Operating expenses amounted to 20,896 million euro, up 122.3%. The change, mirroring the increase in revenue, is almost entirely due to the increase in raw material procurement costs as a result of higher commodity prices.

Labour costs came to 765 million euro (721 million euro in 2021). The increase is partly due to higher FTE (+291 FTE compared to the previous year) and partly due to higher unit costs for collective agreement renewals, remuneration policy (merit increases, category transitions and change of accounting criterion for one-off individual bonuses paid) and lower capitalization of costs.

The **Gross Operating Income** equalled 1,505 million euro, a rise of 77 million euro compared to the previous year.

Net of non-recurring items (+3 million in 2022, +31 million euro in 2021), the Ordinary Gross Operating Margin increased by 105 million euro (+8%): the decrease in margins recorded in the Market and Smart Businesses Infrastructures was more than offset by the results of the Generation & Trading and Waste Business Units.

The following table highlights the composition by Business Unit:

millions of euro	12 31 2022	12 31 2021	Change	% 2022/2021
Generation and Trading	554	368	186	50.5%
Market	125	214	(89)	(41.6%)
Waste	359	341	18	5.3%
Smart Infrastructures	519	538	(19)	(3.5%)
Corporate	(52)	(33)	(19)	57.6%
Total	**1,505**	**1,428**	**77**	**5.4%**

The Gross Operating Income of the Generation & Trading Business Unit amounted to 554 million euro, an increase of 186 million euro compared to December 31, 2021 (+50.5%). Net of the non-recurring items recorded in the two comparison periods, equal to -17 million euro in 2022 and +10 million euro in 2021, ordinary Gross Operating Margin increased by 213 million euro, equal to +59%.

The positive change is mainly attributable to:

- remuneration of the capacity market for 130 million euro, 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;
- operation of the Monfalcone plant on the PGM market reactivated at the request of the government to tackle the ongoing energy crisis, for 60 million euro;
- positive performance of the Trading portfolio by 55 million euro (81 million euro in 2022; 26 million euro in 2021);
- opportunities gained on the ancillary services market ("MSD") in the amount of 49 million euro (+15% compared to 2021), as a result of Terna's requests for critical grid issues that characterized the year under review;
- 40 million euro contribution from the photovoltaic and wind power plants of the newly acquired companies. Production from wind and photovoltaic sources, thanks to the contribution of the companies acquired in 2021 and 2022 (Octopus, 3New and 4New) grew significantly, reaching 251 GWh and 387 GWh, respectively.

The positive impacts were partly offset by:

- lower hydroelectric production (-36%) for -96 million euro, due to the severe drought during the year;
- higher hydroelectric fees for -10 million euro.

Market Business Unit EBITDA amounted to a positive 125 million euro (214 million euro at December 31, 2021).

Net of the non-recurring items recorded in the two comparison years, equal to +2 million euro in 2022 and +14 million euro in 2021, ordinary Gross Operating Margin decreased by 77 million euro, equal to -39%.

The reduction was concentrated in the first half of the year and is attributable to the decline in unit margins in the energy retail segment, both electricity and gas, due to:

- different time distribution of the marginality of fixed-price contracts compared to the previous year, with the same overall contractual margin;
- impacts related to end-customer consumption, which differ from the contracted profiles;
- imbalances emphasized by the year's energy price level.

Ordinary EBITDA in the second half of the year improved compared to the same period of the previous year (+36 million euro), as a result of a partial re-absorption of the above-mentioned negative impacts, particularly in the electricity sector. The positive contribution of business development also continued in the second half of the year, both in terms of increase in customers and volumes served.

The Gross Operating Margin of the EPCG Business Unit equalled 359 million euro (341 million euro at December 31, 2021), up 18 million euro compared to the previous year.

Net of the non-recurring items recorded in the two comparison periods (+9 million euro in 2022 and +8 million euro in 2021), ordinary Gross Operating Margin increased by 17 million euro, equal to +5%.

The municipal waste treatment segment made the contribution to the period result (+30 million euro compared to 2021), thanks to:

- a positive trend in electricity and heat transfer prices of waste-to-energy plants for a total of 39 million euro. The economic effect of the smaller quantities processed is negligible;
- the increase in prices for the delivery of waste comparable with municipal waste, which offset by smaller quantities treated (+3 million euro). In fact, the quantities destined for energy recovery decreased due to the reduced availability of the Parona waste-to-energy plant;
- margins of biomass-fuelled plants (+6 million euro) due to both higher electricity prices and the incremental contribution of Agripower, consolidated from April 2021. This significant contribution was partly reabsorbed by rising costs, particularly for biomass, as a result of the upward price dynamic that affected the sector in the year under review;
- higher costs for disposal of dust, raw materials and reagents (14 million euro).

This result was partly offset by the lower marginality of the waste collection segment (-12 million euro), which was significantly penalized by the increase recorded during the year in the cost of fuel consumed by the vehicles used and only to a limited extent by the loss of the concession of some municipalities, in particular Varese.

The Gross Operating Margin of the Smart Infrastructures Business Unit in 2022 was 519 million euro (538 million euro at December 31, 2021).

Net of non-recurring items (+18 million euro in 2022; +7 million euro in the previous year), the Business Unit's ordinary Gross Operating Margin was 501 million euro, down 30 million euro, equal to -6% compared to 2021.

The change in margins is distributed as follows:

- electricity distribution networks (-14 million euro): decrease linked to lower revenues admitted for regulatory purposes following the resolutions of the sector Authority (ARERA) regarding the remuneration of capital, the equalization of electricity losses, higher operating costs (penalties for continuity of service, software maintenance and disposals) and higher personnel costs for the year compared to the previous year;
- gas distribution networks (-33 million euro): decrease linked to lower revenues admitted for regulatory purposes following the resolutions of the sector Authority (ARERA) regarding the remuneration of capital and higher operating costs for the year compared to previous year (mainly charges for updating the gas fee relating to ATEM Milano 1 and energy costs);
- district heating: +25 million euro, mainly due to higher unit margins on electricity sales and the contribution of the newly acquired company A2A Airport Energy. The drop in the marginality of district heating sales, due in part to the lower volumes of heat sold (-9.5% year-on-year), was neutralized by the benefits of the tax credits for non-energy-intensive and non-gas-intensive companies under the Aid Decrees;
- water cycle: -18 million euro for higher operating costs, in particular electricity;
- public lighting: +9 million euro attributable to the adjustment of rents following the increase in energy costs.

"Depreciation, amortization, provisions and write-downs" totalled 818 million euro (768 million euro at December 31, 2021), representing an increase of 50 million euro.

"Depreciation, amortization and write-downs" amounted to 726 million euro (679 million euro as at December 31, 2021).

Amortization of intangible assets amounted to 233 million euro (201 million euro at December 31, 2021). Depreciation and amortization increased by 32 million euro, of which 13 million euro related to the implementation of information systems, 5 million euro to the integrated water service and gas distribution and metering, 5 million euro related to the new customer lists of the companies Yada Energia and A2A Energia, and 9 million euro to changes in the scope of consolidation.

4.1 Summary of results, assets and liabilities and financial position
4.2 Significant events during the year
4.3 Significant events after December 31, 2022
4.4 Impacts of the Russia-Ukraine conflict
4.5 Climate change
4.6 Taxonomy
4.7 Outlook for operations
4.8 Proposal for the allocation of net profit for the year ended December 31, 2022 and the distribution of a dividend

Depreciation of tangible assets, which amounted to 491 million euro, increased by 26 million euro compared to December 31, 2021 and mainly related to increases in investments and changes in the scope of consolidation. In particular:

- higher depreciation of 17 million euro resulting from the first consolidation of the companies acquired in 2022 and 2021;
- higher depreciation of 2 million euro for rights of use;
- higher depreciation of 3 million euro related to the photovoltaic panel divestment plan of the Sermide and Chivasso plants;
- higher depreciation of 10 million euro, mainly relating to the investments which went into production after December 31, 2021;
- higher depreciation of 2 million euro following the resumption of depreciation calculations on the wet works of the Valtellina core;
- lower depreciation of 2 million euro related to the disinvestment plan for the assets of the Linea 1 waste-to-energy treatment and storage plant in Parona;
- lower depreciation of 3 million euro following the change of the useful life of the San Filippo del Mela plant to 2025;
- lower depreciation of 3 million euro related to the increase in discount rates on the closure/post closure provisions for landfills and decommissioning.

Write-downs for the year amounted to 2 million euro and referred for 1 million euro to the write-down on the Rovato plant and for 1 million euro to the abandonment of projects no longer in the company's core business (13 million euro at December 31, 2021).

"Provisions for risks" had a net effect of 2 million euro (net effect of 56 million euro at December 31, 2021) due to accruals for the year of 61 million euro relating to the accrual for public water derivation fees of 43 million euro, accruals for closure and post-closure costs of landfills of 3 million euro, accruals to tax provisions of 2 million euro, other accruals for pending litigation of 2 million euro and other accruals of 11 million euro, adjusted, for 59 million euro, by the release of provisions for closure and post-closure expenses on landfills for 44 million euro, the release of provisions for hydroelectric derivation surcharges for 6 million euro, the release of provisions for litigation and tax disputes for 7 million euro and other releases for 2 million euro.

The **"Provision for bad debts"** amounted to 90 million euro (33 million euro at December 31, 2021), of which 88 million euro related to the provision for the year for risks on trade receivables and 2 million euro to the provision for risks on other receivables.

As a result of these changes **"Net operating income"** amounted to 687 million euro (660 million euro for the year ended December 31, 2021).

The **"Result from non-recurring transactions"** amounted to 157 million euro (no value at December 31, 2021) and is related to the gain deriving from the sale of the three properties located in Milan in February 2022.

"Net financial charges" amounted to 90 million euro (72 million euro at December 31, 2021), representing an increase of 18 million euro. The increase mainly relates to the increase in interest on bonds and loans of 22 million euro.

The **"Affiliates"** was 2 million euro (2 million euro at December 31, 2021), and is mainly attributable to the positive valuation of the shareholdings held in some associated companies.

"Income taxes" for the year amounted to 344 million euro (36 million euro at December 31, 2021). The increase in taxes compared to the previous year is attributable to the Extraordinary Solidarity Contribution provided for the year 2023, determined pursuant to Article 1, paragraphs 115-119 of Law No. 197 of December 29, 2022 (Budget Law 2023) in the total amount of 117 million euro, as well as the Extraordinary Contribution under Decree Law No. 21 of March 21, 2022, converted into Law No. 51 of May 20, 2022 (Price Cut Decree) in the total amount of 5 million euro. The financial year 2021 included the release of deferred tax liabilities following 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 had amounted to 168 million euro, while the recognition of a substitute tax following the realignment option pursuant to LD 104/2020 had amounted to 23 million euro. Net of the effect of special items, as shown below, the tax rate was 29%, compared to 30.6% for the previous year.

The **"Net result from discontinued operations"** is equal to 36 million euro (negative and equal to 4 million euro at December 31, 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 year"**, after the minorities of 47 million euro were deducted, was positive and amounted to 401 million euro (positive for 504 million euro at December 31, 2021).

Below is the income statement table with evidence of the special items that influenced both the result for the FY2022 and the result for the previous year, thus enabling a clearer representation of the performance of the core business.

millions of euro	01 01 2022 12 31 2022	01 01 2021 12 31 2021	Change	% 2022/2021
Revenues	**23,166**	**11,549**	**11,617**	**100.6%**
Operating expenses	(20,896)	(9,400)	(11,496)	122.3%
Labour costs	(765)	(721)	(44)	6.1%
Gross Operating Income - EBITDA	**1,505**	**1,428**	**77**	**5.4%**
Depreciation, amortization and write-downs	(726)	(672)	(54)	8.0%
Provisions for risks	(2)	(56)	54	(96.4%)
Provisions for credit risks	(90)	(33)	(57)	172.7%
Net Operating Result	**687**	**667**	**20**	**3.0%**
Net financial charges	(90)	(72)	(18)	25.0%
Net result companies measured at equity	2	2	-	0.0%
Result before taxes	**599**	**597**	**2**	**0.3%**
Income taxes	(174)	(183)	9	(4.9%)
Net result from discontinued operations	2	(4)	6	(150.0%)
Minorities	(47)	(39)	(8)	20.5%
Ordinary Group Net Profit	**380**	**371**	**9**	**2.4%**
Special Items	21	133	(112)	(84.2%)
Group result of the year	**401**	**504**	**(103)**	**(20.4%)**

The special items for FY2022 of 21 million euro refer to the net effect of capital gains generated by the sale of certain assets (sale of real estate and gas ATEMs deemed non-strategic) in the amount of 143 million euro net of the tax effect, partially offset by charges for extraordinary contributions on the economic results of energy companies provided for by legislative measures (Price Cut Decree as per LD 21/2022 and Solidarity Contribution as per L.197/2022) in the amount of 122 million euro.

In the previous year, special items amounted to 133 million euro and mainly related to the effects of the release of deferred tax liabilities as a result of the realignment option under LD 104/2020, exercised by certain Group companies net of the substitute tax in the amount of 138 million euro, partially offset by the write-down of certain assets in the amount of 5 million euro.

4.1 Summary of results, assets and liabilities and financial position
4.2 Significant events during the year
4.3 Significant events after December 31, 2022
4.4 Impacts of the Russia-Ukraine conflict
4.5 Climate change
4.6 Taxonomy
4.7 Outlook for operations
4.8 Proposal for the allocation of net profit for the year ended December 31, 2022 and the distribution of a dividend

Balance sheet and financial position

For changes in the scope of consolidation at December 31, 2022, reference should be made to the section "Income statement" in this Summary of the A2A Group's financial position, results of operations and cash flows.

Sources/uses statement

millions of euro	12 31 2022	12 31 2021	Change
Capital employed			
Net fixed capital	**8,849**	**8,026**	**823**
- Tangible assets	6,162	5,588	574
- Intangible assets	3,515	3,125	390
- Shareholdings and other non-current financial assets (*)	82	73	9
- Other non-current assets/liabilities (*)	(296)	(93)	(203)
- Deferred tax assets/liabilities	363	424	(61)
- Provisions for risks, charges and liabilities for landfills	(729)	(797)	68
- Employee benefits	(248)	(294)	46
of which with counter-entry to equity	*(112)*	*(134)*	
Net Working Capital and Other Current Assets/Liabilities	**(124)**	**243**	**(367)**
Net Working Capital	**(308)**	**601**	**(909)**
- Inventories	536	204	332
- Trade receivables	4,680	3,291	1,389
- Trade payables	(5,524)	(2,894)	(2,630)
Other current assets/liabilities	**184**	**(358)**	**542**
- Other current assets/liabilities (*)	283	(405)	688
- Current tax assets/tax liabilities	(99)	47	(146)
of which with counter-entry to equity	*27*	*46*	
Assets/liabilities held for sale (*)	**-**	**147**	**(147)**
of which with counter-entry to equity	-	-	
Total Capital employed	**8,725**	**8,416**	**309**
Sources of funds			
Equity	**4,467**	**4,303**	**164**
Total financial position after one year	5,834	4,309	1,525
Total financial position within one year	(1,576)	(196)	(1,380)
Total Net Financial Position	**4,258**	**4,113**	**145**
of which with counter-entry to equity	*(10)*	*20*	
Total Sources	**8,725**	**8,416**	**309**

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

Net fixed capital

The **"Net fixed capital"** amounted to 8,849 million euro, up 823 million euro compared to 31 December 2021.

Changes are detailed below:

- Tangible assets showed an overall net increase of 574 million euro due to:
  - investments made for 856 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 498 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 181 million euro, the development of district heating networks for 82 million euro, the purchase of movable means to collect waste and other equipment for 26 million euro, for 16 million euro the efficiency plan with new LED technology light

sources, interventions on the fiber optic and gas transport network for 14 million euro, for investments aimed at developing the energy efficiency plan for 10 million euro and for 5 million euro interventions on the electric vehicle charging network, as well as interventions on buildings for 18 million euro and the implementation of telecommunications equipment for 6 million euro;

- first-time consolidation of acquisitions in the year, accounting for an increase of 226 million euro;
- decrease of 491 million euro for the depreciation charge for the year;
- net decrease for other changes of 11 million euro due to decreases in the provision for decommissioning and landfill closure and post-closure expenses of 53 million euro, a decrease due to the recognition of the tax credit of 6 million euro for investments in new capital assets provided for by Law no.178/2020, art.1 paragraph 1051 for the development of the new Cavaglià CSS plant and the heat storage plant at the Lamarmora Nord power station, a decrease due to reclassification to other items of the financial statements in the amount of 3 million euro, as well as an increase in rights of use in accordance with IFRS 16 in the amount of 51 million euro;
- decrease of 5 million euro arising from disposals in the year, net of accumulated depreciation;
- decrease of 1 million euro due to write-downs in the year;

- Intangible assets showed an overall net increase of 390 million euro on December 31, 2021, due to:
  - capex for 384 million euro related to the implementation of computer systems for 130 million euro, plant development and maintenance work in the gas distribution area for 126 million euro, works on the water transport and distribution network, sewers and purification plants for 99 million euro, new acquisitions and maintenance of the customer portfolio for 23 million euro and other residual investments for 6 million euro;
  - first-time consolidation of acquisitions in the year, accounting for an increase of 231 million euro;
  - a net increase of 12 million euro for other changes due to the 24 million euro increase following the Purchase Price Allocation of TecnoA S.r.l. partly offset by a 1 million euro decrease in environmental certificates for the industrial portfolio, a 2 million euro reclassification to assets held for sale of certain gas distribution network assets deemed non-strategic for the Group, the sale of which was completed in the second quarter, a 6 million euro decrease due to reclassifications to other items of the financial statements, a 2 million euro decrease due to the recognition of grants on investments from previous years, a 1 million euro decrease for a tax credit for investments in new capital goods pursuant to Law no.178/2020, Article 1, Section 1051 for the development of the new IDMS system;
  - decrease of 233 million euro for the amortization charge for the year;
  - decrease of 3 million euro arising from disposals in the year, net of accumulated amortization;
  - decrease of 1 million euro due to write-downs in the year;
- Equity investments and other non-current financial assets, at 82 million euro, up by 9 million euro compared to 31 December 2021; The change is due for 1 million euro to the payment to the Court of Taranto, following the request for deposit in a specific account, of the amounts seized as part of the proceedings underway against the subsidiary Linea Ambiente S.r.l.; for 3 million euro referred to investments made in innovative start-ups through Corporate Venture Capital projects; for 4 million euro to advances paid on shareholdings for future projects for the development of plants for the production of electricity from renewable sources, as well as the effects arising from the first-time consolidations amounting to 1 million euro;
- Other non-current assets and liabilities, negative by 296 million euro, showed a net increase of 203 million euro, mainly due to an increase in security deposits from customers of 249 million euro, partly offset by higher security deposits receivable of 10 million euro, higher receivables from the tax authorities for tax benefits under building bonuses due after one year of 13 million euro, higher receivables for prior-period items related to revenues for water services of 12 million euro, and other decreases of 11 million euro;
- Prepaid tax assets amounted to 363 million euro (424 million euro at December 31, 2021) and showed a decrease of 61 million euro. The change mainly includes the effects deriving from the recognition of deferred taxes recognized as a result of the completion of the Purchase Price Allocation of TecnoA S.r.l. for 24 million euro, as well as the effects attributable to the recognition in A2A S.p.A. of deferred taxes of 36 million euro arising from the capital gain on the sale of real estate located in Milan in February 2022;
- Provisions for risks, charges and liabilities for landfills showed an overall net decrease of 68 million euro. The change for the year was due to other negative changes and releases of 101 million euro, mainly due to the updating of appraisals and discount rates used to estimate future decommissioning and site and landfill restoration costs, and utilisations of 36 million euro, of which 21 million euro related to the incurrence of decommissioning and landfill costs and 15 million euro to the settlement of certain disputes with third parties. Furthermore, provisions for the period amounted to 61 million euro, mainly attributable to higher hydroelectric derivation fees, and the contribution of the first-time consolidations for 8 million euro;
- Employee benefits decreased by 46 million euro, due to disbursements during the year and payments to pension funds and actuarial valuations, net of allocations during the year.

4.1 Summary of results, assets and liabilities and financial position
4.2 Significant events during the year
4.3 Significant events after December 31, 2022
4.4 Impacts of the Russia-Ukraine conflict
4.5 Climate change
4.6 Taxonomy
4.7 Outlook for operations
4.8 Proposal for the allocation of net profit for the year ended December 31, 2022 and the distribution of a dividend

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, was negative for 308 million euro, down by 909 million euro compared to December 31, 2021. Comments on the main items are given below:

- **"Inventories"** amounted to 536 million euro (204 million euro at December 31, 2021), net of the related obsolescence provision for 23 million euro, up 332 million euro compared to December 31, 2021. The change is attributable to a 313 million euro increase in fuel (gas and diesel) inventories, reflecting both price and quantity increases, a 18 million euro increase in materials inventories including provisions for material obsolescence, a 2 million euro increase in fuels held by third parties relating to coal at the Koper warehouse, and other decreases of 1 million euro;
- **"Trade receivables"** amounted to 4,680 million euro (3,291 million euro at December 31, 2021), with an increase of 1,389 million euro, of which 59 million euro due to the first-time consolidation effects of the year.
  The change in trade receivables is primarily due to the increase in tariffs for the sale of electricity and gas in the 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 debts provision", calculated in compliance with IFRS 9, amounted to 192 million euro and showed a net increase of 59 million euro compared to December 31, 2021;
- **"Trade payables"** amounted to 5,524 million euro, with an increase of 2,630 million euro, of which 43 million euro due to the first-time consolidation effects of the year. The increase is mainly attributable to higher energy commodity prices related to the volatility of the reference scenario, as well as higher purchases of environmental certificates and to an efficient net working capital management policy;
- **"Other current assets/liabilities"** amounted to 184 million euro (-358 million euro at December 31, 2021) and showed a net increase in assets of 542 million euro due to:

- a net increase in derivative assets of 271 million euro, as a result of the change in overall volumes traded and the high volatility of energy commodity prices with an impact on the differentials between subscription prices and forward prices;
- net increase in receivables from Cassa per i Servizi Energetici e Ambientali for 105 million euro;
- net increase in current tax payables for 146 million euro;
- net increase of 75 million euro in tax receivables for VAT, excise duties and other indirect taxes;
- decrease of 276 million euro in payables due to early collection of electricity and gas futures contracts the economic manifestation of which was in the year;
- decrease in advances to suppliers by 32 million euro;
- decrease in receivables for security deposits for 25 million euro;
- increase in deferred expenses of 8 million euro;
- other increases in current assets of 10 million euro.

"Assets/liabilities held for sale" have no value at December 31, 2022, while at December 31, 2021 they had a net asset value of 147 million euro and referred for 102 million euro to the reclassification of assets and liabilities pertaining to gas distribution referring to ATEMs deemed non-strategic for the Group sold in April 2022 and for 45 million euro to the reclassification of assets owned by the parent company A2A S.p.A. referring to three properties located in Milan sold in February 2022.

Consolidated **"Capital employed"** at December 31, 2022 amounted to 8,725 million euro and was financed by Equity for 4,467 million euro and the Net Financial Position for 4,258 million euro.

Equity and Net Financial Position

"Equity" amounted to 4,467 million euro and showed a positive change for a total of 164 million euro.

The positive change was partly due to the year result for 448 million euro (401 million euro pertaining to the Group and 47 million euro to minorities), offset by the distribution of dividends for 283 million euro. There was also a positive valuation of cash flow hedge derivatives and IAS 19 reserves for a total of 24 million euro, as well as other decreases for a total of 25 million euro mainly relating to the decrease in minority interests.

The **"Consolidated net financial position"** at December 31, 2022 amounted to 4,258 million euro (4,113 million euro at end 2021). The gross debt amounted to 6,889 million euro, up by 1,790 million euro compared to 31 December 2021. Cash and cash equivalents amounted to 2,584 million euro, up by 1,620 million euro. The other net financial assets/liabilities showed an active balance of 47 million euro with a net increase of 25 million euro as compared with December 31, 2021.

Change Consolidated Net Financial Position

The following table summarizes the changes in the Net Financial Position.

millions of euro	12 31 2022	12 31 2021
EBITDA	**1,505**	**1,428**
Changes Net Working Capital	909	16
Changes in Other assets/liabilities	(614)	258
Utilization of provisions, net taxes and net financial charges	(312)	(274)
Operating cash flow	**1,488**	**1,428**
Investments	(1,240)	(1,074)
Property disposals	221	-
Cash flow before dividend payment	**469**	**354**
Dividends	(283)	(248)
Net free cash flow	**186**	**106**
Change in scope	(331)	(716)
Application of ESMA Directive	-	(31)
Change in Net Financial Position	**(145)**	**(641)**

During the year, the generation of net cash amounted to 186 million euro. Operating cash flow was positive at 1,488 million euro, capital expenditure absorbed cash of 1,240 million euro, partly offset by proceeds from the sale of real estate in the amount of 221 million euro. These changes, also taking into account the positive cash inflow from working capital more than offset by the payment of financial expenses and taxes, generated a cash flow of 469 million euro, which made it possible to cover dividend payments of 283 million euro.

Specifically, changes in working capital refer to:

- Net Working Capital generated an improvement of 909 million euro in the Net Financial Position due to the increase of 2,630 million euro in trade payables, partly offset by the increase in trade receivables for 1,389 million euro and the increase in inventories for 332 million euro;
- the negative change of 614 million euro in Other assets/liabilities mainly refers to the increase in the net fair value of commodity derivatives with a balancing entry in the income statement, the net increase in receivables due from Cassa per i Servizi Energetici e Ambientali, the reduction in payables related to advance receipts of electricity and gas futures contracts the economic manifestation of which was in the year, the increase in caution deposit liabilities from customers, the increase in receivables for energy requalification and efficiency works at condominiums and third parties, for which they will benefit from tax benefits provided by building bonuses and the increase in receivables for tariff items related to the integrated water service;
- the payment of net financial charges, taxes and provisions absorbed cash of 312 million euro.

4.1 Summary of results, assets and liabilities and financial position
4.2 Significant events during the year
4.3 Significant events after December 31, 2022
4.4 Impacts of the Russia-Ukraine conflict
4.5 Climate change
4.6 Taxonomy
4.7 Outlook for operations
4.8 Proposal for the allocation of net profit for the year ended December 31, 2022 and the distribution of a dividend

4.2
Significant events during the year

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 would have acquired interests in 3 New & 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 7kW) 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.

On November 22, 2022, the A2A Board of Directors examined and approved a further update of the 2021-2030 Strategic Plan which renews the Group's commitment to decarbonization, ahead of the community objectives. The 2021-2030 Plan update again confirms Circular Economy and Energy Transition as pillars of the A2A strategy. The investment targets of the first 10-year plan presented in January 2021 remain unchanged, with their reshaping focused on development in the distinctive domestic market businesses mainly through organic growth.

In the first two years of the 10-year plan, infrastructure investments of 3.5 billion euro were made for the country. As part of the Circular Economy, the Group has finalized strategic investments in plants for the treatment of organic waste and agro-food waste, for the treatment of sludge, for purification and in the conversion of the Biofor plant.

In the M&A field, two major transactions were finalized. In the industrial waste sector, the acquisition of TecnoA, a leading energy recovery company in central and southern Italy, was completed. In heat recovery, the acquisition of Sea Energia, a company that supplies electric and thermal energy to the Milan Linate and Milan Malpensa airports, was finalized, with the aim of fostering their decarbonization process.

To support the energy transition, in the first phase of the Plan implementation, portfolios of green generation plants with a nominal capacity of 436 MW were acquired through the acquisitions of the Octopus portfolio and the Ardian wind and photovoltaic portfolios.

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 two new Green Bonds 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.

A2A also successfully placed two new Green Bonds during the year, with the aim of financing Green Projects aligned to the EU Taxonomy. These bonds, intended for institutional investors and issued under the Euro Medium Term Notes Program, are based on the Group's Sustainable Finance Framework, the set of guidelines that reinforce the link between financial strategy and sustainable strategy.

The first Green Bond was placed on June 8, 2022 for an amount of 600 million euro with a duration of 4 years 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 issue recorded orders for over 1.7 billion euro, about 3 times the amount.

The second Green Bond was placed on September 12, 2022 for an amount of 650 million euro with a duration of 8 years at an issue price of 99.677% and will have an annual yield of 4.549% and a coupon of 4.500%, with a spread of 215 basis points over the mid-swap reference rate.

The issue recorded orders for over 1.7 billion euro, about 2.6 times the amount.

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" and "climate change adaptation" objectives.

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.

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.

4.1 Summary of results, assets and liabilities and financial position
4.2 Significant events during the year
4.3 Significant events after December 31, 2022
4.4 Impacts of the Russia-Ukraine conflict
4.5 Climate change
4.6 Taxonomy
4.7 Outlook for operations
4.8 Proposal for the allocation of net profit for the year ended December 31, 2022 and the distribution of a dividend

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 the A2A 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.

On June 13, 2022, Standard Ethics, an independent rating agency that measures corporate sustainability, raised the A2A 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.

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.

Renewal in the period 2023-2026 of the Milan-Brescia shareholders' agreements on 42% of the capital

On August 2, 2022, the shareholders' agreements between the Municipality of Milan and the Municipality of Brescia on 42% of A2A were renewed for a further three years. The agreements originally signed on February 1, 2017, and already tacitly renewed three years later, are thus extended by a further three years with effect from February 1, 2023.

The shareholders' agreements bind 42% of the Lombard multiutility, equally divided between the municipalities of Milan and Brescia. The two administrations hold 25% plus one share each, of which 4% is therefore 'free' from the covenant, and a total of 50% plus two shares.

ACSM-AGAM: changes to Acinque from October 1

On September 21, 2022, as resolved by the Shareholders' Meeting, as of October 1, ACSM-AGAM and the Group companies have a new brand: Acinque.

SEA Energia acquisition

On September 30, 2022, A2A, through A2A Calore & Servizi, has acquired SEA Energia, the company wholly owned by SEA that supplies electricity and heat to the two airports of Milan Linate and Milan Malpensa.

With this transaction, A2A allows to consolidate a source of supply for the district heating network in East Milan, which is considered strategic, by dedicating the two new plants - which today have an installed thermal power of 100 MW - to the supply of new users. The agreement is consistent with the objectives of the Group's Strategic Plan, which envisages investments in the development of new grid and new generation plants and growth in thermal energy sold from 2.8 to 4.1 TWht by 2030.

Inauguration of new plants in Cavaglià and Lacchiarella

On October 7, 2022, the new plant for the treatment and recovery of the organic fraction of municipal waste was inaugurated at the Cavaglià site in the province of Biella.

Built by A2A Ambiente - a company of the A2A Group - the infrastructure will enable the production of biomethane and compost through the recovery and treatment of waste from the separate collection of wet and green waste. All this with a clear objective: to respond to the urgent need to exploit the potential of waste, returning valuable resources to the local community. From the activities of the integrated plant - anaerobic digestion and composting - it will be possible to obtain 5 million cubic metres of biomethane and 12,000 tons of certified compost to be reused in agriculture each year. The use of biomethane as an alternative to natural gas also makes it possible to eliminate non-biogenic CO2 emissions and reduce dependence on fossil fuels.

On October 14, 2022, the new plant for the treatment and recovery of the organic fraction of municipal waste was inaugurated at the Giussago - Lacchiarella site. Built by A2A Ambiente, the infrastructure will allow organic waste to be treated appropriately, in full compliance with the principles of the circular economy.

From the activities of the integrated plant - anaerobic digestion and composting - it will be possible to obtain 8 million cubic metres of biomethane and 20 thousand tons of certified compost for agriculture each year. The plant, which can treat 100,000 tons of wet and urban green annually, helps reduce dependence on fossil fuels, and, thanks to the natural fertilizer produced that will be made available to farmers, will minimize the use of chemical fertilizers.

4.1 Summary of results, assets and liabilities and financial position
4.2 Significant events during the year
4.3 Significant events after December 31, 2022
4.4 Impacts of the Russia-Ukraine conflict
4.5 Climate change
4.6 Taxonomy
4.7 Outlook for operations
4.8 Proposal for the allocation of net profit for the year ended December 31, 2022 and the distribution of a dividend

Agreement with Margherita for the reorganization of the Daunia Wind Group

On October 14, 2022, A2A and Margherita, a company dedicated to the construction and management of plants for the production of electricity from renewable sources, signed an agreement for the overall reorganization of the group headed by Daunia Wind, a company equally owned by both and which manages a portfolio of wind farms in Italy with a total capacity of 312 MW.

Through this transaction, A2A comes to have exclusive ownership and control of the companies Daunia Calvello and Daunia Serracapriola (and the relevant wind farms, with a total capacity of 83 MW), while Margherita comes to have exclusive ownership and control of Daunia Wind and the other companies it controls other than Daunia Calvello and Daunia Serracapriola.

The reorganization entails the demerger in favor of A2A of the shareholdings held by Daunia Wind in Daunia Calvello and Daunia Serracapriola and of Daunia Wind's liquid assets in the amount of 50 million euro. The shareholding in Daunia Wind that will remain with A2A after the demerger will be sold to Margherita for a consideration of 61.22 million euro. As a result of this reorganization, A2A consolidates its position among the leading operators in the generation of electricity from renewable sources in Italy, exclusively managing 550 MW of operating plants, of which 305 MW of photovoltaic and 245 MW of wind power, in addition to the production of the Group's hydroelectric plants.

On November 23, 2022, the reorganization was completed.

A2A Ciclo Idrico and Impresa Pizzarotti & C - Together for the efficiency of the Italian water cycle

On October 20, 2022, A2A Ciclo Idrico and Impresa Pizzarotti & C signed a cooperation agreement for the development of initiatives related to the integrated water cycle. The two leading companies in the infrastructure and energy sectors have started a joint commercial activity to identify, evaluate and proceed with the study and award of contracts for water networks for leakage reduction, revamping and upgrading of purification plants, and the installation of sensors for leakage monitoring.

Inauguration of the Val Trompia purification plant

On December 13, 2022, the Val Trompia district purification plant was inaugurated.

Hitachi Rail and A2A in partnership for energy transition and consumption optimization

On December 15, 2022, Hitachi Rail and A2A signed a 20-year agreement under the Virtual PPA (Power Purchase Agreement) formula, which envisages the construction of new photovoltaic plants for the production of renewable energy at Hitachi sites in Reggio Calabria, Naples and Pistoia.

Specifically, A2A - through its subsidiary A2A Energy Solutions - will install more than 40,000 solar panels over the next two years both on land and on the roofs of its production plants, covering a total of more than 100,000 square metres. A2A will support the initial investment and the ordinary and extraordinary maintenance for the entire 20-year contract period, during which Hitachi Rail commits to purchase the green energy produced at agreed prices. The initiative foresees the construction by A2A of state-of-the-art plants capable of producing around 19 GWh/year of energy, equal to 60% of the average annual needs of Hitachi Rail's six Italian sites (31 GWh/year). The aim is to supply green energy for self-consumption to the production areas that will host the photovoltaic panels and to the Hitachi Rail sites in Genoa, Tito Scalo and Turin via the national electricity grid with a Virtual PPA.

Koelliker and A2A: together to accelerate the spread of electric mobility

On December 19, 2022 a partnership was signed between A2A E-Mobility and Koelliker, a leading Italian group in the import and sale of cars, with the aim of promoting the spread of electric mobility throughout Italy. The agreement envisages proposing to companies and private users vehicles distributed by the Koelliker Group - electric, commercial and passenger transport vehicles - together with A2A products and services for recharging and supplying electricity, through an integrated offer for employees that can be used directly from home, in the company and on the road.

Growth in renewables: agreement signed for the construction of a 59.1 MWp photovoltaic plant

On December 23, 2022 the A2A Group and Volta Gestione Energie signed an agreement that provides for AEB, a subsidiary of the A2A Group, to take a majority stake in VGE05 S.r.l., a company that has obtained authorization to build and operate a photovoltaic plant in the municipalities of Santa Maria la Longa and Pavia di Udine, in the province of Udine.

Once completed, the infrastructure will have an installed capacity of 59.1 MWp and will produce more than 85 GWh per year, reducing the annual consumption of natural gas by about 16 million cubic metres and avoiding the emission of about 36,000 tons of CO2, thus contributing to the country's path towards energy transition.

Completion of the operation, which was also made possible thanks to the active collaboration with local authorities and institutions, is scheduled for the first half of 2023.

4.1
Summary of results, assets and liabilities and financial position

4.2
Significant events during the year

4.3
Significant events after December 31, 2022

4.4
Impacts of the Russia-Ukraine conflict

4.5
Climate change

4.6
Taxonomy

4.7
Outlook for operations

4.8
Proposal for the allocation of net profit for the year ended December 31, 2022 and the distribution of a dividend

4.3

Significant events after December 31, 2022

A2A joins the Nasdaq Sustainable Bond Network

On January 24, 2023, A2A joined the Nasdaq Sustainable Bond Network, a platform on Sustainable Finance that brings together investors, issuers, investment banks and specialist organizations. Membership will enable the Group to get in touch with a wide network of potential international investors attentive to sustainability issues.

500 Million Green Bond Issued

On January 27, 2023, A2A successfully placed a new 500 million euro Green Bond with a duration of 11 years, with the aim of financing projects in the field of energy transition and the circular economy eligible for the European Taxonomy and envisaged by the Business Plan. 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 98.824% and will have an annual yield of 4.513% and a coupon of 4.375%, with a spread of 167 basis points over the mid-swap reference rate.

The issue attracted a lot of interest, receiving orders for about 2.2 billion euro, more than about 4 times the amount offered.

4.4

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, for which the Group is equipped with processes in line with the best market standards.

The average value of the PUN Base Load in 2022 showed an increase of 142.5% compared to 2021, reaching 303.1 €/MWh. The dynamics were mainly driven by a significant rise in gas costs, mainly related to the tensions generated by the Russia-Ukraine conflict, as well as the low supply levels of hydroelectricity, to which the energy price is correlated. The PUN in January 2022 stood at 224.5 €/MWh, reaching a high of 543.2 €/MWh in August, as tensions related to the reduction in Russian gas supplies escalated. The progressive reduction in gas prices in the subsequent period led to a PUN of 294.9 €/MWh in December.

As regards gas prices, the average price at the PSV in 2022 reached record levels and stood at 121.9 €/MWh, an increase of +165.9% compared to 2021. In January 2022, the value of the PSV was 86.0 €/MWh and the upward trend that had already started in the last quarter of 2021 continued throughout the year, with the highest value of 233.5 €/MWh being recorded in August. Prices then decreased in October, due to the effect of full storage and mild temperatures, to then settle in December at a value of 116.6 €/MWh. This context created margining increases (cash collaterals) by clearing houses to secure commodity derivatives transactions, the effects of which were promptly mitigated by the Group's strong liquidity position.

In addition, the government measures issued in 2022 have introduced extraordinary contributions on the economic results of energy companies (e.g. Support Ter Decree Law, Price Cut Decree Law, Aid Decree Law, 2023 Budget Law) allocating them, in particular, to financing interventions in support of national companies and households. This context is constantly evolving, with impacts on the A2A Group's margins also in the first half of 2023, and further extensions of these measures cannot be ruled out.

Economic Impacts in Business Units

The extraordinary increase in energy prices, mitigated by the effects of hedging, determined a positive impact on the margins of the industrial and trading portfolios of the Generation and Trading Business Unit, contributed to the increase in the margins of the Waste Business Unit in relation to the sale of electricity and heat from waste-to-energy plants and the Smart Infrastructures Business Unit in the Heat segment.

On the other hand, volatility and rising prices contributed negatively to the Market Business Unit's margins, both for gas and electricity. In addition to this, there are indirect impacts and, essentially, related to the 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, managed the growing volatility of the price of gas both by monitoring the limits of exposure to commodity risk and credit risk and by optimizing its buying and selling strategies. The Group pursues a prudent hedging policy by operating mainly on platforms.

The current availability of gas is very high compared to the expectations of the last months of 2022, mainly due to a particularly mild climate situation in addition to the energy-saving measures implemented. Another factor that certainly contributed to the easing of price tension was the slowdown of the Chinese economy compared to forecasts: population decline, lack of immigration and the worsening health emergency negatively impacted Chinese gas demand.

At present, therefore, the national supply situation seems to be less critical, given the state of filling of national and European storages, as well as the fact that a new regasification terminal is expected to contribute during the coming summer season. To protect itself in the event that the situation should become critical again, A2A will, as in the past, equip itself with gas storage space, which it will fill in such a way as to hold forms of flexibility to reduce the impact of any stress on gas imports into Italy.

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 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,

4.1 Summary of results, assets and liabilities and financial position
4.2 Significant events during the year
4.3 Significant events after December 31, 2022
4.4 Impacts of the Russia-Ukraine conflict
4.5 Climate change
4.6 Taxonomy
4.7 Outlook for operations
4.8 Proposal for the allocation of net profit for the year ended December 31, 2022 and the distribution of a dividend

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 been called upon to maximise electricity production from fuels other than natural gas for most of 2023.

Impact on Net Working Capital

With reference to the solvency of some counterparties, the increase in the price of commodities determines - as observed in most of the months of 2022 - an increase in credit exposures to customers (even in the hypothesis of constant volumes): prudentially and in line with this increase, the bad debt provision was adjusted to 152 million euro (value referring to the Market Business Unit). Credit risk is managed through a Credit Policy with the objective of managing counterparty risk both in the acquisition phase through preliminary checks and requests for guarantees, and in management through the definition of payment terms and/or repayment plans with the application of interest.

As at December 31, 2022, for example, A2A Energia showed an increase in corporate credit of 66% compared to the same month of 2021 strongly influenced by the increase in issued credit (+51% compared to December 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 (62%) that fuel credit. The increase in overdue credit (38%) can also be attributed to the increase in instalment requests, which in terms of amount have reached values 5 times higher than in 2021 and 9 times higher than in the pre-pandemic period.

At December 31, 2022, 84% 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 more than offset by a proactive management of net working capital, mainly due to the management of commodity procurement and a general realignment of collection and payment times. To date, there have been no significant deteriorations related to the increase in credit delinquency, in continuity with what was observed in previous months.

Excluding the changes in the scope of consolidation that occurred during the year under review, which amounted to 331 million euro, the Net Financial Position amounted to 3,927 million euro (4,113 million euro at December 31, 2021), a decrease of 186 million euro: this reduction was due to the effective optimization of net working capital.

With reference to possible tensions on the financial markets, it should be noted that the Group's solid liquidity position (at December 31, 2022 equal to 4.9 billion euro), also supported by both committed and uncommitted back-up lines, made it possible to manage transactions in derivatives on the commodities market, temporary increases in working capital due to the rise in prices and installment plans granted to customers and requests for margins (cash collateral) by clearing houses.

During the year, A2A successfully placed three ESG bonds for a total of 1.75 billion euro, thus partially anticipating its 2023 funding needs. In addition, medium-term bilateral credit lines were signed for 500 million euro, as well as a total of 560 million euro in revolving credit lines for back-up purposes, all confirming the Group's ability to access capital and banking markets. This strengthening of the Group's liquidity position continued in the first months of 2023: A2A first placed a new Green Bond for 500 million euro to support the investments envisaged in the new Business Plan, and subsequently increased its committed credit lines with a new 100 million euro bilateral transaction.

Other Information

With reference to the generalized increase in inflation, the A2A Group recorded in the year cost increases in the performance of operating activities (for example, for the cost of asphalting in excavation activities rather than the generalized cost of transporting waste to destination plants, and for the cost of reagents in waste treatment processes) and difficulties in obtaining certain materials within the ordinary time frame. To deal with this situation, it has adjusted, where possible, the price lists, increased the inventories of materials that are more difficult to find and increased the supplier portfolio.

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 program 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 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. In the course of 2022 A2A S.p.A. obtained ISO 27001 certification on IT Security, proving that the company's top management is aware of the relevance of Cyber Security issues and that it is enhancing the tools to guard against the relative risk.

4.1 Summary of results, assets and liabilities and financial position
4.2 Significant events during the year
4.3 Significant events after December 31, 2022
4.4 Impacts of the Russia-Ukraine conflict
4.5 Climate change
4.6 Taxonomy
4.7 Outlook for operations
4.8 Proposal for the allocation of net profit for the year ended December 31, 2022 and the distribution of a dividend

4.5 Climate change

The actions implemented by the A2A Group to combat climate change are an important part of its development strategy. In this regard, the update of the 2021-2030 Business Plan published in November 2022, includes some actions aimed at mitigating the effects of climate change. The pillars of development for the Group are, in fact, the Circular Economy and the Energy Transition: the Group will increase its waste treatment and valorization capacity by consolidating its leading role in Waste-to-Energy and a significant position in the biomethane market segment, and will further focus on the development of renewable energies, flexibility and electrification of consumption.

The Group is strongly committed to meeting the decarbonization target, confirming the reduction trajectory validated by the SBT and envisaging net zero, i.e. a 90%-95% reduction in emissions compared to baseline values and using carbon removals to neutralize the remaining 5%-10%, by 2040, 10 years ahead of EU targets.

Significant risks for the Group related to climate change

From the analyses performed, the following risks relevant to the Group were identified:

Business	Event	Probability*	Econimic impact on EBITDA**
Electricity Grids	Resilience of electricity distribution networks	Possible	Low
Retail gas	Thermal energy demand	Possible	Low
Heat	Thermal energy demand	Possible	Low
Electricity - Hydro and Renewables	Precipitation and water resource use	Possible	High
Electricity CCGT + Monfalcone + San Filippo del Mela	Plant cooling	Unlikely	Low
Waste	Revision of the ETS Directive	Possible	High
Transversal	Extreme weather phenomena	Possible	Low

* Unlikely: <10%; Possible: >=10%; =<50%; Probable: >50%
** Low: <5M€; Medium: >=5M€; =<20M€; High: >20M€

In particular, for **electricity grids**, the resilience of distribution networks is linked to three possible risks:

- interruption of service related to possible peaks in demand due to increased temperatures;
- flooding of underground cabins caused by heavy rain;
- increased demand for energy related to the electrification of consumption.

The 2021-2030 Business Plan includes an investment plan of around 2.1 billion euro for the maintenance and development of the electricity grid, enabling both the adaptation to physical climate risks and the progressive electrification of energy services by improving their efficiency and reducing CO2 emissions. In this regard, the plan includes interventions to upgrade and rationalize the networks, secondary substations, primary substations and an extension of the remote management of assets.

As electricity distribution is a regulated business, these investments are remunerated at a rate defined by ARERA and updated according to a regulatory period of 8 years. In addition, ARERA offers the possibility of joining a bonus mechanism to encourage the implementation of specific interventions to increase the resilience of electricity grids.

The **Retail Gas** and **Heat** businesses could suffer a unfavorable trend resulting from

- higher than expected winter temperatures;
- the occurrence of climatic conditions at the end of the year that are very different (exceptional/ minimum temperature) from those used at the planning stage.

The business plan includes investments in the Heat business of approximately 0.9 billion euro, part of which is aimed at the development of district heating networks and strategies to increase the number of customers. Furthermore, there are projects for the recovery of “thermal waste” and the revamping of existing plants, to optimize energy costs and maintain the competitiveness of the assets. These capex, in addition to mitigating risk, are aimed at developing the district heating business. For estimating the amount of heat sold, the median of the degree days observed over the last 8 years was taken into account in order to adequately account climate change.

Electricity production from renewable sources could be impacted by several exogenous phenomena:

- change in the precipitation regime;
- competition on water use.

The business plan update envisages investments of around 3.9 billion euro in the period 2021-2030 for the development of renewable energy sources.

The change in the precipitation regime could lead to a change in the water availability for the Group's main hydroelectric auctions. The Business Plan includes investments to optimize the use of the derived water resource for hydroelectric purposes (e.g., pumping). In addition, the Group is engaged in the development of tools to improve rainfall and run-off forecasts as well as in the development of engineering analyses and models to support the planning of hydroelectric plants in both the medium and short term. The Group's hydroelectric production estimate is based on an 8-year historical average, including 2022, which experienced an exceptional drought.

Competition for the use of water resources could lead to an increase in the share of water that hydroelectric plants will be forced to release to make it available for irrigation and drinking.

Production from thermoelectric plants could be impacted by rising temperatures due to the risk of plant operation limitations caused by difficulties in adequately cooling the thermoelectric cycle when summer temperatures rise. To mitigate these risks, the Group constantly monitors the temperature of the cooling water, as well as, at some plants, the temperature of the watercourse downstream of the discharge. Furthermore, the Group has active all-risk insurance coverage, which also covers direct and indirect damage caused by natural phenomena. The investments associated with these facilities amount to approximately 1.4 billion euro in the period 2021-2030.

The Revision of the ETS Directive could impact the **Waste Business Unit**. In particular, waste-to-energy plants could be included in the Emissions Trading Scheme following the revision of the EU directive. The Group is constantly engaged in monitoring legislation and assessing possible impacts. In addition, this could push the Group to experiment with new technologies for capturing and sequestering CO2 emitted by waste-to-energy plants.

The A2A Group monitors any extreme weather phenomena (e.g. floods, landslides, water bombs, tornadoes, etc.), which could be a risk to the Group's assets and business continuity. To cover against such events, the Group has active insurance contracts with coverage extended to include damage caused by natural phenomena. In addition, there are procedures in place to manage any acute weather phenomena in an optimal and timely manner. Finally, with a view to prevention, the design and construction of installations (e.g. wind and photovoltaic) takes into account the characteristics of the territory and local climatology (e.g. slope stability, windiness, etc.).

Macroeconomic context

The A2A Group's activities are sensitive to economic cycles and general economic conditions in the countries in which it operates. The current context of the energy markets in which A2A operates shows signs of consolidation of the economic recovery underway, partly as a result of the gradual easing of the restrictive measures adopted at national and international level to deal with the COVID-19 emergency. For the years to come, macroeconomic projections foresee a continuation of the recovery of international trade and a moderate expansion of domestic demand, which should allow the gradual recovery of GDP and the alignment of values, also with reference to prices and margins, to A2A's Business Plan.

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). 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.

Impact of scenario and climate change on items of the financial statements

Impairment test

Consistent with IAS 36, the Group periodically monitors CGUs for impairment indicators, including those related to risks associated with climate change (regulatory or consumption changes, changes in temperature and rainfall, etc.) and the energy scenario.

As described in the previous section, the 2021-2030 business plan update published in November 2022 and the related scenario updates, on which the impairment test is based, natively includes climate change-related effects not only in the capex projections but also in the economic projections in order to also reflect recent events in terms of, for example, temperature and rainfall.

The Weighted Average Cost of Capital (WACC) used for discounting cash flows is determined as the weighted average of the cost of equity and the cost of debt capital, net of tax effects.

This value is updated annually to reflect current volatility and risk perceptions, thus including expectations on growth and exposure to climate risks that the stock market recognizes for each sector.

No positive growth rates are expected beyond the explicit Plan horizon.

The reference energy scenario was estimated by considering long-term supply and demand trends, taking into account numerous variables including population growth, the development and adoption of new green technologies, consumer choices and political ambition to stimulate the transition. As a result, a gradual reduction in the consumption of oil products is expected in the coming years, while the natural

gas market sees a substantial consolidation of demand in Italy until 2030, as a result of the resilience of the thermoelectric sector, and thereafter, also due to the increasing penetration of energy efficiency and electrification policies, a decisive acceleration in the drop in demand for methane. The demand for electricity is seen growing, supported by new forms of electrification (electric vehicles, heat pumps, electrolysers).

It should be noted that the only coal-fired plant (Monfalcone) was fully written down in previous years.

Provisions, contingent liabilities and assets

The risk of climate change did not give rise to the need to recognize additional contingent liabilities as the A2A Group, as required by the standard, reviews risks annually, estimating the present value of the amounts required to meet future contingent obligations (e.g. decommissioning provisions on landfills or thermoelectric plants). This estimate is the result of the methodology used by the Group in previous years, which takes into account the macroeconomic scenario.

Employee benefits

In the area of employee benefits, in accordance with the methodology set forth in the relevant accounting standard (IAS 19 Revised), actuarial assumptions are updated annually on the basis of market rates, inflation, salary growth forecasts and future commodity trends. For analyses and details on the actuarial assumptions used and sensitivity, please refer to the corresponding section of the Notes to the Consolidated Annual Financial Report.

Revenues from contracts with customers

Among sales contracts, which are accounted for in accordance with the accounting standards, the A2A Group, consistently with what has been done in previous years, evaluates from time to time the possible estimation of a specific provision for contracts classifiable as onerous pursuant to IAS 37.

Financial instruments

In line with the methodology already used in previous years, the A2A Group adopts a Credit Policy with the aim of managing counterparty risk both in the customer acquisition phase through preliminary checks and requests for guarantees, and in the management phase through the definition of payment terms and/or repayment plans with the application of interest.

The changed macroeconomic scenario during 2022 led to an increase in credit exposures to customers and a higher risk with respect to both possible counterparty default and late payment. These aspects were considered by the A2A Group in determining the expected credit losses for the purpose of quantifying the bad debt provision for the year 2022.

4.1 Summary of results, assets and liabilities and financial position
4.2 Significant events during the year
4.3 Significant events after December 31, 2022
4.4 Impacts of the Russia-Ukraine conflict
4.5 Climate change
4.6 Taxonomy
4.7 Outlook for operations
4.8 Proposal for the allocation of net profit for the year ended December 31, 2022 and the distribution of a dividend

4.6
Taxonomy

In June 2021, the European Commission formally adopted the first Technical Delegated Act of EU Regulation 2020/852 (so-called Taxonomy) that defines the list of economic sectors and activities currently included in the Taxonomy and the related technical screening criteria for whether they contribute substantially to the achievement of the environmental objectives of climate change mitigation and adaptation.

Additional Technical Delegated Acts on the remaining environmental objectives are expected to be published during 2023.

In order to ensure compliance with the requirements of EU Regulation 2020/852, the A2A Group has implemented a specific project aimed at identifying "eligible" activities in accordance with the Regulation itself. This process has led to the identification of "eligible" activities for the Group under the Taxonomy for Environmental Objectives for Climate Change Mitigation and Adaptation; with reference to these activities, A2A has reported revenues, capital expenditure and/or operating expenditure in the year 2022, which are reported in Group's Consolidated Non-Financial Disclosure (CNFD) 2022.

Starting this year, as required by the regulations, the analyses have been further refined in order to identify those economic activities that are considered truly eco-sustainable (so-called 'taxonomy-aligned' economic activities), i.e. those activities that:

a) contribute substantially to the achievement of one or more of the environmental objectives by meeting the technical screening criteria defined in the Climate Delegated Act;

b) do not cause significant harm to any of the other environmental objectives (so-called DNSH); and

c) are carried out in compliance with minimum safeguards[1].

1 According to Article 18 of EU Regulation 2020/852, minimum safeguards are *"procedures implemented by an enterprise engaged in an economic activity in order to ensure that it is in line with the OECD Guidelines for Multinational Enterprises and the United Nations Guiding Principles on Business and Human Rights, including the principles and rights set out in the eight core conventions identified in the International Labour Organization's Declaration on Fundamental Principles and Rights at Work and the International Bill of Human Rights."*

4.7
Outlook for operations

Forecasts for 2023 Strategic Plan envisage Ebitda of between 1.60 and 1.64 billion euro and Group Net Income, net of non-recurring items, between 380 and 390 million euro.

High levels of volatility in the energy markets, exceptionally low water levels and new regulatory measures are risks that could generate impacts on the Group that are difficult to quantify to date.

The A2A Group constantly monitors the evolution of the context and, as done in other situations of volatility, promptly identifies possible mitigating actions, aimed at greater protection of the economic and financial position.

With reference to possible tensions on the financial markets, it should be noted that the solid liquidity position of the Group (at December 31, 2022 equal to 4.9 billion euro, made up of cash of 2.58 billion euro and committed and uncommitted credit lines for 2.35 billion euro) made it possible to manage derivative transactions on the commodity market, the temporary increases in working capital due to the rise in prices and the installment plans granted to customers and the requests for margins (cash collateral) by of clearing houses. The strengthening of the Group's liquidity position continued in the first months of 2023: A2A first placed a new Green Bond for 500 million euro to support the investments envisaged in the new Business Plan, and subsequently increased its committed credit lines with a new 100 million euro bilateral transaction.

4.1 Summary of results, assets and liabilities and financial position
4.2 Significant events during the year
4.3 Significant events after December 31, 2022
4.4 Impacts of the Russia-Ukraine conflict
4.5 Climate change
4.6 Taxonomy
4.7 Outlook for operations
4.8 Proposal for the allocation of net profit for the year ended December 31, 2022 and the distribution of a dividend

4.8

Proposal for the allocation of net profit for the year ended December 31, 2022 and the distribution of a dividend

The annual financial statements of A2A S.p.A. for the year ended December 31, 2022 show a net profit of 545,581,220.00 euro.

If you are in agreement with the criteria used to prepare the financial statements, with the accounting principles and methods used in those statements and with the measurement criteria adopted, we invite you to approve:

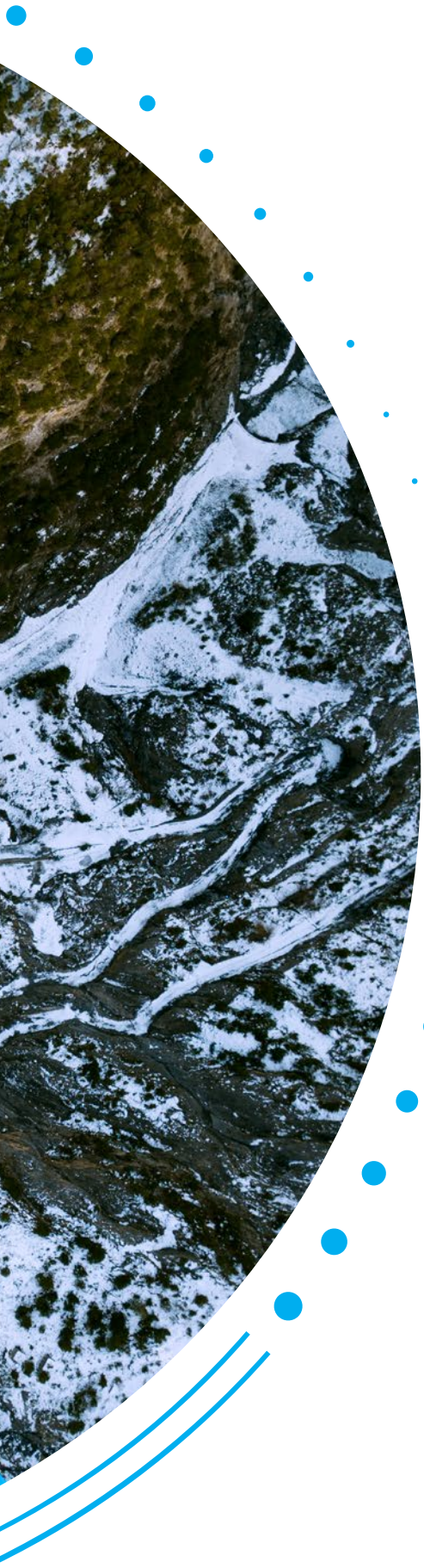
the allocation of the net profit for the year of 545,581,220.00 euro as follows:

- 27,279,061.00 euro to the legal reserve;
- 283,214,637.00 euro as an ordinary dividend payable to shareholders to ensure a remuneration of 0.0904 euro for each outstanding ordinary share;
- 235,087,522.00 euro to the extraordinary reserve.

By way of information, we bring to your attention that the number of shares currently outstanding is equal to 3,132,905,277 shares.

The dividend will be paid from May 24, 2023, with ex-dividend date May 22, 2023 and record date May 23, 2023.

The Board of Directors



5

Analysis of main sectors of activities

5.1

Summary of results sector by sector

millions of euro	Generation and Trading		Market		Waste	
	01 01 2022 12 31 2022	01 01 2021 12 31 2021	**01 01 2022 12 31 2022**	01 01 2021 12 31 2021	**01 01 2022 12 31 2022**	01 01 2021 12 31 2021
Revenues	**19,605**	**8,095**	**8,798**	**3,885**	**1,422**	**1,260**
- of which inter-sector	*7,144*	*2,263*	*358*	*152*	*348*	*229*
Operating expenses	**(18,960)**	**(7,642)**	**(8,615)**	**(3,618)**	**(710)**	**(582)**
- of which inter-sector	*(558)*	*(332)*	*(7,320)*	*(2,559)*	*(113)*	*(97)*
Labour costs	(91)	(85)	(58)	(53)	(353)	(337)
Gross operating income - EBITDA	**554**	**368**	**125**	**214**	**359**	**341**
% of Revenues	*2.8%*	*4.5%*	*1.4%*	*5.5%*	*25.2%*	*27.1%*
Depreciation of tangible assets and amortization of intangible assets	(206)	(190)	(53)	(41)	(149)	(131)
Net write-downs of fixed assets	(1)	-	-	-	-	(1)
Provisions for risks	(30)	(17)	1	(3)	32	(28)
Provisions for credit risks	-	(1)	(88)	(32)	1	1
Net operating income - EBIT	**317**	**160**	**(15)**	**138**	**243**	**182**
% of Revenues	*1.6%*	*2.0%*	*(0.2%)*	*3.6%*	*17.1%*	*14.4%*
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 year						
Gross capex (1)	272	144	71	73	264	273

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

5.1 Summary of results sector by sector
5.2 Results sector by sector
5.3 Generation and Trading Business Unit
5.4 Market Business Unit
5.5 Waste Business Unit
5.6 Smart Infrastructures Business Unit
5.7 Corporate

Smart Infrastructures		Corporate		Eliminations		Income statement	
01 01 2022 12 31 2022	01 01 2021 12 31 2021	**01 01 2022 12 31 2022**	01 01 2021 12 31 2021	**01 01 2022 12 31 2022**	01 01 2021 12 31 2021	**01 01 2022 12 31 2022**	01 01 2021 12 31 2021
1,539	**1,280**	**320**	**301**	**(8,518)**	**(3,272)**	**23,166**	**11,549**
374	*367*	*294*	*261*	*(8,518)*	*(3,272)*		
(908)	**(637)**	**(221)**	**(193)**	**8,518**	**3,272**	**(20,896)**	**(9,400)**
(473)	*(251)*	*(54)*	*(33)*	*8,518*	*3,272*		
(112)	(105)	(151)	(141)			(765)	(721)
519	**538**	**(52)**	**(33)**			**1,505**	**1,428**
33.7%	*42.0%*	*(16.3%)*	*(11.0%)*			*6.5%*	*12.4%*
(260)	(256)	(56)	(48)			(724)	(666)
(1)	(11)	-	(1)			(2)	(13)
(3)	(5)	(2)	(3)			(2)	(56)
(2)	(2)	(1)	1			(90)	(33)
253	**264**	**(111)**	**(84)**			**687**	**660**
16.4%	*20.6%*	*(34.7%)*	*(27.9%)*			*3.0%*	*5.7%*
						157	-
						(88)	(70)
						756	590
						(344)	(36)
						412	554
						36	(4)
						(47)	(46)
						401	**504**
560	516	73	77	-	(9)	1,240	1,074

millions of euro	Generation and Trading		Market		Waste	
	12 31 2022	12 31 2021	**12 31 2022**	12 31 2021	**12 31 2022**	12 31 2021
Capital employed						
Net fixed capital	**2,549**	**2,122**	**108**	**269**	**1,582**	**1,388**
- Tangible assets	2,369	2,165	49	43	1,257	1,122
- Intangible assets	379	154	368	276	620	609
- Shareholdings and other non-current financial assets	4	-	21	36	29	12
- Other non-current assets/liabilities	12	8	(306)	(44)	-	14
- Deferred tax assets/liabilities	133	166	9	(8)	36	50
- Provisions for risks, charges and liabilities for landfills	(325)	(345)	(25)	(25)	(312)	(359)
- Employee benefits	(23)	(26)	(8)	(9)	(48)	(60)
Net Working Capital and Other Current Assets/Liabilities	**(668)**	**(130)**	**741**	**366**	**(113)**	**12**
Net Working Capital	**(917)**	**30**	**700**	**428**	**(66)**	**56**
- Inventories	445	129	-	-	40	34
- Trade receivables	3,106	1,862	2,119	1,394	295	322
- Trade payables	(4,468)	(1,961)	(1,419)	(966)	(401)	(300)
Other current assets/liabilities	**249**	**(160)**	**41**	**(62)**	**(47)**	**(44)**
- Other current assets/liabilities	250	(156)	38	(62)	(47)	(40)
- Current tax assets/tax liabilities	(1)	(4)	3	-	-	(4)
Assets/Liabilities held for sale	-	-	-	-	-	-
Total capital employed	**1,881**	**1,992**	**849**	**635**	**1,469**	**1,400**

5.1 Summary of results sector by sector
5.2 Results sector by sector
5.3 Generation and Trading Business Unit
5.4 Market Business Unit
5.5 Waste Business Unit
5.6 Smart Infrastructures Business Unit
5.7 Corporate

Smart Infrastructures		Corporate		Eliminations and adjustments		Total Group	
12 31 2022	12 31 2021	**12 31 2022**	12 31 2021	**12 31 2022**	12 31 2021	**12 31 2022**	12 31 2021
4,354	**3,978**	**4,125**	**4,301**	**(3,869)**	**(4,032)**	**8,849**	**8,026**
2,294	2,109	217	195	(24)	(46)	6,162	5,588
2,049	1,925	99	204	-	(43)	3,515	3,125
1	4	3,873	3,977	(3,846)	(3,956)	82	73
(15)	(54)	13	(4)	-	(13)	(296)	(93)
117	95	67	65	1	56	363	424
(46)	(44)	(21)	(22)	-	(2)	(729)	(797)
(46)	(57)	(123)	(114)	-	(28)	(248)	(294)
102	**27**	**(180)**	**(26)**	**(6)**	**(6)**	**(124)**	**243**
(28)	**139**	**(65)**	**(68)**	**68**	**16**	**(308)**	**601**
49	38	2	2	-	1	536	204
491	473	71	65	(1,402)	(825)	4,680	3,291
(568)	(372)	(138)	(135)	1,470	840	(5,524)	(2,894)
130	**(112)**	**(115)**	**42**	**(74)**	**(22)**	**184**	**(358)**
129	(111)	(13)	(5)	(74)	(31)	283	(405)
1	(1)	(102)	47	-	9	(99)	47
-	**102**	**-**	**45**	**-**	**-**	**-**	**147**
4,456	**4,107**	**3,945**	**4,320**	**(3,875)**	**(4,038)**	**8,725**	**8,416**

5.2

Results 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.

5.1 Summary of results sector by sector
5.2 Results sector by sector
5.3 Generation and Trading Business Unit
5.4 Market Business Unit
5.5 Waste Business Unit
5.6 Smart Infrastructures Business Unit
5.7 Corporate

The following is a summary of the main economic data by sector:

Results by sector 2022

millions of euro	Generation and Trading	Market	Waste	Smart Infrastructures	Corporate	Eliminations and adjustments	Total
Revenues from the sale of goods and services	19,544	8,758	1,378	1,465	291	(8,490)	22,946
Other operating income	61	40	44	74	29	(28)	220
Total revenues	**19,605**	**8,798**	**1,422**	**1,539**	**320**	**(8,518)**	**23,166**
Operating expenses	18,960	8,615	710	908	221	(8,518)	20,896
Labour costs	91	58	353	112	151	-	765
Gross Operating Margin - EBITDA	**554**	**125**	**359**	**519**	**(52)**	**-**	**1,505**
Depreciation, amortization and write-downs of assets	(207)	(53)	(149)	(261)	(56)	-	(726)
Provisions for risks and receivables	(30)	(87)	33	(5)	(3)	-	(92)
Net Operating Income - EBIT	**317**	**(15)**	**243**	**253**	**(111)**	**-**	**1,597**
Capex	**272**	**71**	**264**	**560**	**73**	**-**	**1,240**

Results by sector 2021

millions of euro	Generation and Trading	Market	Waste	Smart Infrastructures	Corporate	Eliminations and adjustments	Total
Revenues from the sale of goods and services	8,006	3,849	1,207	1,248	284	(3,242)	11,352
Other revenue and income	89	36	53	32	17	(30)	197
Total revenues	**8,095**	**3,885**	**1,260**	**1,280**	**301**	**(3,272)**	**11,549**
Operating expenses	7,642	3,618	582	637	193	(3,272)	9,400
Labour costs	85	53	337	105	141	-	721
Gross Operating Margin - EBITDA	**368**	**214**	**341**	**538**	**(33)**	**-**	**1,428**
Depreciation, amortization and write-downs of assets	(190)	(41)	(132)	(267)	(49)	-	(679)
Provisions for risks and receivables	(18)	(35)	(27)	(7)	(2)	-	(89)
Net Operating Income - EBIT	**386**	**249**	**368**	**545**	**(31)**	**-**	**1,517**
Capex	**144**	**73**	**273**	**516**	**77**	**(9)**	**1,074**

5.3

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:

554

mln €
Ebidta

+50.5% compared to 2021

272

mln €
Capex

144 mln in 2021 (+88.9%)

663

GWh
Production of coal-fired plants

(157 GWh in 2021)

14,973

GWh
Thermoelectric production from other facilities

(+7.6% vs 2021)

638

GWh
Photovoltaic and wind power production

(313 GWh in 2021)

2,729

GWh
Hydroelectric production

(-35.5% vs 2021)

303.1

€/MWh
Single National Price

(125 €/MWh in 2021)

+1.9

€/MWh
Clean spark spread

(0.6 €/MWh in 2021)

5.1 Summary of results sector by sector
5.2 Results sector by sector
5.3 Generation and Trading Business Unit
5.4 Market Business Unit
5.5 Waste Business Unit
5.6 Smart Infrastructures Business Unit
5.7 Corporate

Operating figures

Net electricity production GWh	12 31 2022	12 31 2021	Change	% 2022/2021
Net thermoelectric production	**15,636**	14,078	1,558	11.1%
- CCGT	12,836	12,459	377	3.0%
- Oil	2,137	1,462	675	46.2%
- Coal	663	157	506	n.s.
Net production from Renewable Sources	**3,367**	4,544	(1,177)	(25.9%)
- Hydroelectric	2,729	4,231	(1,502)	(35.5%)
- Photovoltaic	387	291	96	33.0%
- Wind	251	22	229	n.s.
Total net production	**19,003**	**18,622**	**381**	**2.0%**

Economic figures

millions of euro	01 01 2022 12 31 2022	01 01 2021 12 31 2021	Change	% 2022/2021
Revenues	19,605	8,095	11,510	142.2%
Operating expenses	18,960	7,642	11,318	148.1%
Labour costs	91	85	6	7.1%
Gross Operating Margin - EBITDA	**554**	**368**	**186**	**50.5%**
% of Revenues	2.8%	4.5%		
Depreciation, amortization and write-downs of assets	*(207)*	*(190)*	*(17)*	*8.9%*
Provisions for risks and receivables	*(30)*	*(18)*	*(12)*	*66.7%*
Depreciation, amortization, provisions and write-downs	(237)	(208)	(29)	13.9%
Net Operating Result	**317**	**160**	**157**	**98.1%**
% of Revenues	1.6%	2.0%		
Capex	272	144	128	88.9%
FTE	1,072	1,051	21	2.0%

Revenues in 2022 amounted to 19,605 million euro, an increase of 11,510 million euro (+142%) compared to the previous year. The significant change was mainly caused by the extraordinary increase in the prices of electricity and gas recorded in the year; the higher volumes sold and brokered made a marginal contribution.

Operating expenses in 2022 amounted to 18,960 million euro, an increase of 11,318 million euro compared to 2021, mainly due to higher procurement costs for energy raw materials. To a lesser extent, the increase in hydroelectric fees also had an impact.

Labour costs amounted to 91 million euro, up 6 million euro compared to 2021 (7%). Approximately 50% of this change was due to salary increases provided for by national collective labour agreements and remuneration policy actions, and the remainder to changes in the scope of consolidation, and the expansion of structures for the development and management of renewable energies.

In 2022, FTEs stood at 1,072 units (1,051 FTEs at December 31, 2021).

The Gross Operating Margin of the Generation and Trading Business Unit amounted to 554 million euro, an increase of 186 million euro compared to December 31, 2021 (+50.5%). Net of the non-recurring items recorded in the two comparison periods, equal to -17 million euro in 2022 and +10 million euro in 2021, ordinary Gross Operating Margin increased by 213 million euro.

The positive change is mainly attributable to:

- remuneration of the capacity market for 130 million euro, 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;

- operation of the Monfalcone plant on the PGM market reactivated at the request of the government to tackle the ongoing energy crisis, for 60 million euro;
- positive performance of the Trading portfolio by 55 million euro (81 million euro in 2022; 26 million euro in 2021);
- opportunities gained on the ancillary services market ("MSD") in the amount of 49 million euro (+15% compared to 2021), as a result of Terna's requests for critical grid issues that characterized the year under review;
- 40 million euro contribution from the photovoltaic and wind power plants of the newly acquired companies. Production from wind and photovoltaic sources, thanks to the contribution of the companies acquired in 2021 and 2022 (Octopus, 3New and 4New) grew significantly, reaching 251 GWh and 387 GWh, respectively.

The positive impacts were partly offset by:

- lower hydroelectric production (-36%) for -96 million euro, due to the severe drought during the year;
- higher hydroelectric fees for 10 million euro.

Depreciation, amortization, provisions and write-downs totalled 237 million euro (208 million euro at December 31, 2021). The change is related for 16 million euro to higher depreciation and amortization, mainly due to the consolidation of newly acquired companies in the renewables segment, and for 13 million euro to higher provisions for risks.

As a result of the above changes, Net Operating Income amounted to 317 million euro (160 million euro at December 31, 2021).

Capex in the year under review amounted to 272 million euro and included extraordinary maintenance work and adaptation to regulations of 85 million euro, of which 53 million euro at thermoelectric plants and 26 million euro at the Group's hydroelectric plants and 1 million euro at the photovoltaic plants.

Development work totalling 187 million euro was also carried out, of which 151 million euro was for investments in thermoelectric plants: gas turbine upgrades of combined-cycle plants in Cassano, Chivasso, Sermide and Piacenza, projects for endothermic engines in Cassano, and new combined-cycle plants in Monfalcone and Cassano. These interventions, aimed at ensuring flexibility, peak demand coverage and balancing the energy needs of the electricity grid, contribute to the adequacy and security of the national electricity system.

Finally, capex were made in wind and photovoltaic plants for 33 million euro, aimed at accelerating the growth of the Group's renewable sources.

5.4

Market Business Unit

The following is a summary of the main quantitative and economic data relating to the Market Business Unit:

125

mln €
Ebidta

-41.6% compared to 2021

71

mln €
Capex

73 mln in 2021

20,737

GWh
Electricity Sales

(+12.5% vs 2021)

2,677

Mmc
Gas Sales

(-1.3% vs 2021)

1,491

(#/1000) POD
Retail market ele customers
free market: 1,128 POD

(+22.2% vs 2021)

1,579

(#/1000) PDR
Retail market gas customers
free market: 1,043 PDR

(+12.3% vs 2021)

Operating figures

Electricity	12 31 2022	12 31 2021	Change	% 2022/2021
Electricity Sales				
Electricity Sales Free Market (GWh)	18,423	15,968	2,455	15.4%
Electricity Sales under Greater Protection Scheme (GWh)	732	983	(251)	(25.5%)
Electricity Sales Safeguard Market (GWh)	1,582	1,475	107	7.3%
Total Electricity Sales (GWh)	**20,737**	**18,426**	**2,311**	**12.5%**
POD Electricity				
POD Electricity Free Market (#/1000)	1,128	923	205	22.2%
POD Electricity under Greater Protection Scheme (#/1000)	323	382	(59)	(15.4%)
POD Electricity under Safeguarding Scheme (#/1000)	40	63	(23)	(36.5%)
Total POD Electricity (#/1000)	**1,491**	**1,368**	**123**	**9.0%**

Gas	12 31 2022	12 31 2021	Change	% 2022/2021
Gas Sales				
Gas Sales Free Market (Mcm)	2,282	2,146	136	6.3%
Gas Sales under Protection Scheme (Mcm)	395	565	(170)	(30.1%)
Total Gas Sales (Mcm)	**2,677**	**2,711**	**(34)**	**(1.3%)**
PDR Gas				
PDR Gas Free Market (#/1000)	1,043	929	114	12.3%
PDR Gas under Greater Protection Scheme (#/1000)	536	638	(102)	(16.0%)
Total PDR Gas (#/1000)	**1,579**	**1,567**	**12**	**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.

Economic figures

millions of euro	01 01 2022 12 31 2022	01 01 2021 12 31 2021	Change	% 2022/2021
Revenues	8,798	3,885	4,913	126.5%
Operating expenses	8,615	3,618	4,997	138.1%
Labour costs	58	53	5	9.4%
Gross Operating Margin - EBIDTA	**125**	**214**	**(89)**	**(41.6%)**
% of Revenues	1.4%	5.5%		
Depreciation, amortization and write-downs of assets	*(53)*	*(41)*	*(12)*	*29.3%*
Provisions for risks and receivables	*(87)*	*(35)*	*(52)*	*148.6%*
Depreciation, amortization, provisions and write-downs	(140)	(76)	(64)	84.2%
Net Operating Result	**(15)**	**138**	**(153)**	**(110.9%)**
% of Revenues	(0.2%)	3.6%		
Capex	71	73	(2)	(2.7%)
FTE	951	907	44	4.9%

The revenues amounted to 8,798 million euro (3,885 million euro at December 31, 2021). The growth recorded is mainly attributable to higher unit prices for both electricity and gas, and to a more limited extent to higher quantities of electricity sold.

Operating expenses in 2022 amounted to 8,615 million euro, an increase of 4,997 million euro compared to 2021, mainly due to higher procurement costs for energy raw materials.

5.1 Summary of results sector by sector
5.2 Results sector by sector
5.3 Generation and Trading Business Unit
5.4 Market Business Unit
5.5 Waste Business Unit
5.6 Smart Infrastructures Business Unit
5.7 Corporate

To a lesser extent, the increase in costs incurred in support of business development, in particular ICT and customer acquisition costs, also had an impact.

With particular reference to the mass market segment (electricity and gas), the number of supply points served during the year exceeded 3 million units, of which more than 2 million related to the free market, which recorded an increase of about 319 thousand units. Overall in the year, gross acquisitions (before terminations) of new Mass Market customers in the free market of the Group's main sales company amounted to 393 thousand units, corresponding to an increase of 28%, mainly in the electricity sector.

Staff costs amounted to 58 million euro (53 million euro in 2021), mainly as a result of the increase in FTEs to 951 (907 FTEs at December 31, 2021). Of the change, 80% is due to increased recruitment in the year under review for the strengthening of traditional and innovative business areas, in line with development objectives.

Market Business Unit EBITDA amounted to a positive 125 million euro (214 million euro as at December 31, 2021).

Net of non-recurring items (+2 million euro in 2022 and +14 million euro in 2021), Ordinary EBITDA decreased by 77 million euro.

The reduction was concentrated in the first half of the year and is attributable to the decline in unit margins in the energy retail segment, both electricity and gas, due to:

- different time distribution of the marginality of fixed-price contracts compared to the previous year, with the same overall contractual margin;
- impacts related to end-customer consumption, which differ from the contracted profiles;
- imbalances emphasised by the year's energy price level.

Ordinary EBITDA in the second half of the year improved compared to the same period of the previous year (+36 million euro), as a result of a partial re-absorption of the above-mentioned negative impacts, particularly in the electricity sector. The positive contribution of business development also continued in the second half of the year, both in terms of increase in customers and volumes served, as outlined above.

Depreciation, amortization, provisions and write-downs totalled 140 million euro (76 million euro at December 31, 2021): the main change is attributable to higher provisions for bad debts (56 million euro) related to credit exposure to customers, also due to the increase in turnover. However, the credit delinquency indicators did not change, confirming the soundness of the customer portfolio.

Depreciation and amortization for the period, amounting to 53 million euro, increased due to ongoing digitalization projects.

As a result of the above changes, net operating income amounted to negative 15 million euro (138 million euro at December 31, 2021).

In 2022, the Market Business Unit capex amounted to 71 million euro, involving:

- 61 million to the energy retail segment for evolutionary maintenance and development work on hardware and software platforms, aimed at supporting billing and customer management activities, and to the full-digital company NEN, as well as capitalized charges for the acquisition of new customers;
- 10 million for the Energy Solutions segment for energy efficiency projects.

5.5
Waste Business Unit

The following is a summary of the main quantitative and economic data relating to the Waste Business Unit:

359
mln €
Ebidta
+5.3% compared to 2021

264
mln €
Capex
273 mln in 2021 (-3.3%)

1,487
GWht
Heat sold
(-9.3% vs 2021)

2,121
GWh
Electricity sold
(+1.9% vs 2021)

3,368
Kton
Waste disposed of
(-1.6% vs 2021)

of which:

994
Kton
Material recovery disposals
(+0.6% vs 2021)

1,436
Kton
Energy recovery disposals
(-3% vs 2021)

5.1 Summary of results sector by sector
5.2 Results sector by sector
5.3 Generation and Trading Business Unit
5.4 Market Business Unit
5.5 Waste Business Unit
5.6 Smart Infrastructures Business Unit
5.7 Corporate

Operating figures

	12 31 2022	12 31 2021	Change	% 2022/2021
Waste collected (Kton)	1,785	1,861	(76)	(4.1%)
Residents served (#/1000)	3,965	4,065	(100)	(2.5%)
Electricity sold (GWh)	2,121	2,082	39	1.9%
Heat sold (GWht)*	1,487	1,640	(153)	(9.3%)

(*) Quantities at the plant entrance.

Rifiuti smaltiti (Kton)	12 31 2022	12 31 2021	Change	% 2022/2021
Energy recovery	1,436	1,481	(45)	(3.0%)
Material recovery	994	988	6	0.6%
Other	938	953	(15)	(1.6%)
Total	**3,368**	**3,423**	**(55)**	**(1.6%)**

The quantities reported are net of intra-group disposals.

Economic figures

millions of euro	01 01 2022 12 31 2022	01 01 2021 12 31 2021	Change	% 2022/2021
Revenues	1,422	1,260	162	12.9%
Operating expenses	710	582	128	22.0%
Labour costs	353	337	16	4.7%
Gross Operating Margin - EBITDA	**359**	**341**	**18**	**5.3%**
% of Revenues	25.2%	27.1%		
Depreciation, amortization and write-downs of assets	*(149)*	*(131)*	*(18)*	*13.7%*
Provisions for risks and receivables	*33*	*(28)*	*61*	*n.s.*
Depreciation, amortization, provisions and write-downs	(116)	(159)	43	(27.0%)
Net Operating Result	**243**	**182**	**61**	**33.5%**
% of Revenues	17.1%	14.4%		
Capex	264	273	(9)	(3.3%)
FTE	6,577	6,470	107	1.7%

In 2022, the Waste Business Unit recorded revenue of 1,422 million euro, up 12.9% compared to the same period in 2021 (1,260 million euro at December 31, 2021) mainly due to higher revenue from the sale of electricity and the sale of heat. Higher revenues from waste disposal due to higher unit prices and the contribution of the companies acquired during 2021 also contributed to the increase.

Operating expenses amounted to 710 million euro, up 128 million euro compared to the corresponding figure for 2021, mainly due to higher energy, consumption, spare parts and maintenance costs, in line with the general increase in prices. Changes in the scope of consolidation also contributed to the increase (Agripower consolidated from April 2021, TecnoA consolidated from December 2021).

Labour costs stood at 353 million euro, up 16 million euro compared to 2021, equal to 4.7%. Of this change, 40% was due to an increase in FTEs (6,577 FTEs in 2022 compared to 6,470 FTEs in the previous year) as a result of hires made to strengthen certain services in the Collection and Treatment segment. The increase related to the application of national labour contracts and remuneration policies amounted to a total of about 5 million euro, or 30% of the change.

The Gross Operating Margin of Waste Business Unit equalled 359 million euro (341 million euro at December 31, 2021), up 18 million euro compared to the previous year.

Net of the non-recurring items recorded in the two comparison periods (+9 million euro in 2022 and +8 million euro in 2021), ordinary Gross Operating Margin increased by 17 million euro.

The municipal waste treatment segment made the contribution to the period result (+30 million euro compared to 2021), thanks to:

- a positive trend in electricity and heat transfer prices of waste-to-energy plants for a total of 39 million euro. The economic effect of the smaller quantities processed is negligible: electricity volumes increased compared to the previous year due to the higher productivity of the Silla2 waste-to-energy plant, which partly offset the lower availability of the Parona waste-to-energy plant due to the decommissioning of a line. The volumes of heat required by the district heating sector decreased by 9.3% as a result of the mild temperatures during the year under review;
- the increase in prices for the delivery of waste comparable with municipal waste, which offset by smaller quantities treated (+3 million euro). In fact, the quantities destined for energy recovery decreased due to the reduced availability of the Parona waste-to-energy plant;
- margins of biomass-fuelled plants (+6 million euro) due to both higher electricity prices and the incremental contribution of Agripower, consolidated from April 2021. This significant contribution was partly reabsorbed by rising costs, particularly for biomass, as a result of the upward price dynamic that affected the sector in the year under review;
- higher costs for disposal of dust, raw materials and reagents (14 million euro).

This result was partly offset by the lower marginality of the waste collection segment (-12 million euro), which was significantly penalized by the increase recorded during the year in the cost of fuel consumed by the vehicles used and only to a limited extent by the loss of the concession of some municipalities, in particular Varese, which led to a decrease in quantities of -4.1% compared to the previous year.

Depreciation, amortization, provisions and write-downs amounted to 116 million euro (159 million euro in 2021). The negative change is the combined effect of higher depreciation and amortization (18 million euro) related to investments made during 2022, and companies acquired during 2021. Lower provisions for risks and the release of excess provisions, due to the increase in discount rates, contributed 60 million euro.

As a result of these changes, Net Operating Income totalled 243 million euro (182 million euro at December 31, 2021).

Capex in 2022 amounted to 264 million euro and concerned:

- development work for 197 million euro, of which 113 million euro relating to the waste-to-energy plants (in particular 60 million euro for the construction of the new waste-to-energy plant in Parona and 42 million euro for the fume purification line of the waste-to-energy plant in Brescia), 52 million euro to the MSWDF plants of Lacchiarella and Cavaglià and 27 million euro to the other treatment and recovery plants (in particular 6 million euro for the new sludge plant in Parona) and 3 million to the collection sector;
- maintenance work for 67 million euro relating to waste-to-energy plants (30 million euro, biomass plants (5 million euro), treatment and recovery plants (10 million euro) and the collection sector (19 million euro).

5.6

Smart Infrastructures Business Unit

The following is a summary of the main quantitative and economic data relating to the Smart Infrastructures Business Unit.

519
mln €
Ebidta
-3.5% compared to 2021

560
mln €
Capex
516 mln in 2021 (+8.5%)

1,482
mln €
RAB Gas
(+1.1% vs 2021)

827
mln €
RAB Electricity
(+9.8% vs 2021)

511
mln €
RAB Water Services
(+24.3% vs 2021)

2,877
GWht
Heat sold
(-9.5% vs 2021)

Operating figures

Networks	12 31 2022	12 31 2021	Change	% 2022/2021
Electricity distributed (GWh)	11,238	11,422	(184)	(1.6%)
Gas distributed (Mcm)	2,726	3,132	(406)	(13.0%)
Water distributed (Mcm)	75	76	(1)	(1.3%)
RAB Electricity (M€) (*)	827	753	74	9.8%
RAB Gas (M€) (*)	1,482	1,466	16	1.1%
RAB Water (M€) (*)	511	411	100	24.3%

(*) Provisional figures, underlying the calculation of allowed revenues for the period.

Heat GWht	12 31 2022	12 31 2021	Change	% 2022/2021
SOURCES				
Plants in:	**1,392**	**1,554**	**(162)**	**(10.4%)**
- Lamarmora	330	385	(55)	(14.3%)
- Famagosta	61	95	(34)	(35.8%)
- Tecnocity	59	72	(13)	(18.1%)
- Other plants	942	1,002	(60)	(6.0%)
Purchases from:	**1,911**	**2,137**	**(226)**	**(10.6%)**
- third parties	373	473	(100)	(21.1%)
- other Business Units	1,538	1,664	(126)	(7.6%)
Total Sources	**3,303**	**3,691**	**(388)**	**(10.5%)**
USES				
Sales to end customers	2,877	3,178	(301)	(9.5%)
Distribution losses	426	513	(87)	(17.0%)
Total Uses	**3,303**	**3,691**	**(388)**	**(10.5%)**
Electricity from cogeneration	**429**	297	132	44.4%

Notes:
- 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.

Economic figures

millions of euro	01 01 2022 12 31 2022	01 01 2021 12 31 2021	Change	% 2022/2021
Revenues	1,539	1,280	259	20.2%
Operating expenses	908	637	271	42.5%
Labour costs	112	105	7	6.7%
Gross Operating Margin - EBITDA	**519**	**538**	**(19)**	**(3.5%)**
% of Revenues	33.7%	42.0%		
Depreciation, amortization and write-downs of assets	*(261)*	*(267)*	*6*	*(2.2%)*
Provisions for risks and receivables	*(5)*	*(7)*	*2*	*(28.6%)*
Depreciation, amortization, provisions and write-downs	(266)	(274)	8	(2.9%)
Net Operating Result	**253**	**264**	**(11)**	**(4.2%)**
% of Revenues	16.4%	20.6%		
Capex	560	516	44	8.5%
FTE	3,075	3,052	23	0.8%

5.1 Summary of results sector by sector
5.2 Results sector by sector
5.3 Generation and Trading Business Unit
5.4 Market Business Unit
5.5 Waste Business Unit
5.6 Smart Infrastructures Business Unit
5.7 Corporate

The Smart Infrastructures Business Unit's revenue for the period amounted to 1,539 million euro (1,280 million euro at December 31, 2021, +20%). The change is related to higher revenues in the heat segment (+268 million euro) due to the dynamics of district heating and electricity unit prices and the contribution of A2A Airport Energy acquired in September 2022, to revenues related to activities functional to obtaining energy savings (Superbonus) and to the public lighting segment (+23 million euro). With regard to the electricity and gas segments, on the other hand, there was a contraction in revenues admitted due to the reduction of the regulatory WACC by 0.7% and the equalization of electricity losses (-17 million euro) following the change in calculation methods by ARERA.

Operating costs increased by 271 million euro, of which 239 million euro, mirroring the revenue trend, was attributable to the heat segment as a result of higher raw material procurement costs (gas and heat).

However, the increase in energy costs was also the main driver of cost growth for the Gas, Water Cycle and Public Lighting networks. On the Gas Network, there was also an increase in the fee for ATEM Milan following the award of the tender.

Labour costs amounted to 112 million euro (105 million euro in the previous year). Approximately 80% of the change is attributable to the increase in unit costs as a result of increases in collective agreements and remuneration policies, and the remainder to the increase in FTEs. In 2022, in fact, FTEs stood at 3,075, with a change of 23 units attributable to new investment projects and recruitment, net of the effect of the sale of non-strategic gas ATEMs.

The Gross Operating Margin of the Smart Infrastructures Business Unit in 2022 was 519 million euro (538 million euro at December 31, 2021).

Net of non-recurring items (+18 million euro in 2022; +7 million euro in the previous year), the Business Unit's ordinary Gross Operating Margin was 501 million euro, down 30 million euro (-6%) compared to 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 Acinque Group.

The change in margins is distributed as follows:

- electricity distribution networks (-14 million euro): decrease linked to lower revenues admitted for regulatory purposes following the resolutions of the sector Authority (ARERA) regarding the remuneration of capital, the equalization of electricity losses, higher operating costs (penalties for continuity of service, software maintenance and disposals) and higher personnel costs for the year compared to the previous year;
- gas distribution networks (-33 million euro): decrease linked to lower revenues admitted for regulatory purposes following the resolutions of the sector Authority (ARERA) regarding the remuneration of capital and higher operating costs for the year compared to previous year (mainly charges for updating the gas fee relating to ATEM Milano 1 and energy costs);
- district heating: +25 million euro, mainly due to higher unit margins on electricity sales and the contribution of the newly acquired company A2A Airport Energy. The drop in the marginality of district heating sales, due in part to the lower volumes of heat sold (-9.5% year-on-year), was neutralized by the benefits of the tax credits for non-energy-intensive and non-gas-intensive companies under the Aid Decrees;
- water cycle: -18 million euro for higher operating costs, in particular electricity;
- public lighting: +9 million euro attributable to the adjustment of rents following the increase in energy costs.

Depreciation, amortization, provisions and write-downs equalled 266 million euro (274 million euro at December 31, 2021). The change is attributable to lower write-downs compared to the previous year.

As a result of the above changes, Net Operating Income amounted to 253 million euro (264 million euro at December 31, 2021).

Capex in the period in question amounted to 560 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 (203 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 (131 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 (104 million euro);
- district heating and heat management segment: development and maintenance of plants and networks for a total of 86 million euro.
- in the public lighting sector for new projects (17 million euro);
- in the Smart City segment, mainly laying fibre optics, radio frequencies and data centres (14 million euro);
- in the e-mobility sector for the installation of new electric energy recharging stations (5 million euro).

5.1 Summary of results sector by sector
5.2 Results sector by sector
5.3 Generation and Trading Business Unit
5.4 Market Business Unit
5.5 Waste Business Unit
5.6 Smart Infrastructures Business Unit
5.7 Corporate

5.7

Corporate

Economic figures

millions of euro	01 01 2022 12 31 2022	01 01 2021 12 31 2021	Change	% 2022/2021
Revenues	320	301	19	6.3%
Operating expenses	221	193	28	14.5%
Labour costs	151	141	10	7.1%
Gross Operating Margin - EBITDA	**(52)**	**(33)**	**(19)**	**57.6%**
% of Revenues	(16.3%)	(11.0%)		
Depreciation, amortization and write-downs of assets	*(56)*	*(49)*	*(7)*	*14.3%*
Provisions for risks and receivables	*(3)*	*(2)*	*(1)*	*50.0%*
Depreciation, amortization, provisions and write-downs	(59)	(51)	(8)	15.7%
Net Operating Result	**(111)**	**(84)**	**(27)**	**32.1%**
% of Revenues	(34.7%)	(27.9%)		
Capex	73	77	(4)	(5.2%)
FTE	1,637	1,541	96	6.2%

Operating costs increased mainly due to higher expenses for digitalization and innovation of the Group and higher external communication costs.

Personnel costs increased due to the higher FTE, which amounted to 1,637 employees in 2022, recording a positive change of 96 employees compared to the previous year, linked to additions for the strengthening of certain business areas, consistent with the Group's development needs and objectives.

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 -52 million euro (-33 million in 2021).

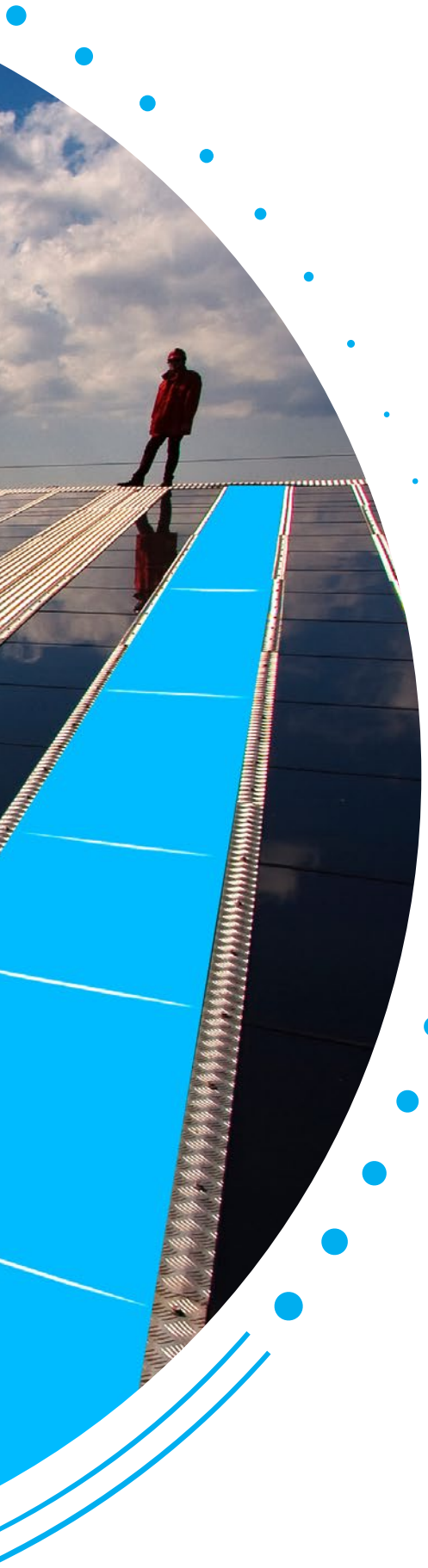
Net of non-recurring items (-9 million euro in 2022; -8 million euro in the previous year), the Corporate ordinary Gross Operating Margin was -43 million euro, down -18 million euro compared to 2021.

The negative change in margins is attributable to higher costs not charged back compared to the previous year.

Depreciation, amortization, provisions and write-downs equalled 59 million euro (51 million euro at December 31, 2021).

After depreciation, amortization, provisions and write-downs there was a Net operating loss of 111 million euro (a net operating loss of 84 million euro at December 31, 2021).

Capex in 2022 amounted to a total of 73 million euro, of which 47 million euro relating to interventions on IT systems, 14 million euro relating to investments in buildings and 6 million euro for interventions on telecommunications systems.



6

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

In 2022, 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. In order to cope with this situation of exceptional instability and in order to contain the impact of prices on end customers, protecting in particular those in an uncomfortable condition, the Government has intervened on several occasions with a series of emergency initiatives and with a gross allocation of expenditure for the year 2022 for measures directly aimed at reducing the impact of the increase in electricity and gas prices on end customers, amounting in total to approximately 38.7 billion euro.

Law no. 234 of December 30, 2021 (Budget Law 2022)

In order to contain 'high energy prices', the Law provided for the first quarter of 2022 to:

- 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.

Article 1, paragraph 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 implementing rules, stipulating that sellers are required to notify customers by means of a reminder or default letter.

Law Decree no. 4 of January 27, 2022, converted into Law no. 25 of March 28, 2022 (LD Sostegni ter)

In support of businesses, the following were provided:

- extend 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;
- recognize 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 Q1 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 February 1, 2022 - 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'). ARERA 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. The operators concerned should have sent the necessary information to the GSE by August 10, a deadline that was extended to September 20 for vertically integrated entities due to Article 11 of LD Aiuti bis, which clarified that, for the purposes of applying the rule, in the case of corporate groups, contracts with end customers or companies outside the group are relevant, and not intra-group contracts. The economic adjustment took place from October for the months of February-August and was scheduled to continue by the end of the second month following the month to which the production refers for the remaining months of the reference period; however, as a result of the Lombardy Regional Administrative Court's Sentence No. 02675 of December 1 annulling ARERA Resolution 266/2022/R/eel, the GSE suspended billing. The impact of the measure for the A2A Group, net of the effects of the aforementioned ruling, the reasons for which are not yet known, is approximately 6.3 million euro.

Law Decree no. 14 of February 25, 2022, converted into Law no. 28 of April 5, 2022 (LD Ukraine)

In relation to the thermoelectric sector, the decree 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. Pursuant to the subsequent Deed of Address of the Minister of Ecological Transition of September 1, 2022, Terna published the list of plants affected by the measure (including the San Filippo del Mela fuel oil plant and the Monfalcone coal plant of A2A Energiefuture S.p.A.) and ARERA established, with Resolution 430/2022/R/eel, the criteria for the formulation of offers on the electricity market and the remuneration of the plants concerned. The measure is currently effective from September 19, 2022 to March 31, 2023.

In addition, the decree, in order to provide greater support to domestic customers affected by the increase in energy costs, 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 were also confirmed for Q2 2022:

- the cancellation, for the electricity sector, 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 Q1 2022;

Article 18 bis amended the law establishing the ARERA, introducing the principle that the tariff ARERA is established and updated 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 introduced:

- in Article 16-bis a mechanism, on voluntary participation, whereby the GSE sells, at a price of 210 €/MWh, the renewable electricity withdrawn through the signing of contracts to two-way differences with a duration of at least three years. The MiTE Ministerial Decree of September 16, 2022 (Electricity Release Decree) governed the modalities for the release of energy (about 16 TWh the quota for 2023), providing for its allocation to end customers falling into certain categories (industrial end customers, SMEs, end customers located in Sicily and Sardinia and participating in the island instantaneous interruptibility and curtailment service, energy-intensive end customers located in Sicily and Sardinia, and end customers in aggregate form). The allocation procedure took place on the GME PPA notice board and the award was made on the basis of the quantity offered (which had as a maximum limit 3% of the quota and, in any case, 30% of the average consumption of the last 3 years and as a minimum limit 1 GWh/year) with the pro-quota provision in the event of an excess offer according to priority criteria. The aggregate made up of A2A Calore e Servizi S.r.l., Unareti S.p.A., Retragas S.r.l. and LD Reti S.r.l. was awarded about 32 GWh/year, against a demand of about 40 GWh/year. With reference to the Acinque Group, Lereti S.p.A. was awarded approximately 4.5 GWh/year (requested 10.8 GWh/year) while Acinque Tecnologie S.p.A. was awarded 1.6 GWh/year (requested 3.8 GWh/year);
- in relation to permitting, 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%, 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.

Article 12bis expands the list of agricultural and agro-industrial by-product matrices that can be used in biomethane production plants in addition to those listed in Annex IX of the Ministerial Decree of February 2016 (e.g. by-products of first 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)

To support businesses, the following was introduced:

- an extraordinary contribution to:
  - companies with meters with an 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 Q2 2022, if the price has increased by more than 30% of the average price per kWh for the same quarter of 2019;
  - 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 Q2 2022, for uses other than thermoelectric ones, if the reference price, calculated as the average, referring to Q1 2022, of the reference prices of the Intraday Market (MI-GAS), has increased by more than 30% of the corresponding average price referring to the same quarter of 2019;
- 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 billion euro.

Article 37 introduced for a second measure to levy the so-called "extra-profits" by providing 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 2020-2021. 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 contribution is not deductible for income tax and regional business tax purposes. The companies subject to the subsidy filed for reimbursement with the Revenue Agency. The Budget Law 2023, in paragraphs 120 and 121, subsequently provided to limit the application of the measure to companies whose turnover in 2021 is derived at least 75% from the activities listed above and to exclude from the determination of the totals of asset and liability transactions the sale and purchase of shares bonds or other securities not representing goods and company shares between the persons subject to the measure, as well as asset transactions that are not subject to VAT due to the lack of the territorial prerequisite if and to the extent that the purchases relating to them are not territorially relevant for VAT purposes. If, as a result of the innovations envisaged, the amount already paid is higher than the amount due, the higher amount may be used as of March 31, 2023 to offset unitary payments of taxes, contributions due to INPS and other sums due to the State, regions and social security institutions. For the Group, the overall impact of the measure amounts to 41 million euro.

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. The Mite Ministerial Decree of September 21, 2022 outlined the requirements and conditions for access to the exemption from variable components of general system charges, defining green hydrogen as hydrogen with less than 3 tCO2eq/tH2 emissions. ARERA Resolution 557/2022/R/eel established the operating procedures. However, the application of the measure is suspended until positive verification of compatibility with EU State Aid rules.

LD no. 50 of May 17, 2022, converted into Law no. 91 of July 15 (LD Aiuti)

The following were also confirmed for Q3: (i) the supplementary bonus (CCI) for the supply of gas and electricity to support customers who are economically disadvantaged (ISEE threshold higher than the pre-crisis situation) and in physical distress, and (ii) the cancellation, for the electricity sector, of general system charges for domestic and non-domestic users, and likewise the rates relating to general system charges for the gas sector were reduced as well as the extension of the reduced VAT rate to 5% for consumption of natural gas for civil and industrial uses.

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 market context, the LD provided that SACE guarantees also apply to market operators. In addition, it is established that the GSE will provide a filling service of last resort through the purchase, up to a countervalue of 4 billion euro, of gas with subsequent sale by December 31, 2022, a deadline extended to March 31, 2023 by LD Aiuti quater. This filling service of last resort is regulated by MD MiTE of July 20, 2022.

With reference to permitting renewable energy plants, the LD established as de facto suitable areas (pending identification by the Regions) for the installation of all renewable energy plants the areas that are 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.

Law Decree no. 115 of August 9, 2022, converted into Law no. 142 of September 21, 2022 (LD Aiuti bis)

The following were also confirmed for Q4:

- (i) the supplementary bonus (CCI) for the supply of natural gas and electricity to support customers who are economically disadvantaged (ISEE threshold higher than the pre-crisis situation) and in physical distress, and (ii) the cancellation, for the electricity sector, of general system charges for domestic and non-domestic users, and likewise the rates relating to general system charges for the gas sector were reduced as well as the extension of the reduced VAT rate to 5% for consumption of natural gas for civil and industrial uses;
- the relief in the form of a tax credit calculated, if certain price increase conditions are met, on energy expenditure for both energy-intensive and gas-intensive companies (25%) and for those other than these and, with reference to electricity, equipped with meters with an available power of 16.5 kW or more (15%).

Instead, Art. 3 provided for the suspension until April 30, 2023 (deadline extended to June 30, 2023 by the so-called LD Milleproroghe) the effectiveness of any contractual clause that allows the electricity and natural gas supplier to unilaterally modify the general terms and conditions of the contract relating to the definition of the price, even if the counterparty's right of withdrawal is contractually recognized. Consequently, the ineffectiveness of notices given for the aforementioned purposes before August 10, 2022 (date of entry into force of the Law Decree) has also been provided for, unless the contractual amendments have already been finalized. Subsequently, Article 11, paragraph 8, of the Milleproroghe Decree clarified that the updating of contractual economic conditions upon expiry is excluded from the scope of the provision.

The LD also defined, for the natural gas sector, the new perimeter of vulnerable customers, which includes, in addition to persons in economically disadvantaged conditions, with disabilities, holders of utilities on non-interconnected minor islands or in emergency housing facilities following calamitous events, also persons over 75 years of age. For these subjects, the Authority will have to define special economic and contractual supply conditions.

With Art. 11, in connection with Art. 15 bis of Decree-Law Sostegni ter, in addition to specifying the application of the mechanism in relation to contracts concluded by companies of vertically integrated groups, it provided for its extension to June 30, 2023, stating that with reference to the year 2023, forward contracts concluded by August 5, 2022 are relevant.

Law Decree no. 144 of September 23, 2022, converted into Law no. 175 of November 17, 2022 (LD Aiuti ter)

The relief in the form of a tax credit calculated, if certain price increase conditions are met, on energy expenditure for both energy-intensive and gas-intensive companies (increased to 40%) and for those other than these and, with reference to electricity, equipped with meters with an available power of 4.5 kW or more (30% EE and 40% Gas) is confirmed for the months of October and November.

Provisions have also been introduced to support the liquidity needs of businesses to meet the payment of energy consumption bills issued in October, November and December 2022, consisting, in particular, in the provision, free of charge, of guarantees by SACE of loans granted, at certain cost and amount conditions, by entities authorized to provide credit to businesses.

LD November 18, 2022, no. 176 (LD Aiuti quater)

With reference to customer protection interventions:

- the relief in the form of a tax credit calculated, if certain price increase conditions are met, on energy expenditure for both energy-intensive and gas-intensive companies (40%) and for those other than these and, with reference to electricity, equipped with meters with an available power of 4.5 kW or more (30% EE and 40% Gas) was confirmed for December 2022;
- the possibility has been introduced for end customers to request the payment in instalments of the amounts relating to the raw material component (both electricity and natural gas) for consumption from October 1, 2022 to March 31, 2023 and invoiced by September 30, 2023, limited to the portion exceeding the average reference value calculated with reference to 2021. The supplier is obliged to accept any application from its end customer and to submit an instalment proposal if the applicant has obtained an insurance guarantee for the claims arising from the instalment. In order to further strengthen support to companies, SACE is authorized to provide guarantees for 90% of the indemnities generated by any default by the guarantee applicant, and the State guarantee is placed on any obligations arising therefrom. Electricity and natural gas sellers may also apply for bank loans backed by a public guarantee to meet liquidity needs related to the instalments granted. However, the latter is granted if certain conditions are met, including in particular the non-distribution of dividends.

The deadline for the end of the protection service for domestic gas customers is extended from January

1, 2023 to January 10, 2024, in line with what has already been foreseen for the end of the greater protection service for domestic electricity customers.

Measures to increase natural gas production were also introduced, including the so-called "gas release" with the provision for the GSE to enter into contracts for long-term differences (10 years) with the holders of hydrocarbon production concessions at a price that guarantees coverage of the actual total costs, including tax and transport charges, as well as fair remuneration and, in any case, within a cap of 100 €/MWh and a floor of 50 €/MWh.

Law No. 197 of December 29, 2022 (Budget Law 2023)

The following were confirmed for Q1 2023:

- the relief in the form of a tax credit calculated, if certain price increase conditions are met, on energy expenditure for both energy-intensive and gas-intensive companies (increased from 40% to 45%) and for those other than the latter and, with reference to electricity, equipped with meters with an available power of 4.5 kW or more (increased from 30% to 35% EE and from 40% to 45% Gas);
- the cancellation, for the electricity sector, of general system charges for all domestic and non-domestic, low-voltage users with available power up to 16.5 kW, while medium- and high-voltage users and low-voltage users with available power above 16.5 kW remain excluded. In addition, general charges relating to nuclear decommissioning were transferred to general taxation;
- the zeroing of the general system charges rates for the gas sector and the provision for the negative valuation of the UG2 component. In addition, the reduced VAT rate of 5% is also confirmed for invoices accounting for consumption of natural gas for civil and industrial use; compared to the past, this rate is also applicable to the supply of district heating services;
- the enhancement of the bonus for the supply of natural gas and electricity to support economically disadvantaged and physically challenged customers, the scope of which was extended to households with an ISEE of 15,000 euro (previous threshold 12,000 euro).

Article 1, paragraphs 30-38, implementing EU Regulation 2022/1854, provided for, as of December 1, 2022 and until June 30, 2023, the application of a cap on market revenues obtained from the production of electricity from renewable energy sources not falling within the scope of Article 15-bis of LD Sostegni ter and from additional plants fuelled by non-renewable sources (including waste-to-energy plants). This is a one-way compensation mechanism where the cap is 180 €/MWh (for sources with higher costs than will be established by ARERA) while the comparison value is equal to:

- the monthly mean of the hourly zonal market price weighted for the individual plant profile in the case of non-programmable plants;
- the monthly arithmetic mean of the hourly zonal market price in the case of programmable plants;
- at the price indicated in contracts concluded by January 1, 2023 if higher than the reference price or indexed to the spot price.

Excluded from the application of the cap are, inter alia, plants with a capacity of up to 20 kW, plants affected by the measures to maximize fuels other than gas, energy subject to supply contracts concluded before December 1, 2022 provided that they are not linked to the price trend of the energy spot markets and that, in any case, they are not stipulated at an average price higher than the cap, energy subject to withdrawal by the GSE pursuant to art. 16 bis of LD Energia, energy subject to two-way incentive mechanisms, all-inclusive tariff and subject to sharing in energy communities and self-consumption of renewable energy. The application of the rule in relation to contracts concluded by companies belonging to vertically integrated groups is confirmed. ARERA will establish the implementation modalities of the mechanism in continuity with the provisions of Resolution 266/2022/R/eel. The impact of the measure on December 2022 was approximately 2 million euro.

Finally, Article 1, paragraphs 115-119, in implementation of EU Regulation 2022/1854, introduced a new solidarity contribution in the form of a rate equal to 50% on the amount of the portion of total income determined for corporate income tax purposes for the tax year 2022 that exceeds by at least 10% the average total income determined for income tax purposes earned in the period 2018-2021 (in an amount, however, not exceeding 25% of the value of the net assets as of the closing date of the financial year 2021). The contribution is payable by subjects exercising in Italy, for the subsequent sale of goods, the activity of producing electricity, subjects exercising the activity of producing methane gas or extracting natural gas, subjects reselling electricity, methane gas and natural gas, and subjects exercising the activity of producing, distributing and trading in petroleum products. The contribution is also payable by subjects who permanently import electricity, natural gas or methane gas or petroleum products for subsequent resale, or who bring such goods into Italy from other EU States. The contribution, which is due if at least 75% of the revenues of the 2022 tax year are attributable to the activities listed above, is paid by June 30, 2023 and is not deductible. The estimated impact for the A2A Group is approximately 117 million euro.

6.1 Generation and Trading Business Unit
6.2 Market Business Unit
6.3 Waste Business Unit
6.4 Smart Infrastructures Business Unit

6.1

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 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 EU General Court dismissed the appeal in a ruling filed on September 7, 2022; the hearing on the merits by the TAR, which was postponed pending the decision of the EU General Court, is expected to take place during 2023.

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 1, 2022 (for delivery 2022) and July 1, 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; For the delivery year 2022, the contractual start of the commitments for the new capacity of the repowering was postponed to July 1, 2022 following a reasoned request to Terna S.p.A.;
- 2023 delivery: repowering of the combined-cycle plants of Piacenza and Sermide and for the Cassano engines. For the delivery year 2023, the contractual start of the new capacity commitments was extended to July 1, 2023 following a reasoned request to Terna S.p.A. in connection with the Cassano motors only.

The MD MiTE October 28, 2021 approved the capacity market mechanism with reference to the years 2024 and 2025. Compared to the current regulations, the most significant changes concerned the possibility of bidding in relation to non-relevant new units, the introduction of more details for the participation of storages, 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, ARERA Resolution 399/2021/R/eel provided:

- 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. However, starting from March 5, due to the extreme volatility of gas prices, 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, the auction for the 2024 delivery took place, where A2A S.p.A. was awarded about 5.4 GW of total capacity, of which 1.3 GW of new construction (combined cycles, photovoltaic plants, electrochemical storage), for a total award of about 199 million euro:

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

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

With reference to subsequent years, further use of the production capacity remuneration system will be determined on the basis of adequacy assessments for the three consecutive years.

Remuneration of plants essential for the safety of the electricity system

The San Filippo del Mela plant owned by A2A Energiefuture S.p.A. was included in the list of Terna S.p.A.'s essential plants also for 2022, and ARERA Resolution no. 269/2020/R/eel admitted it to the cost reintegration scheme (groups 2, 5, and 6).

ARERA Resolution 563/2021/R/eel accepted the company's request 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).

ARERA Resolution no. 667/2022/R/eel ordered the payment of 16 million euro as the first 2022 advance payment of the consideration, while with ARERA Resolution no. 661/2022/R/eel, the company paid Terna S.p.A. the amount of 4.2 million euro as the second 2021 advance payment.

Also for 2023, the San Filippo del Mela plant was confirmed in the list of essential plants, and ARERA Resolution 741/2022/R/eel admitted it (in the same plant configuration as in previous years) to cost recovery. Finally, as of September 19, 2022 and until March 31, 2023, the plant is subject to the non-gas production maximization regime pursuant to Article 5bis of LD Ukraine in conjunction with the Guideline Act of the Minister of Ecological Transition of September 1, 2022.

Forward procurement of resources for voltage regulation in the Brindisi area

The supply of reactive energy is necessary in the Brindisi area not only to maintain the stability of voltage, compromised by the presence of intermittent renewable sources, but also to reduce dispatching costs. 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.

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 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 total for 2022 amount is approximately 17.6 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, together with ARERA, has intervened through repeated measures to ensure the achievement of the target of filling of 90% of storage, in line with the provisions of the LD Energia. In the absence of stimulus measures, gas injection into storage would have been unattractive 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 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, 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. The same Resolution 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 zero (if the difference is negative) in sale;
- 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;
- in view of the trend in storage injection and the consequent risk of not reaching the 90% filling target, the MiTE Ministerial Decrees of June 22 and July 20, 2022 entrusted the balancing manager and the GSE, respectively, with the task of speeding up the filling of national storage through the so-called "filling service of last resort storage";
- 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 recognizes of a storage premium, which varies according to the summer/winter spread for implicit allocations from June 24, 2022 until the end of the thermal year;
- Resolution 614/2022/R/gas defined the methods by which the GSE and Snam Rete Gas S.p.A. allocate spot products on the market in relation to the gas injected into storage as part of the service of last resort, following the MASE directive of November 16, 2022, which established that the quantities of gas procured through storage of last resort should be made available for the most part (≥60% of total volumes) through the sale of forward products and for the remainder through spot products. The latter are sold by Snam Rete Gas S.p.A, also on behalf of the GSE, in the AGS segment of the day-ahead and intraday markets at a sale price set equal to the higher of: i) the price of gas with delivery to the PSV in the summer semester 2023, decreased by 10

€/MWh; ii) the price of gas with delivery to the PSV expressed, at the time of the offer, by the markets in continuous trading relative to the day of delivery, decreased by 7 €/MWh; iii) the price of gas with delivery to the TTF expressed, at the time of the offer, by the markets in continuous trading relative to the day of delivery. The forward products were allocated through procedures already concluded by the GSE - which, on November 30, offered for sale 1.3 billion of the 1.6 billion cubic metres procured, allocating approximately 450 million cubic metres - and by Snam Rete Gas S.p.A., which, on December 22, offered for sale 816 million of the 1.3 billion cubic metres procured, allocating the entire quantity. In both procedures, the quantities were offered at a premium to the PSV day-ahead reference price.

In light of the legal and regulatory framework outlined, A2A S.p.A.:

- allocated storage capacity - seasonal product and implicit allocation with recognition of the premium in relation to the gas in stock at the end of the injection period in the amount of 21 million euro - in line with the quantities procured in previous years and with the objective of guaranteeing the modulation service to A2A Energia S.p.A.'s civil and non-civil customers;
- was awarded 6 lots of about 20 million Smc in relation to each procedure for the forward allocation of gas in storage within the last resort service of both GSE and Snam Rete Gas S.p.A. (in the latter case, the option to supply gas for 1 lot in the TA 2023-2024 was exercised).

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 launched the eighth, ninth and tenth auction procedures (closed in October 2022);
- for plants close to economic competitiveness (firstly, photovoltaic and wind power), a new incentive MD is expected, 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 bonuses 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, a special MD MASE is expected (initially foreseen for mid-2022) that 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.

At December 31, 2022, the incentives paid by the GSE to the A2A Group's plants powered by renewable sources amounted to 52.3 millions of euro.

GSE incentive type millions of euro	
Feed in tariff	12.3
TO and RID	9.7
Energy account (FV)	30.3
Total	**52.3**

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 regulate with their own laws the methods, procedures and criteria for the allocation of concessions, which may be entrusted to economic operators identified through a tender, or to public/private joint ventures with selection of the private partner through a tender, or through forms of partnership under Legislative Decree 50/2016. Pursuant to article 7 of Law no. 118 of August 5, 2022 (so-called Annual Law for the Market and Competition 2021), 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 December 31, 2023.

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 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. 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 regime, most recently in accordance with Regional Council Resolution of December 28, 2022, no. XI/7717, of the Lombardy Region. The Linea Green S.p.A. concession of Resio also expired on December 31, 2010, for which the temporary continuation was sanctioned by effect of the Regional Council Resolution mentioned above.

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 Acinque S.p.A. (formerly ACSM-AGAM S.p.A.) with expiry 2029.

Acquisition of sole control of 3New & Partners S.r.l. and 4New S.r.l.

On March 16, 2022, A2A S.p.A. notified the AGCM, pursuant to Article 16(1) of Law No. 287/90, of a merger transaction involving the acquisition of sole control of the companies 3New & Partners S.r.l. (and, indirectly, its subsidiaries, some jointly and some exclusively) and 4New S.r.l. (and, indirectly, its subsidiaries), both of which operate in the renewable energy sector as producers and developers of wind and photovoltaic power plants with a total capacity of 353 MW, located mainly in Italy and partly in Spain.

By Provision no. 30103 of April 5, 2022, the AGCM decided not to initiate the preliminary investigation pursuant to Article 16, paragraph 4, of Law no. 287/90, since the notified transaction does not entail the creation or strengthening of a dominant position in the markets concerned (of the production and wholesale supply of electricity and the production and marketing of certificates of origin) such as to eliminate or substantially and permanently reduce competition.

The operation was finalized on June 7, 2022.

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.

6.2
Market Business Unit

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

The Law August 4, 2017, no. 124 (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 59-85, 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 micro electricity businesses[3], according to the methods and criteria defined by the MiTE aimed at guaranteeing an aware transition in the free market.

As regards protection services for domestic customers, following a number of legislative interventions[4], the deadline was postponed to January 10, 2024, without prejudice to the introduction of the obligation for sellers to offer so-called vulnerable and energy-poor customers a price reflecting the cost of energy and gas on the wholesale markets and defined by ARERA with subsequent provisions.

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 consumption.

Similarly to what has been established for small businesses, ARERA Resolution 208/2022/R/eel defined the rules for the assignment of the TSG of electricity micro-companies with power up to 15 kW without a supplier on the free market (about 2 million POD for about 5 TWh/year of consumption), requiring that the service be provided for 4 years. The deadline for the activation of the service set for January 1, 2023 was subsequently postponed to April 1, 2023[6] by Resolution 586/2022/R/eel because, following a hacker attack on the IT systems of Acquirente Unico S.p.A. in September, the organization of the competition procedures was significantly delayed. During the awards, in which only the operators[7] who had served at least 100,000 POD/PdR on December 31, 2021 were allowed to participate, 12 customer lots were allocated on the basis of the lowest price offered, expressed in €/POD/year, to cover the marketing and imbalance costs not already recognized by ARERA. A2A Energia S.p.A. was awarded the maximum ceiling of the areas that could be awarded (4 lots), equal to 35% of the total volumes, i.e. about 500,000 POD for about 1.2 TWh/year of consumption:

Lot no.	Provinces/Regions	Award price c€/POD
Lot 3	Abruzzo, Marche, Umbria, Forlì-Cesena, Ferrara, Ravenna, Rimini	1,500.00
Lot 8	Molise, Frosinone, Grosseto, Livorno, Lucca, Massa-Carrara, Pisa, Pistoia, Municipality of Rome	2,500.00
Lot 10	Sardinia, Caserta, Naples excluded municipality	10,500.00
Lot 12	Sicilia	5,300.00

At the end of the TSG supply period, customers who have not yet chosen an offer on the free market will continue to be supplied by A2A Energia S.p.A. with the application of the most convenient offer, as established by MD MiTE August 31, 2022, no. 325. 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 November 2, 2022, the MiTE Ministerial Decree August 25, 2022, no. 164 was published, establishing the Vendors List in the electricity sector 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 According to the EU definition, micro-electrical enterprises have fewer than 10 employees and an annual turnover not exceeding 2 million euro.

4 Decree Law no. 152 of November 6, 2021 (LD Recovery) postponed the end of the greater protection of electricity to January 10, 2024, and subsequently also for domestic gas customers, LD Aiuti Quater provided for the same deadline.

5 The perimeter of this first lot 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 Until April 1, 2023, companies will continue to be supplied by the same operators as for the greater protection.

7 Only one operator per corporate group.

Interventions on the economic conditions of gas and electricity protection

The Authority, in order to contain the increase in bills for customers still supplied in the protection services, intervened with:

- Resolution 374/2022/R/gas revising, as of October 1, 2022, the methodology for calculating the gas component (Cmem), for the determination of which the wholesale market forward quotations (TTF) are no longer used, but the monthly average of the PSV day-ahead price recorded by ICIS Heren. This resulted in a reduction on the bill as the average price in Q4 2022 with the new calculation methodology was approximately 25% lower;
- Resolution 463/2022/R/eel, which, when updating the tariffs for Q4 2022, postponed the recovery of the differential between the costs incurred by Acquirente Unico S.p.A. for the purchase of electricity and the revenues earned as a result of the application of the tariffs generated in Q3 2022 in order to contain the increases in bills.

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 (in particular 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 distributors, 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. and 2i Rete Gas S.p.A., which contested the introduction of specific obligations for distributors, which provide for the sending to sellers of all necessary information, also with documented evidence, aimed at ascertaining the presence of causes hindering the acceptance of the prescription. On January 2, 2023, the Lombardy Regional Administrative Court, upholding the appeals filed, partially annulled Resolutions 603/2021/R/com and 604/2021/R/com insofar as it held that ARERA did not have the power to amend the general rules on prescription and the related evidentiary mechanisms.

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.

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 Q2, 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 euro/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

euro/POD/year	2021		JANUARY 1, 2022 MARCH 31, 2022		APRIL 1, 2022 MARCH 31, 2023	
	C-North	C-South	C-North	C-South	C-North	C-South
RCV						
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*						
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						
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 euro/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 4.8 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 was in the 2nd half of 2022;

- in August 2022, A2A Energia S.p.A. filed an application for access to the incentive mechanism for greater dissemination of bills in dematerialized format, aimed at recognizing the costs incurred for the recognition of the discount on bills to customers who jointly activate an automatic debit method and the dematerialized sending of bills. The mechanism was revised by Resolution 477/2021/R/com and in the first recognition session (2022), the possibility was allowed for operators to file a retroactive application and request offsets with reference also to the intervening years from 2016 to 2021. CSEA recognized and paid A2A Energia S.p.A. an amount of 2.5 million euro.

Interventions in the electricity sector on load profiling/settlement

In the course of 2022, the Authority intervened several times on the settlement mechanism of electricity batches between the various dispatching users, including Acquirente Unico S.p.A. (which today in the retail market acts as a residual dispatching user for customers supplied in the higher protection service). In particular, the lines of intervention can be differentiated as follows:

- interventions aimed at overcoming the inadequacies of the previous settlement mechanism with respect to the increase in POD equipped with hourly meters for settlement purposes caused by the advancement of the 2G Smart Metering Systems (PMS2) Commissioning Plans prepared by distribution companies: this includes the provisions contained in Resolution 570/2021/R/eel, which provided, starting in 2022, for a greater frequency (from annual to four-monthly) of updating, as well as a refinement of the calculation method, of the parameters representing the percentage share of Residual Area Withdrawal (PRA) attributable to each POD not hourly metered (CRPP and CRPU) and used for the settlement process. These measures were fine-tuned by Resolution 698/2922/R/eel, which, as of September 2023, provided for a further increase in the frequency of calculation of the previously mentioned parameters (from quarterly to monthly) and a change in the provisions concerning the transition to hourly treatment of 2G meters, which will start from the second month after installation (or third, if this occurs after the 15th day of the month) and no longer after twelve months;
- interventions to deal with the financial items that arose during the first half of 2022 as part of the settlement process due to the combined effect of the regulatory framework applicable for that period in respect of load profiling (see previous point) and the significant increase in energy prices on the wholesale markets: Dispatching Users for end customers served in the free market had accumulated a significant debt, while the Acquirente Unico S.p.A. (in its capacity as dispatching user for end customers served in the greater protection area) and, through this entity, the greater protection operators had accumulated a corresponding credit. Therefore, ARERA Resolution 473/2022/R/eel established that an extraordinary load profiling settlement session would be held in December 2022 (which would otherwise have been settled in July 2023), accommodating the needs of dispatching users other than Acquirente Unico S.p.A. and providing that these parties could request Terna S.p.A. (in its capacity as the entity in charge of managing, also financially, the settlement mechanism) the deferment of the payments to be made by it from December 31, 2022 to January 24, 2023. A2A Energia S.p.A. adhered to this possibility by requesting a deferred payment of approximately 55 million euro.

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.

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 numerous litigation 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.) and Gelsia S.r.l. the proceedings (commenced respectively with Determinations DSAI/81/2017/eel and DSAI/86/2017/eel) were concluded with filing by ARERA respectively with Resolutions 650/2022/S/eel and 537/2022/S/eel, in light of the case law developments concerning the cancellation of the measures of similar proceedings due to the late conclusion thereof.

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 supplementary investigation was concluded in relation to A2A Energia S.p.A. with Resolution 503/2022/E/eel, and the company paid Terna S.p.A. the amount of about 3.3 million euro in November 2022. With reference to Suncity Energy S.r.l. (now A2A S.p.A.) and Gelsia S.r.l. the term of the proceedings was set by Resolution 249/2022/E/eel at June 30, 2023. By virtue of the review of the prescriptive proceedings, the companies have maintained or made the necessary provisions in the financial statements.

The sanctioning measure against A2A Energia S.p.A. was initially annulled by the Council of State and the company was paid the relevant amounts (in two instalments: 450 thousand euro in December 2021 and 1.06 million euro in May 2022). Subsequently, on the basis of the possibility of the re-exercise of the Authority's sanctioning power provided for by the Council of State, the proceeding was restarted by Resolution 8/2022/S/eel and the measure was re-issued by Resolution 6/2023/S/eel for an amount of 1.36 million euro (already subject to provision). The amount was settled by the company in February 2023.

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.

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.

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 Q1 2022, 1.305 €/MWh for Q2 2022, 1.886 €/MWh for Q3 2022 and 0.496 €/MWh for Q4 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 provided 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 Safeguard Service for the years 2021-2022 and for the years 2023-2024

The Law no. 125/07 of August 3, 2007 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 lot 2 (Lombardy) and lot 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 lot 2 and equal to 13.57 €/MWh for lot 4.

In November, A2A Energia S.p.A. also took part in the competitive procedure for the assignment of the protection service for the two-year period 2023-2024, once again winning lot 2 (Lombardy) and lot 4 (Marche, Tuscany and Sardinia) and also acquiring lot 1 (Liguria, Piedmont, Valle d'Aosta, Trentino-Alto Adige) and lot 3 (Veneto, Emilia-Romagna, Friuli-Venezia-Giulia), for approximately 33,700 points and about 2.15 TWh. The award value, omega parameter (Ω), was higher than in previous procedures: 29.97 €/MWh for lot 1, 15.90 €/MWh for lot 2, 24.97 €/MWh for lot 3 and 21.95 €/MWh for lot 4.

Interventions to increase consumer awareness

The Authority, in order to support the exit path of customers from the protection regime towards the free market, has put in place a series of interventions in 2022 aimed at ensuring greater transparency of billing documents as well as 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;
- revised the rules of Bill 2.0, introducing with Resolution 209/2022/R/com the information on annual consumption, understood as the difference between two readings/self-readings, covering a period of 12 consecutive months, and the estimate of the annual expenditure incurred net of any items not related to the supply of energy (e.g. RAI licence 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". Resolution 637/2022/R/com introduced the obligation for sellers to make available to customers in dematerialized format the detailed elements of the bill, which will have to be modified by unbundling the display of the components of the general system charges (ASOS and ARIM). The Resolution also provided for the systematization of all communications from the Authority and the creation of a special space in the bill.

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 article 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 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 violation 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 reply - dated April 29, 2022 - 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.

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

Request for information and subsequent initiation of preliminary investigation proceedings (with the adoption of a precautionary measure at the same time) with a further request for information from the AGCM with respect to A2A Energia S.p.A. as to the manner in which the provisions of Article 3 of LD Aiuti bis were implemented (PS12470)

On October 18, 2022, AGCM received an initial request for information from A2A Energia S.p.A. aimed at ascertaining whether the company had implemented conduct that did not comply with the provisions of Article 3 of Legislative Decree Aiuti bis, converted into Law No. 142 of September 21, 2022, concerning the "Suspension of unilateral amendments to electricity and natural gas supply contracts", which could constitute unfair commercial practices in violation of the Consumer Code.

The request is part of 4 preliminary proceedings initiated against Iren Mercato S.p.A., Dolomiti Energia S.p.A., Iberdrola Clienti Italia S.r.l. and E.ON Energia S.p.A., which are alleged to have violated Article 3 of LD Aiuti bis, following numerous reports from consumers. In addition to A2A Energia S.p.A., the request for information was sent to 24 other supplier companies active on the free market.

On November 7, 2022, the company responded to the Authority's request by pointing out that it had always kept faith with the contractual commitments it had undertaken with its customers, not availing itself of the faculties provided for by the regulatory provisions for cases of supervening excessive onerousness/ impossibility, nor activating the clauses that would have allowed the unilateral variation of the agreed economic conditions. A2A Energia S.p.A. clarified that this commercial strategy was perpetrated despite the dramatic context that the market is experiencing and that the prohibition under Article 3 did not consequently have any impact on its commitment to continue to offer services, limiting its actions to only the physiological renewal of the economic conditions applied, at the expiry of their period of validity, in accordance with the contracts signed with end customers.

Following the findings of the reply to the request for information previously sent to the AGCM (PS12455) and the orders of the Lazio Regional Administrative Court on the precautionary appeals of Iren Mercato S.p.A. and Dolomiti Energia S.p.A. (which confirmed the AGCM precautionary measures addressed to them), the Authority, on December 13:

1. initiated an investigation procedure (PS12470), with the simultaneous adoption of precautionary measures, against A2A Energia S.p.A. for alleged variations in the price of electricity and natural gas supplies in breach of Article 3 of Legislative Decree Aiuti bis;
2. notified the company of a request for information to be provided, with documentation, within 20 days of receipt of the notice.

The company promptly notified the AGCM of a compliance report in which it undertook to take the most appropriate steps to comply with the measures referred to in the precautionary measure. It also filed a procedural memorandum.

On December 30, 2022, however, the Authority notified the company that it had fully revoked the precautionary measure, justifying its decision with reference to the principles expressed by the order of the Council of State on December 22, 2022 (which upheld the request for suspension submitted by Iren Mercato S.p.A.) as well as to what emerged from the procedural memorandum, the compliance report and the company's communication of response to the requests for information of October 18, 2022 (PS12455).

In particular, the Authority indicates that it must consider that the assumptions that justified the adoption of the precautionary measure do not exist, since, prima facie, the conduct alleged against the company appears to constitute variations in the economic conditions actually expiring of open-ended contracts. Therefore, the risk of the impact of the precautionary measures themselves is removed, while the proceedings, which are expected to be closed by the first half of 2023, remain open.

6.3
Waste Business Unit

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

ARERA Resolution 363/2021/R/rif 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 the undifferentiated waste and MSWOF 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 introduced as from 2023, and the simultaneous need to guarantee coverage of the additional costs attributable to them.

In the second half of 2022, the A2A Group's municipal sanitation companies finalized the raw 2022-2025 PEF for each individual concession in accordance with the new methodology with submission 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.

The table below shows the 2022-2025 approvals by ARERA.

			PEF tariff revenue (values in millions of euro)			
ARERA Resolution no.	Municipality	Operator	2022	2023	2024	2025
544/2022/R/rif	Milan	Amsa S.p.A.	303.3	306.1	306.1	306.1
731/2022/R/rif	Brescia	Aprica S.p.A.	35.3	35.9	36.7	37.2

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 4.6 of the MTR-2, preserving any efficiencies and thus applying the value envisaged by the previous contracts (if lower than the maximum value of the MTR-2) subject to compliance with the economic-financial balance of operations.

With reference 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 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 WACC 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 WACC 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 MSWOF treatment plants as "additional", taking into account that Lombardy is not in market conditions with structural rigidity either for the municipal waste chain or for MSWOF and is, on the contrary, characterized by plant self-sufficiency and competitive gate prices. The Region has 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.

The Piedmont Region has identified the Villafalletto landfill and, consequently, also the adjacent Villafalletto treatment plant of A2A Ambiente S.p.A. among the 'minimum' plants for closing the cycle, 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. 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 Executive Decree no. 694/2022, the Piedmont Region approved the 2022-2025 PEF as perMTR-2 for the Villafalletto plant, managed by A2A Ambiente S.p.A..

The Campania Region with Government Resolution no. 190/2022 identified the Acerra waste-to-energy plant and the Caivano mechanical biological treatment plant as 'minimum' cycle closure plants and 'intermediate' plants, from which flows indicated as entering 'minimum' cycle closure plants originate. By way of Executive Decree no. 235/2022, the Campania Region approved the 2022-2025 PEF 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 I Minimum quality level	SCHEME III Intermediate quality level
	Quality contractual = YES	SCHEME II Intermediate quality level	SCHEME IV Advanced quality level

As far as 2022 is concerned, the Municipality of Milan, as ETC, positioned the operator AMSA S.r.l. within the I Scheme. From a prudential perspective, positioning within the same Scheme has occurred for most of the municipalities managed by Group companies.

Resolution 15/2022/R/rif 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.

As things stand, the collection and municipal sanitation operating companies have shared with the municipalities a template of the new Service Charter,

which incorporates the new regulatory framework and shows the positioning of management in the quality matrix defined by the TQRIF, with the related obligations and performance standards, differentiated according to the starting quality level identified by the ETC. With regard to the involvement of Consumer Associations, the sharing of the new Service Charters took place in a differentiated manner on the basis of the specificities of the managed assignments, either by participating in dedicated meetings (as in the case of the Municipality of Milan) or by sending an information note containing the legal and regulatory prerequisites of the update.

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 (obligation valid for assignments that fall under Schemes II-III-IV), 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, 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 MSWOF

Until December 31, 2022, the biomethane incentive framework was 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 MSW) 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, a new incentive mechanism for biomethane production was introduced by MiTE Decree of September 15, 2022, which will cover the period 2022-2024. The new instrument is 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 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. Projects for the reconversion of existing agricultural biogas plants and the construction of new capacity from agricultural matrix or organic waste fall within the scope (for the latter, the tariff is significantly reduced compared to the 2018 MD). The first competitive procedure was scheduled for 2022: the GSE is awaiting the publication of the application procedures to launch the first call for tenders.

The MiTE Ministerial Decree of August 5, 2022 also introduced an extension that allows projects authorized by August 19, 2022, and which have been qualified as a project by the GSE by December 31, 2022, to benefit from the incentives under the 2018 Ministerial Decree by postponing the start-up deadline to December 31, 2023.

During 2022, A2A Ambiente S.p.A. obtained the pre-qualification from the GSE for 4 biomethane production plants from organic waste that will be incentivized with the CIC mechanism provided for by the MD 2018. Two plants (Lacchiarella and Cavaglià) came into operation in 2022, while the other two (Corteolona and Castelleone) benefit from the extension of the Ministerial Decree of August 5, 2022 and will come into operation during 2023 (benefiting from the incentives of the 2018 Ministerial Decree).

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

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 MASE), with the technical support of ISPRA, the definition of a *"National Waste Management Program"* (PNGR) that will have to define the criteria and strategic guidelines to be followed by the Regions and Autonomous Provinces in drawing up regional waste management plans.

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 MSWOF. 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: 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, amending 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.

Ministerial Decree no. 257 of June 24, 2022: adoption of the National Waste Management Program (PNGR)

The PNGR, which is part of the reforms envisaged in the PNRR and approved on June 24, 2022 by Ministerial Decree no. 257, defines the macro-objectives, criteria and strategic lines to be followed by the regions when approving the Regional Plans. Among the most important elements:

1. national plant recognition by type of plant and by region;
2. criteria for identifying macro-areas that allow rationalization of plants from a location point of view. The macro-areas are characterized by:

- proximity, understood as territorial contiguity;
- infrastructure and logistical organization to minimize impacts related to waste transport;
- benefits or economies of scale in the management of generated waste flows;
- waste production basin that justifies the construction of an integrated network of plants;
- integrated network of plants, distributed within the territory of the macro-area so that the location of plants does not fall on only a few specific areas, enabling all phases of the cycle to be managed until closure;
- quantifiable contribution to decarbonization in terms of CO2 reduction;
- endowment of treatment facilities to make a substantial contribution to the achievement of the EU targets for all relevant flows.

The general criteria to be taken into account for the identification of macro-areas are:

1. progressive socio-economic rebalancing between areas of the national territory;
2. efficiency, sustainability, including the protection of cultural and landscape heritage, effectiveness and economy of the waste management system;
3. implementation of a modern, integrated waste management system;
4. contribution to the prevention/resolution of EU litigation.

Each region will have to guarantee full autonomy for the management of non-differentiated municipal waste and for the fraction of waste from the treatment of municipal waste destined for disposal. As regards the circulation of organic waste, the option of defining macro-area agreements identified by the PNGR would, however, not affect the free circulation of this fraction pursuant to article 181(5) of Legislative Decree 152/06 (TUA). This approach is, moreover, endorsed by the AGCM itself, in its recent Report AS1875, concerning the identification of 'minimum' cycle closure plants in Emilia-Romagna and Friuli-Venezia Giulia.

The PNGR has a time horizon of six years (2022-2028) and is designed to guide public policies and stimulate private initiatives for the development of a sustainable and circular economy, benefiting society and the quality of the environment.

Resolution by the Reg. Council Lombardy July 11, 2022, no. XI/6659: regional guidelines for the implementation of Commission Implementing Decision (EU) 2019/2010 of November 12, 2019 laying down Best Available Techniques (BAT) conclusions for the incineration of waste

The Lombardy Region has approved guidelines on the application of Best Available Techniques ('BAT') for incineration plants in order to provide clarification for their application. They are addressed to the operators and authorities responsible for the renewal of authorizations.

The deed impacts the installations under regional and provincial jurisdiction referred to in point 5.2 of Annex VIII to Part II of Legislative Decree 152/2006, i.e. disposal or recovery of waste in waste incineration plants or waste co-incineration plants.

As provided for in article 29-octies of Legislative Decree 152/2006, when new EU 'BAT' relating to a particular sector are issued, within four years of publication the competent authority must review the Integrated Environmental Authorizations (IEA) and, if necessary, update them in line with the new features, in particular in relation to emission limit values. In this case, the date by which to proceed with the review is December 3, 2023.

Law No. 91 of July 15, 2022: conversion into law, with amendments, of Decree-Law No. 50 of May 17, 2022, containing urgent measures on national energy policies, business productivity and investment attraction, as well as on social policies and the Ukrainian crisis

This law converts LD 50/2022 (LD Aiuti), introducing urgent measures on national energy policies, business productivity and investment attraction, as well as on social policies and the Ukrainian crisis.

The following articles, relating to HSE-relevant topics, have been significantly amended during conversion: Art. 6 - Provisions on authorization procedures for plants producing energy from renewable sources; Art. 7 - Simplification of authorization procedures for plants producing electricity from renewable sources; Art. 7 bis - Extension of the temporal effectiveness of the building permit; Art. 10 - Provisions on EIA; Art. 12 - Provisions on integrated environmental authorization of plants producing energy from fossil fuels.

Lombardy Decree no. 11240 of July 28, 2022: Start of the overall review procedures of the Integrated Environmental Authorization (IEA) for the incineration plants under regional jurisdiction pursuant to article 17, paragraph 1, of Regional Law 26/2003

The Region of Lombardy started the BAT review proceedings of the waste-to-energy plants under regional jurisdiction. For the A2A Group, the following plants are included:

1. A2A Ambiente - waste-to-energy plant Brescia
2. A2A Ambiente - waste-to-energy plant Silla 2
3. Acinque Ambiente - waste-to-energy plant Como
4. Linea Ambiente - waste-to-energy plant Cremona
5. Lomellina Energia - waste-to-energy plant Parona

Going into the specifics of the determination, the text refers to Annexes, in particular:

- Annex with detailed procedure for conducting the review, including timetable with deadlines for submission of review documentation (30-day extension possible);
- Annex with outline for evaluation on the application of BAT;
- Annex with spreadsheet for submitting energy data for yield calculation.

LD no. 115/2022 (so-called LD Aiuti bis): urgent measures on energy, water emergency, social and industrial policies

LD Aiuti bis introduces further provisions on energy, water emergency, social and industrial policies. In the HSE sphere, the following is noted:

- article 32, which introduces areas of national strategic interest. These are areas appropriately created for the implementation of plans and programs in which investments of no less than 400 million euro are proposed by public or private entities in certain sectors. Once formalized, these areas are considered to be of public utility. At the moment, the sectors of strategic importance indicated by this article are microelectronics and semiconductors, batteries, supercomputing and high-performance computing, cyber security, Internet of Things (IoT), low-carbon manufacturing, connected, autonomous and low-emission vehicles, digital and smart healthcare and hydrogen;
- article 33, which implements a new authorization procedure called 'Procedimento autorizzatorio unico accelerato regionale per settori di rilevanza strategica (PAUAR)' (Regional Single Accelerated authorization Procedure for Sectors of Strategic Significance), adding the new Article 27-ter to Legislative Decree 152/2006. This procedure is, in fact, an EIA procedure of regional competence, but accelerated (the total duration is less than 160 days). However, it can only be used for the realization of projects within national strategic areas.

LD September 23, 2022, no. 144: further urgent measures on national energy policy, business productivity, social policies and for the implementation of the PNRR

The LD aims to introduce rules to regulate national energy policy, business productivity, social policies and the implementation of the PNRR. The following is noted:

- art. 16: inserts a reduction of deadlines in the case of the installation of photovoltaic systems or solar thermal systems on the roofs and façades of buildings serving activities subject to fire prevention controls. If, as a result of the installation of these systems, a fire protection project assessment is required, the deadlines laid down in Art. 3, paragraph 3, of Presidential Decree 151/2011 are reduced, until December 31, 2024, from 60 to 30 days after submission of the complete documentation;
- art. 22: states that the works, plants and infrastructures necessary for the plant requirements identified by the PNGR constitute public utility works that cannot be postponed and are urgent. In the authorization procedures for these works, plants, infrastructures, where the competent authority does not act on the application for authorization within the time limits provided for by the legislation in force, the President of the Council of Ministers, on the proposal of the MiTE, assigns that authority a time limit not exceeding 15 days to act. In the event of continued inactivity, on the proposal of the Minister for Ecological Transition, after consulting the competent authority, the Council of Ministers appoints a commissioner ad acta, who is vested with the power to adopt the necessary acts and measures.

D.D.g. Region of Sicily no. 1008 of September 27, 2022: approval of practices for the issuance of authorizations for waste disposal and recovery plants, pursuant to Articles 208 and 211 of Legislative Decree 152/2006, as amended and supplemented

In light of the simplification activities envisaged in the PNRR, the Region of Sicily provided technical-operational support for the procedures for issuing: single authorization for waste disposal and recovery plants provided for in Article 208 of Legislative Decree 152/2006; authorization for research and experimentation plants pursuant to Art. 211 of Legislative Decree 152/2006; substantial and non-substantial variants of already authorized plants; renewal; company variations.

For all types of proceedings, forms have been drawn up for submission and can be found in the D.D.g. 1007/2022 of September 27.

Finally, a clarification on the Environmental Impact Assessment for existing plants, which stipulates that for plants for which an EIA application has never been submitted, specifies that they must undergo it: on the occasion of the first useful renewal; when applying for changes to the authorization issued; on request.

DGR (Regional Council Resolution) Lazio no. 884 of October 18, 2022: Operational provisions for carrying out Environmental Impact Assessment procedures

In order to address the need to adapt the regional operational modalities to the latest changes in Legislative Decree 152/2006, the Lazio Region issued this D.G.R., containing provisions on the performance of the following administrative procedures:

- preliminary assessment of the procedure to be initiated;
- verification of subjectivity to the EIA;
- consultation of the environmental impact study (EIS);
- EIA and PAUR;
- verification of compliance with environmental conditions and monitoring;
- prior consultation with the competent authority for the definition of the level of detail of the project documents required at the EIA stage.

It is specified that the provisions on the procedures regulated by the Regional Government Decree under analysis reflect for the most part the provisions of Legislative Decree 152/2006.

Concerning the competent authority for EIA and EIA subjectability procedures, the regulation refers to Annex B of Regional Regulation no. 1 of 2022, which identifies the Regional Environment Directorate of the Lazio Region.

Regional Law (Lombardy) no. 28 of December 13, 2022: second legislative revision law 2022

With the second revision law of the year 2022, the Lombardy Region updated the provisions concerning the Regional EIA, contained in the L.R. 5/2010. Article 10 of the standard introduces three new features:

- on PAUR, modifies Article 5-bis on the preliminary phase. Specifically, it provides:

1. the formal start of the procedure with the publication of the submitted documentation on the portal of the Sistema Informativo Lombardo per la Valutazione di Impatto Ambientale (SILVIA);
2. the convening of the preliminary services conference provided for by Legislative Decree 152/2006;

- the new Art. 6-bis, concerning the preliminary assessment, identifies the competent authority for requests for technical modifications, extensions or adaptations and design variants, in the same authority that has expressed its opinion on the project already authorized in the environmental assessment;
- Annex B, number 7, letter z.b), excludes the application of the EIA to mobile plants for the recovery of non-hazardous waste used for a maximum of 30 days. In the case of successive campaigns of activity on the same site and with treated quantities of more than 1,000 m3/day, the EIA verification procedure will be applied.

D.G.R. no. 7553 of December 15, 2022: approval of the Regional Program for Energy, Environment and Climate (PREEC) and related documents for the Strategic Environmental Assessment (SEA)

The new PREEC proposes several objectives, such as the reduction of consumption and climate-changing gas emissions, the development of local renewable sources and the circular economy, and the financing of research and innovation.

Photovoltaic development

The Plan envisages a target of installing 10 GW of new photovoltaic systems by 2030, with preference given to the installation of systems on the roofs of residential, manufacturing and tertiary buildings. On-ground plants are also promoted, giving priority to degraded areas, such as quarries, reclaimed sites, depleted landfills, and agri-voltaic plants.

Realization of RES plants in Protected Areas

Annex 13 of PREEC sets out the measures relating to Protected Areas and consists of the following points:

- the solar belt provision in the applied regulatory context (page 1): construction and installation of photovoltaic systems at a maximum distance of 500 metres from the industrial centre;
- the list of Protected Areas (page 3);
- the three levels of feasibility of a RES plant in a Protected Area: feasible plant, feasible with criticality or technically difficult to realize (page 5);
- the classification of types of RES plants, including agri-voltaics, on the basis of technological, constructional and installation characteristics (page 6-14);
- the locational criteria for each type of RES plant mentioned above and their technical elements, aimed at verifying their level of feasibility in a given area (page 15-129);
- technical elements to be considered when designing RES plants (page 130-138).

District heating

PREEC confirms growth in this sector of up to 20%. The need for the Region's coordination and guiding activity in permitting is highlighted, so as to have a simplified framework and an increase in the realization of these plants.

Bioenergy development

The biomethane market presents itself as an excellent means to achieve the decarbonization of the region. The act promotes the conversion of biogas plants to biomethane and, in the case of plants of a size not suitable for refining, the construction of new plants. Conversion will be possible for plants with an output of more than 300 kW and the remaining plants will be able to continue with their current biogas production.

Circular Economy Measures

PREEC emphasises the importance of developing the circular economy, through material recovery, biogas and biomethane production. It also highlights the potential of CSS and RDF as substitutes for coal and methane, having positive implications not only in the energy and waste sector, but also in the cement industry.

Hydrogen chain

The Region is committed to stimulating research and promoting several pilot projects on the use of hydrogen for its key role in the final phase of decarbonization. The Plan prioritizes the use of hydrogen in rail and road transport, identifying the need to provide suitable areas for refuelling, through the installation of 700 bar hydrogen dispensers for each type of vehicle in easily accessible areas and close to production points.

Council Regulation (EU) 2022/2577 of December 22, 2022 establishing the framework for accelerating the deployment of renewable energies

Given the current energy emergency, the Regulation introduces temporary provisions to speed up authorization procedures and the deployment of renewable energy projects. The rule will apply to all authorization procedures started between December 30, 2022 and June 30, 2024, leaving the possibility for the Member State to adopt the framework also for procedures already started and awaiting a final decision on December 30, 2022, provided that there is an effective acceleration of the timeframe.

The act has abbreviated terms, in particular:

- for the installation of solar energy equipment, the authorization procedure shall last for a maximum of 3 months, only if the purpose of the facility in which they are located is not the production of solar energy (Art. 4);
- for the revision of the capacity of existing RES plants, the procedure shall last no longer than 6 months, including the time required for the EIA (Art. 5);
- for connections to the transmission/distribution network, the procedure must be completed within 3 months, provided that the increase in plant capacity does not exceed 15% (Art. 5);
- for heat pumps with an electrical capacity of less than 50 MW, the procedure shall not exceed 1 month (Art. 7);
- for geothermal heat pumps, the procedure must be completed within 3 months (Art. 7).

In order to accelerate the deployment of renewable energy projects, the regulation presents two simplifications:

- for solar energy equipment with a capacity of up to 50 kW, which does not exceed the existing capacity of the grid connection, the authorization shall be deemed to have been granted if one month has elapsed since the application was submitted and no reply has been received from the competent authority. Member States may reduce this capacity to a maximum of 10.8 kW for the application of this provision (Art. 4);
- the application for authorization for connections to the transmission/distribution network for heat pumps with electrical capacity of up to 12 kW and for heat pumps installed by a self-consumer of renewable energy with electrical capacity of up to 50 kW is waived, provided that the total capacity of the system is at least 60% of the heat pump capacity. In this case, notification to the competent authority will be sufficient (Art. 7).

The regulation also provides for exemptions in the field of EIA. In Article 5, it is stipulated that any screening for availability to EIA for the revision of RES plants will be limited to the assessment of potential significant effects compared to the initial project. In addition, an exemption from the EIA procedure is introduced for this case, if the projects respect the environmental mitigation measures of the initial installation and do not involve the use of additional space. Finally, Article 6 provides the possibility for the Member State to exempt renewable energy projects located in a dedicated RES area, previously subject to SEA, from EIA and VINCA.

6.1 Generation and Trading Business Unit
6.2 Market Business Unit
6.3 Waste Business Unit
6.4 Smart Infrastructures Business Unit

6.4

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 electricity and gas infrastructure services in the period 2022-2027, confirming the main characteristics of the regulation 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 ßasset (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
	ßasset 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%	1.86%	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%		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%

With reference to the trigger mechanism for the annual update of the WACC, ARERA Resolution 654/2022/R/Com disclosed the results of the trigger check for 2023: since the change in the WACC, for each infrastructure service, was less than 50 bps with respect to the current value, the WACC values in force in 2022 are confirmed for 2023[10].

10 The analysis included updating the parameters $RF_{nominal}$, isr inflation, SPREAD, $iBoxx^{spot}$ on an annual (October 2021-September 2022) and ten-year $iBoxx^{10Y}$ (October 2012-September 2022) basis.

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

Resolution no. 271/2021/R/com initiated a procedure aimed at defining a new method for calculating costs recognized to energy networks 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 that considers both operating and capital costs together. The new approach (defined as Regulation by Expenditure and Service Objectives - ROSS) 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.

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 the 2021 final reference tariffs, subsequently subject to redetermination - for some tariff locations - with Resolution 679/2022/R/gas. 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)	Reti Più	Acinque Group (1)(2)	**Total**
Centralized cap.	45	1	10	12	9	**77**
RAB Distribution	773	11	160	129	143	**1,216**
RAB Metering	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 Acinque Group are affected by the sale, in Q1 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 reduction in the WACC compared to 2021 (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). We are currently awaiting the start of data collection for applications for the recognition of costs pertaining to the year 2021.

Unareti S.p.A.'s provisional 2022 tariffs do not take into account the switch to ATEM-based management of the Milan 1 area that took place 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 (at the end of 2023 and downstream of the 2022 RAB GAS data collection in which the operations necessary for the purposes of the transition to tariff management on a scope basis of the localities falling within ATEM Milano 1 were carried out) will be equal to the average, weighted for the days of each management, of the revenues calculated using the municipal criteria and those calculated using 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. Resolution 287/2021/R/gas and the subsequent Determination 3/2021 DIEU establish:

- 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, 2021 and 2022.

Again with reference to the depreciation quotas of traditional meters decommissioned because they have been replaced with electronic meters, Resolution 679/2022/R/gas has, among other things, redetermined the definitive 2020 and 2021 reference tariffs in order to exclude from the calculation of allowed revenues the depreciation quotas of traditional meters of a calibre greater than G6 replaced with electronic ones after the year 2018, the deadline for completing the roll-out of these metering instruments.

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 ß 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 of the cases before the Regional Administrative Court took place between April and June. However, the rulings are not yet available.

Resolution 737/2022/R/gas provided for the infra-period update 2023 - 2025 but did not significantly change the regulatory framework, limiting itself to operationally outlining some measures already provided for, such as the parametric recognition of the costs of remote management/ remote metering systems and concentrators, and updating some parameters, such as the standard cost of gas smart meters and the unit value of the down payment to cover the costs incurred for metrological checks. The main introduction, which has also been called for by operators, is the mechanism to mitigate the negative impacts of reductions in active PdR -

and thus of the parametric share of revenues allowed to cover the operating costs of locations for the distribution service, against which some fixed costs associated with non-active points remain - as a result of the increasing electrification of consumption. This mechanism, to be managed within the framework of equalization from 2023 revenues, is based on trigger logics to be activated when certain conditions occur[11].

Reform of the regulation of the natural gas metering service

Resolution 269/2022/R/gas reformed the regulation applicable to the gas metering service, intervening on the provisions regarding obligations and timing for the commissioning of gas smart meters, the frequency of metering data collection at PdR equipped with gas smart meters and the timing for making them available to the Integrated Information System (SII), and compensation to end customers and distribution users in the event of failure to meet the performance levels set by ARERA.

In particular, the regulation establishes a fixed time limit (90 days) beyond which the gas smart meter installed is considered in service and, therefore, able to be remotely metered and remotely managed and, therefore, covered by the obligations, made more stringent, of reading frequency, now monthly also for PdR equipped with G4/G6 gauges (with respect to gauges > G6 there is no daily detail and the data can be collected by the third day following the last gas day of the reference month), and sending the data thus collected to the SII (by the 7th day of the month).

The Resolution introduces a structured system of indemnifications in favor of both end customers, in the event of failure to collect metering data for a given number of months, differentiated on the basis of the customer's annual consumption, and distribution users for whom, in addition to the mechanisms previously in force, automatic indemnities have been introduced in the event of non-compliance, with reference to PdR equipped with meters of gauge > G6, with the performance targets regarding the provision of metering data and the quality of the latter (understood as % of actual metering data relating to individual readings with daily detail). When fully operational, verification of compliance with the obligations will be entrusted to the SII, and mechanisms are provided for mitigating the burden borne by distribution companies for the recognition of these incentives, aimed at taking into account - dynamically - the actual technical limitations of the remote reading and remote management systems used.

The provisions came into force partly in October 2022 (new compensation mechanisms) and partly in April 2023 (commissioning, frequency of metering data collection, making them available to the SII).

Mechanism for empowering distribution companies in delta in-out management

Resolution 386/2022/R/gas defined a simplified mechanism for making natural gas distribution companies responsible for managing the in-out delta (i.e. the difference between the gas entering the distribution network measured at the Re.Mi cabin or even city gate and the outgoing gas measured at the users' PdR/interconnection points with other networks), consisting solely of penalties, structured in such a way as to intercept the situations of most manifest and macroscopic inefficiency of the distribution company and also considering the localized losses and fraudulent withdrawals detected in each year.

The mechanism, operationally managed by Snam Rete Gas S.p.A. as Balancing Manager (BM) and financially by CSEA, is based on the comparison, for each city gate, between the minimum and maximum admissible reference values of the delta in-out calculated for homogeneous groups - by size and geographic location - of plants and the value of the actual delta in-out of the specific city gate and on the consequent valorization of the result through a unitary reference value of gas, so as to determine the penalty for the distributor owning this city gate.

The penalty is assessed only if the value of the actual delta in-out falls outside the 'deductible band' determined by the minimum and maximum permissible values; moreover, the quantities of gas related to localized losses and fraudulent withdrawals detected by distributors and communicated to the BM are excluded from the calculation, so as to give the latter an incentive to detect and quantify them correctly. The first application of the mechanism will be made with reference to the three-year period 2020-2022, and the outcomes of the annual adjustment session covering 2022 and those of the multi-year adjustment session covering 2021 and 2020 to be held in 2023 will be used.

Finally, with reference to localized leaks and fraudulent withdrawals, the Resolution introduces specific provisions aimed at overcoming the well-known uncertainty of the applicable regulatory framework concerning the ownership, and thus the liability, of gas quantities related to localized leaks or fraudulent withdrawals. In particular, ARERA assimilates these quantities to the natural gas necessary to guarantee the balancing of the networks, including the distribution networks, and assigns the responsibility to the territorially competent distributor who is required to quantify, also by means of specific CIG guidelines currently being drafted, these quantities and to take the necessary actions, including legal actions, to recover the value of the gas from the subject who made the fraudulent withdrawal or caused the loss; in return for this and through the submission of a specific certified petition, it may withhold a share of the recovered amount.

11 See Resolution 737/2022/R/Gas, Annex A (RTDG), Art. 45.2.

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 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.. The inspections focused on compliance with the regulatory provisions on Gas Emergency Assistance and Gas Emergency Assistance Switchboard for the year 2020. Following these inspections, the Sanctions and Commitments Department of the Authority adopted Determinations 24/2022 DSAI and 28/2022 DSAI whereby, in respect of certain contested violations, the potential penalties that may be imposed on Retipiù S.r.l. and Azienda Servizi Valtrompia S.p.A. are quantified, at the same time providing for the possibility of a simplified closure of the sanctioning procedure, which envisages, in exchange for the fulfilment of the obligations set forth in the contested breaches, the payment of the penalty to the extent of one-third of the amount potentially payable. The companies took up this option by paying 9,100 euro and 20,850 euro respectively.

Resolution 383/2022/R/gas determined the bonuses and penalties relating to the safety recoveries of the natural gas distribution service for the year 2019, the amounts of which, net of the advance payments fixed by Resolution 171/2022/R/gas and received by CSEA in May 2022, were disbursed in October 2022. The A2A Group received approximately 3.2 million euro.

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 fee to cover operating costs. As part of the RAB GAS 2022 data collection, the necessary operations were carried out for the transition to tariff management on an area basis for the localities falling within ATEM Milan 1.

Pilot projects for optimizing the management and innovative use of natural gas infrastructure

Resolution 404/2022/R/gas approved the *Regulation on incentives for pilot projects to optimize the management and innovative use of infrastructures in the natural gas sector*, providing for a maximum duration of three years for experiments and outlining the following project areas:

1. methods and tools for optimized network management aimed in particular at increasing the possibility of injection along transport and distribution networks of gas of renewable origin and the development of methods and solutions to reduce fugitive gas emissions;
2. innovative uses of existing infrastructures, including initiatives focused on testing the capacity of regulated natural gas infrastructures to accommodate and handle renewable (especially hydrogen) but also non-renewable gases, where situations can be simulated that will prospectively see the predominant use of renewable gases;
3. innovation interventions on the regulated infrastructures of the natural gas supply chain aimed not only at increasing energy efficiency but also at digitalizing the networks.

The Authority has set a ceiling of 35 million euro on the revenue to finance the mechanism, also stipulating that at least one project per project area must be admitted, and that the maximum amount that can be disbursed for a single project is 5 million euro for initiatives related to project areas 1 and 2 and 2.5 million euro for those related to project area 3. Determination 9/2022 DIEU defined the format and minimum contents of the applications to be submitted to ARERA between January 15 and April 15, 2023, as well as the reporting tools and criteria for recognizing the costs incurred in the experiments.

Measures for small end customers to cope with the sharp increase in natural gas prices

In order to cope with the sharp increase in natural gas prices that occurred in 2022, the Authority adopted, initially with Resolution 148/2022/R/gas and then - also following discussions with Parliament - confirmed with the subsequent resolutions for the quarterly update of the Gas System Charges, a mechanism aimed at containing the cost of gas for end customers up to an annual consumption of 5,000 smc consisting in the negative valuation, in the part expressed in €/Smc, of the additional component of the UG2 distribution tariff. This component is applied by distributors as part of the billing of the service to sellers and by them to end customers, while the CSEA reimburses distributors for the advance payment made.

The intervention described made it necessary for the Authority and the CSEA to take further action to minimize the timing for reinstatement (in particular in December) and, therefore, the financial burdens borne by distributors, as well as to better clarify the provisions on the payment of invoices issued to sellers which, due to the provisions introduced and the sharp increase in the amounts of the social gas bonus, should be negative.

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	2023 Tariffs	2022 Tariffs
RAB Transport	52.4	45.9
RAB Metering	1.6	1.6
Total RAB	**54.0**	**47.5**

With regard to the evaluation of the 2021 and 2022 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 methanizing some areas of the Autonomous Province of Trento was audited, for which the consistency of the cost-benefit analysis (CBA) conducted by the company was confirmed with the regulatory provisions of Resolution 468/2018/R/gas. The Authority, however, with Resolution 696/2022/R/gas evaluating the 2021 and 2022 Plans, highlighted the persistence of the criticality relating to the coordination, both functional and temporal, between the developments of the transportation networks proposed by Retragas S.p.A. and the developments of the distribution networks, to which is added the risk of total or partial overlapping between some sections of the gas transportation networks envisaged in the Plans of Retragas S.p.A. and Gasdotti Alpini S.r.l.. Consequently, the Authority pointed out the opportunity to initiate appropriate forms of cooperation and dialogue between the parties, also with the participation of the Autonomous Province of Trento, in order to define a single coordinated intervention for the development of the natural gas transportation network in the Trento area to be subsequently included in the Network Development Plans and to be recognized for tariff purposes.

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). Finally, Resolution 723/2022/R/gas introduced a specific mechanism to incentivize the maintenance in operation of fully depreciated natural gas transmission networks and identified the modalities for the application of the related asset health methodology.

Reorganization of gas metering activities at entry and exit points of the natural gas 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 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 was carried out between the transporters to proceed with the census of the measurement plants in order to start, from 2023, the performance monitoring phase (and related reporting, also to the Authority) and, from 2024 the incentive system. In addition, Snam Rete Gas S.p.A., in its capacity as a major transportation company, drew up and consulted on specific amendments to the Network Code to incorporate these provisions and identify the operating procedures for their application in relations with stakeholders; these amendments were then approved by the Authority with Resolution 600/2022/R/gas.

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.

Value of the ELECTRIC RAB underlying the provisional tariffs 2022 millions of euro	Unareti *	LD Reti	RetiPiù	Reti Valtellina Valchiavenna	Total
RAB Distribution	693	55	23	15	**786**
RAB Metering	80	2	1	2	**85**
Total	**773**	**57**	**24**	**17**	**871**

* The RAB Measure of Unareti S.p.A. includes approximately 42 million euro of gross 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[12]. 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[13] 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).

12 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.

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

Electricity quality - TIQE 2020-2023: special regulation and regulation for experiments

Resolution 566/2019/R/eel has updated for the 2020-2023 regulatory semi-period the TIQE - *Integrated text of output-based regulation of electricity distribution and metering services*, introducing specific measures aimed at reducing the gaps in service continuity between the various areas of the country. In particular, a special regulation on a voluntary basis 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 territorial area - Very High Concentration, 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, 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.

In light of this framework and on the basis of the data transmitted by the operators by March 2022, the Authority calculated the bonuses and penalties relating to output-based regulation (i.e. service continuity in terms of number and duration of interruptions). This calculation takes into account, among other things, the special regulation provisions. In particular, the A2A Group received a total net premium of 0.34 million euro; this amount benefits from the participation of Unareti S.p.A. in the special regulation for the Milan area - Very High Concentration for the indicator relating to the number of interruptions, which thus falls within the applicable deductible band.

Electricity quality - TIQE 2020-2023: resilience plans for the electricity grid

Title 10 of the TIQE 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[14] 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 bonuses and penalties, respectively at a percentage share of the net benefit of the individual intervention carried out within the established time frame and of the net present value of the actual costs based on the extent of the delay.

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[15] 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.

14 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.

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.

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.

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, for both the interventions concluded in 2021 and for those being realized. Instead, at the end of September, the company notified ARERA with the update of the 2022-2024 Plan of the 4 interventions included in the Plan for the first time for the purpose of verifying the bonus/penalty eligibility mechanism.

Resolution 722/2022/R/eel announced the preliminary findings of the examination of the 2022 Resilience Plans submitted by electricity distributors at the end of June for:

- the determination of bonuses/penalties for interventions to increase the resilience of the distribution network concluded by December 31, 2021;
- the relevant three-year balance of the net effective premium for the year 2021.

With specific reference to Unareti S.p.A., the Authority, in consideration of the cap on net premiums for the three-year period 2019-2021 calculated at approximately 3.1 million euro and the fact that no penalties were applied to the company, set at 1.74 million euro the three-year net balance 2019-2021 of bonuses and penalties to be paid by December 31, 2022.

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 regulation for the period January 1, 2020 - June 30, 2023 regarding the modernization of the old risers of the electricity distribution network in condominiums (with or without centralization of the meters) to which all distributors are required, regardless of their size in terms of POD served. Once the census of the upright columns has been carried out, the distributors propose the plan of interventions to the condominiums: in order to overcome any reluctance on the part of the condominiums to carry out the works (which can create inconveniences within the buildings), the Authority has defined a 'Standard Contract' and has provided for 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, subject to completion by March 31, 2023 of the obligatory census of its old riser columns.

Unareti S.p.A. carried 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 and carried out 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. To date, the inspections have been completed, having been conducted with a slightly earlier deadline than the one set by ARERA.

Regarding the modernizations, in 2021-22 contracts were stipulated with 23 condominiums (all with centralized meters), of which 10 modernizations were completed and reported with total contributions paid equal to 239,860 euro, while there were 7 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 152,400 euro in 2023.

Development of electricity distribution networks: access to PNRR funds

MiTE Ministerial Decrees no. 146 of April 6, 2022 and no. 150 of April 7, 2022 defined the criteria for the allocation of the PNRR resources earmarked for the increase, respectively of:

I. the grid capacity to integrate additional distributed generation from renewable sources (so-called Hosting Capacity) and to increase the power available to utilities in order to promote the electrification of energy consumption (Scope *Strengthening Smart Grid* - M2C2.2.1);

II. resilience of the electricity distribution network (Scope *Interventions to increase the resilience of the electricity network* - M2C2.2.2).

The budget made available for the strengthening of smart grids amounted to 3.61 billion euro, of which 1 billion euro was earmarked for measures to increase hosting capacity and 2.61 billion euro for measures to electrify consumption, while 350 million euro was set aside for increasing resilience. The call for project selection opened on June 20 and the process was concluded on December 23, with the allocation of all the resources required for the projects submitted by the A2A Group companies. In particular:

- Unareti S.p.A. was the winner in the *Smart Grid Strengthening* area with two projects: the first one related to the development and upgrading of Primary Cabins (financed amount 141.1 million euro) and the second one related to the installation of STATCOM devices for reactive energy compensation (financed amount 17.9 million euro), with a total financed value of 137.96 euro/POD;
- Reti Valtellina e Valchiavenna S.r.l. was the winner in the area of *Increasing the resilience of the electricity grid* with a project for the expansion of medium-voltage electricity distribution plants related to the Milan-Cortina 2026 Olympic Games (financed amount 1.46 million euro), with a total financed value of 56.51 euro/POD.

2G Smart Metering Systems for the metering of low voltage electrical energy and approval of PMS2 by Unareti S.p.A.

Resolution 87/2016/R/eel intervened on the subject of second-generation (2G) smart metering systems in low voltage, defining the functional requirements and applicable performance levels and, with Resolutions 646/2016/R/eel, 306/2019/R/eel and, most recently, Resolution 724/2022/R/eel the specific methods for recognizing the costs incurred by electricity distribution companies > 100,000 POD and the applicable bonus/penalty mechanisms (failure to proceed with the laying plan, under-performance with respect to the pre-established performance levels), while the simplified provisions on tariffs and incentive systems applicable to operators < 100,000 POD were adopted with Resolution 106/2021/R/eel.

Within the regulatory framework applicable to larger operators, Unareti S.p.A. submitted for approval to the Authority its plan for the commissioning of a 2G smart metering system, which, following extensive discussions with the Offices, was approved with Resolution 278/2020/R/eel; this plan calls for the replacement of approximately 1.3 million meters with a massive phase planned for the 2020-2024 period that is currently underway (the Brescia area was completed in 2021 and the installation is now concerning the Milan area).

In 2022, 2G smart metering regulation was the subject of intervention on two levels:

- contingent: to address the critical issues that have arisen due to the so-called semiconductor crisis in China, where the 2G smart meter production chains are located. To this end, Resolution 601/2022/R/eel introduced a number of transitional changes to the regulation, including the suspension of any penalties in the event of failure to meet the plan target for 2022 and the sterilization of the quantities set for 2022 also for subsequent years;
- structural: update for the three-year period 2023-2025 of the provisions on the recognition of costs incurred. In particular, Resolution 724/2022/R/eel confirmed the overall structure of the previous regulation, refining certain aspects of it, such as, for example, the management of requests to update, also due to exceptional events (e.g. corporate transactions) of the plans already approved, modifying others, including the penalty mechanism in the event of under-performance with respect to the pre-established performance levels, the effective date of which was postponed from the 4th to the 5th year of the plan, and introducing new mechanisms and, specifically, a bonus mechanism in the event of an acceleration of the plan speed in the presence of certain conditions, including the obtaining of public grants.

Tariff regulation of withdrawals and injections of reactive energy

Resolution 568/2019/R/eel[16] 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.

In the course of 2022, an intense consultation process took place, and at the end of November, Terna S.p.A. sent the Authority a Report with the results of the application of the methodology prepared in cooperation with the Politecnico University of Milan, for the purpose of identifying and clustering in homogeneous areas the nodes of the relevant grid characterized by the same impact of reactive energy exchanges (input or withdrawal).

Resolution 232/2022/R/eel postponed to April 1, 2023 the application of the tariff fees for reactive energy injected in the F3 band for LV non-domestic end customers with power greater than 16.5 kW and for MV non-domestic end customers, as well as to the interconnections between MV and LV networks, while it provided that the distribution companies should directly contact up to 10% of MV end customers with greater reactive energy injections into the grid by February 28, 2023 to identify the technical actions necessary to mitigate this phenomenon. Resolution 281/2022/R/eel, however, extended to 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 previous Resolution 232/2022/R/eel.

The last stage of this process led to Resolution 712/2022/R/eel, which introduces the fees for reactive energy injected into HV and VHV as of April 1, 2023, and also provides for subsequent functional actions for this regulation: the measure stipulated that the fees for reactive energy injected by end customers and distribution networks in high and very high voltage shall be equal to 0 euro/Mvarh for the period January 1, 2023 - March 31, 2023 and that from April 1, 2023 the following shall apply:

I. a unit fee of 1.44 euro/Mvarh for excessive withdrawals in the F1 and F2 bands and for reactive energy inputs in the F3 band;
II. a surcharge of 0.56 euro/Mvarh over the unit fee referred to in the previous point to the withdrawal and interconnection points between grids located in homogeneous areas characterized by a greater impact of reactive energy exchanges on grid voltages and voltage control costs.

Finally, the aforementioned Resolution, for the purpose of defining temporary derogations and in relation to an initial time window between June 1, 2023 and July 31, 2023, envisaged that Terna S.p.A., by April 30, 2023, should submit an application to ARERA for the application of different thresholds for the withdrawal or input of reactive energy or, due to local specificities.

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.

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 119/2022/R/eel established a single mechanism aimed at guaranteeing the reinstatement of credits not otherwise recoverable relating to both the OGS and network charges. 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 network charges, 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.

Energy efficiency certificates and tariff contribution recognized to distributors

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.

16 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.

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 publication of this Decree is expected in 2023.

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 companies of the A2A Group for the year 2021, all of which had been fulfilled by the end of May 2022, and the new 2022 obligations set by ARERA with Determination DMRT/EFC/7/2022.

	TEE obligation year 2021	TEE obligation year 2022
Unareti S.p.A.	46,979	78,986
Le Reti S.p.A.	10,449	17,624
LD Reti S.r.l.	12,411	19,649
RetiPiù S.r.l.	6,205	14,133
Total	**76,044**	**130,392**

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, 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[17]) 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 Transport 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).

Legislative Decree no. 199/2021 introduced some changes regarding publicly accessible IdRs:

- some interventions have been provided 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 MiTE Ministerial Decree 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).

With Resolution 130/2022, the Transport Regulatory Authority (ART) concluded the procedure for defining the outline of the calls for tenders for the assignment of the electric recharging service at filling stations and rest areas on motorways by motorway concessionaires. The measure affects both new and existing concessions and provides for the construction of high-power charging infrastructures and the entrusting of the service to at least two CPO per rest area. The resolution was challenged before the Piedmont Regional Administrative Court by the Italian Association of Motorway and Tunnel Concessionaires (AISCAT).

In May 2022, the MiTE placed for consultation the outline of the MD 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 2023-2024), with the first call to open in 2023. There will be a separate contingent for the allocation of the remaining resources (around 20 million euro) earmarked for the construction of IdR with a high degree of innovation (primarily the use of storage systems).

17 On July 1, A2A Calore & Servizi S.r.l. 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.

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 (WIP): excluding from recognition in the tariff WIPs with balances unchanged for more than 4 years and application to WIPs of a lower rate than for assets that have already entered service and decreasing over time;
- the drafting, in addition to the Plan of Interventions, of a Plan for Strategic Works (PSW) 2020-2027 that contains the infrastructural interventions dedicated to complex works with a useful life greater than/ equal to 20 years priority for the quality of service. The WIP 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 WIP, for the years 2020 and 2021, of the rate recognized for fixed assets relating to works contained in the PSW.

Below is the status of the 2022-2023 tariff updates:

- A2A Ciclo Idrico S.p.A.: ARERA, considering EGA's failure to send the tariff update by April 30, 2022, on October 28 issued a warning to comply with the submission of the data within 30 days. On November 25, the company submitted to ARERA and EGA the 2022-2023 tariff proposal drafted in the hypothesis of Acque Bresciane S.r.l. taking over the aggregated and expired managements upon payment of the VR as of December 31, 2021 with subsequent cost adjustment. The submitted tariff approvals, which include the following changes, are now being examined by the Authority: -0.14% for 2022 and +1.15% for 2023;
- Azienda Servizi Valtrompia S.p.A. (ASVT S.p.A.): the recognized costs will be included in the 2022-2023 tariff proposal of Acque Bresciane S.r.l.. The operator is applying the same tariffs for 2022 as those approved for 2021;
- Lereti S.p.A.: as resolved by the competent EGAs, will apply the following tariff increases:
  - Varese Area: + 5.5% for 2022 and + 4.93% for 2023 (EGA Board Resolution No. 78/2022);
  - Como Area: + 8.45% for 2022 and + 8.45% for 2023 (EGA Board Resolution No. 3/2023).

millions of euro	Constraint to Operator Revenues (VRG) Year 2022	RAB 2020 (net residual) (underlying 2022 tariffs)
A2A Ciclo Idrico S.p.A.*	81 (net of 26 municipalities)	341.2 (full perimeter)
Lereti S.p.A. - COMO	17.9	48.3
Lereti S.p.A. - VARESE	31.5	44.9

* Provisional VRG and RAB values pending 2022-2023 tariff approvals.

Lastly, Resolution 52 of the Board of Directors of the Como EGA of December 21, 2021 recognized to Lereti S.p.A. 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 in 2021, 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 was also challenged. To date, we are awaiting the publication of the judgment, following the discussion of the appeal on January 11, 2023.

Transfer of the aggregated and expired management of A2A Ciclo Idrico S.p.A. and ASVT S.p.A. to Acque Bresciane S.r.l.

Pursuant to the regulatory framework defined by ARERA[18] in the cases of the transfer of the SII assignments, following the request made by the Brescia EGA regarding the process of transferring the aggregated and expired managements by A2A Ciclo Idrico S.p.A. and ASVT S.p.A. to Acque Bresciane S.r.l, the two companies sent the proposed quantification of the Residual Value (RV) to the EGA on May 13 for validation and subsequent submission to ARERA. The EGA validated the proposals (Resolution no. 16/2022 for A2A Ciclo Idrico S.p.A. and no. 17/2022 for ASVT S.p.A.) and on June 17 submitted the reports containing the RV quantified at December 31, 2021 to ARERA for approval. These values will be updated after a subsequent investigation on December 31, 2022.

COMPANY	NO. MUNICIPALITIES	RV (millions of euro)
A2A Ciclo Idrico S.p.A.	21: Aggregate Management*	63.7
	5: Expired Management**	
ASVT S.p.A.	15: Expired Management**	42.2

* EGA Resolution no. 4 of December 21, 2007 had 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.

On August 3, ARERA communicated that the approval of the RV will take place at the time of the 2022-2023 tariff update, since only at that time will the Authority have full knowledge of the economic impacts of the management and its effects on users.

On October 28, since the deadline of April 30, 2022 for EGA to send the tariff update to ARERA pursuant to Resolution 580/2019/R/idr had expired, and since the notifications of the update request had not been received from the operators, ARERA proceeded to send a warning to comply with the submission of the data within the next 30 days.

On November 25, 2022, the companies of the A2A Group proactively submitted the 2022-2023 tariff proposals to ARERA and the EGA, in accordance with the takeover values as of December 31, 2021 set forth above, subject to adjustment of the economic and equity components for the period of management due to the ceasing party up to the date of management takeover.

On January 4, 2023, the Brescia Area Office took note of the postponement of the take-over deadline, ordering that:

- the updating of the tariff arrangement is subject to the formal approval of the takeovers and the related company agreements;
- all operations related to the takeover of the management must take place and be completed by December 31, 2023;
- during 2023, the Area Office will start activities to update the takeover value, taking into account the investments made in 2022 by A2A and ASVT and the additional activity that will be carried out until the actual transfer of the ownership of the management.

18 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.

Transfer of the expired management of the Municipality of Cernobbio by Lereti S.p.A. to Como Acqua S.p.A.

Lereti S.p.A., pursuant to Resolution 656/2015/R/idr and following the request of the EGA of Como concerning the transfer of the Municipality of Cernobbio to Como Acqua S.p.A., submitted the proposal of quantification of the RV to the EGA for validation and subsequent submission to ARERA.

Resolution no. 73 of December 20, 2022 of the Como EGA concluded the preliminary investigation process concerning the determination of the RV of Cernobbio, quantifying it at 2.5 million euro as of December 31, 2021 and sending it to ARERA for final approval.

Pursuant to the agreement signed between the parties, Como Acqua S.p.A. took over from Lereti S.p.A. in the management of the Cernobbio aqueduct service as from January 1, 2023, subject to the presentation of a bank guarantee and with subsequent settlement of the RV deferred to February 28, 2023. With the final approval of the RV and of the adjustments relating to the updatable and equalizable costs by ARERA, Como Acqua S.p.A. shall pay this value to Lereti S.p.A..

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 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 the 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.

Application of the technical quality incentive mechanism (RQTI): final results 2018-2019

Resolution 183/2022/R/Idr approved 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 bonuses is collected in the bill by means of the UI2 component (intended for the promotion of the quality of water, sewerage and purification services), which for 2018 totalled 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:

- bonuses were provided by the CSEA;
- 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	BONUSES (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.

Public financing of investments in the SII: Budget Law 2018 and PNRR Funds

Article 1, paragraph 516, of Budget Law 2018 requires, for the purpose of implementing the measures necessary to mitigate the damage related to the 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 are reported by the EGAs to the ARERA and are financed with public resources.

The 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"* approved 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 construction of the aqueduct, sewerage and purification network for the Municipality of Calvisano (BS) managed by A2A Ciclo Idrico S.p.A. for an amount equal to 7.6 million euro. Against a contribution collected in 2021 of 5.3 million euro, ARERA Resolution 582/2021/R/idr authorized the CSEA to disburse a portion of financing equal to 1.17 million euro collected in 2022 (the portion of financing still to be disbursed is about 1.1 million euro).

MIMS Ministerial Decree no. 517 of December 16, 2021 allocated PNRR resources to enhance, complete, and carry out extraordinary maintenance of water derivation, storage, and primary water supply infrastructures throughout the country, so as to improve water quality and ensure continuity of supply in important urban and large irrigated areas.

Azienda Servizi Valtrompia S.p.A. was awarded 27 million euro out of a total budget of 2 billion euro for a project to build the district aqueduct in the Upper and Middle Trompia Valley.

Article 14 of LD Aiuti bis on strengthening the governance of the SII in Southern Italy

In consideration of the critical state of the SII in some regions of southern Italy, ARERA has signalled to the Government and Parliament the need for regulatory interventions to modify the current legislative provisions in order to accelerate the entrusting of management in these areas in order also to be compliant with the reforms necessary to obtain PNRR funds (ARERA Report 331/2021/I/idr).

In these areas, in fact, significant criticalities remain 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).

Article 14 of LD Aiuti bis incorporates the contents of the ARERA Report: in particular, the legislator has provided for an intervention aimed at setting a peremptory deadline for the conclusion of the assignment processes (February 6, 2023) and in the event of persistent inertia, upon the proposal of the Prime Minister or the MASE, the Council of Ministers shall adopt the necessary measures, also entrusting a wholly-public entity (Invitalia) with the assignment of the management of the SII on a transitional basis for a maximum period of 4 years (renewable). Invitalia will be able to call for tenders from subjects with industrial and management experience with a view to relaunching the sector.

Activities of ARERA in the regulation and control of the district heating/cooling sector

Articles 9, 10 and 16 of Legislative Decree no. 102/2014, which transposes Directive 2012/27/EC on energy efficiency, granted the Authority specific powers to regulate and control, including in the district heating/cooling sector, even if 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, obligation to self-read, the definition of calculation methods for estimating and reconstructing consumption and rules for archiving data.

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 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 has rationalized and harmonized the contents of the various integrated texts (TITT, RQTT and TIMT) in force from January 1, 2022. Annex B to the same Resolution approves the Consolidated Text for the size classification of service operators for the period January 1, 2022 - December 31, 2025 (TUD), defining different obligations based on the 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) will take place, on the other hand, 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 (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 inserted in 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 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 initiated a fact-finding investigation into the development of district heating prices and costs for the period from January 1, 2020 to March 31, 2022. The aim of the investigation was 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. .

Resolution 547/2022/R/tlr closed the fact-finding investigation, from which it emerged in particular that:

- natural gas accounts for 69% of the mix of energy sources used in production systems;
- in 83% of the bids, the price is determined by reference to the avoided cost of a gas boiler (with wide discretion on the definition of efficiency, which in many cases led to district heating price levels higher than the corresponding alternative service);
- the increase in gas prices caused a directly proportional increase in revenues in the district heating sector as well, because operators use indexations linked to the development of gas prices. However, this growth in supply prices also characterized networks using energy sources with low variable costs (waste and geothermal) without a corresponding increase in variable production costs. The discrepancy between the level of costs and revenues led to an increase in margins for return on capital;
- the functioning of the market is characterized by two macro-criticisms (ex ante and ex post): the difficulty for the user to compare the price of the district heating service with the price of alternative air conditioning services and the possible presence of significant switching costs.

Following these findings with the subsequent Report 568/2022/I/tlr the Authority brought to the attention of Government and Parliament the opportunity to change the regulatory framework in the sector by proposing to:

- introduce cost-reflective price regulation;
- define the general criteria for determining tariffs, including how capital and operating costs are to be recovered, as well as the accounting separation criteria for the allocation of costs common to several activities.

The guarantee for operators to recover the costs incurred and to obtain an adequate rate of return on invested capital could, in the Authority's opinion,

ensure a favorable context for further development of the sector, even in the presence of a reduction in service prices. To limit the impact of price increases on users, the Authority also proposed to:

- apply to the district heating sector, on a transitional basis, a reduced VAT rate of 5%, by analogy with what is envisaged for the natural gas sector[19];
- extend to the sector the application of the social bonus rules, without the need to submit a special application, to households that are 'economically vulnerable' on the basis of ISEE.

Resolution 710/2022/R/tlr establishes the minimum requirements for meters and modifies the perimeter of the reading obligations by including remote meters with proximity reading (so-called walk-by) but postpones until the first half of 2023 the completion of the regulation on the minimum requirements for meters on the basis of a cost-benefit analysis. As part of these analyses, further proposals for action will be considered, including the replacement of existing meters and the introduction of mandatory remote management of utility substations.

Procedures for the qualification of efficient district heating and cooling systems under Legislative Decree 199/2021 published by the GSE in July in order to define rules and procedures to qualify efficient district heating networks under the provisions of Legislative Decree no. 102/2014.

Access to PNNR funds: the MiTE Ministerial Decree of June 30, 2022 defined the criteria for the allocation of PNRR resources for the development of efficient district heating and cooling networks (200 million euro). The proceedings ended on December 23 with a claim of 567 million euro. A2A Calore e Servizi S.r.l. was awarded a project relating to the district heating network in Bergamo (3.8 million euro), while Acinque Energy Greenway S.r.l. was awarded resources amounting to 11.9 million euro.

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. Against this decision of AGCM, the sanctioned parties brought an appeal before the Lazio Regional Administrative Court.

Acquisition of control of SEA Energia S.p.A. by A2A Calore & Servizi S.r.l.

On May 31, 2022, the AGCM was notified of the merger involving the acquisition by A2A Calore & Servizi S.r.l. of the entire share capital of SEA Energia S.p.A., by virtue of which SEA Energia S.p.A. will be entrusted with the supply contracts to SEA S.p.A. (awarded to A2A Calore & Servizi S.r.l. following a tender) of the heating and cooling energy and electricity produced by the power plants located at the Milan Linate and Malpensa airports. AGCM, on June 21, 2022, with the adoption of provision no. 30208, resolved not to proceed with the opening of the investigation on the transaction as it does not give rise to the creation or strengthening of a dominant position, such as to eliminate or reduce competition in a substantial and lasting manner. The transaction was finalized on September 28, 2022 and the acquired company took the name A2A Airport Energy S.p.A..

19 The proposal for a reduced VAT rate was accepted in the Budget Law 2023 for Q1 2023

7

Risks and uncertainties

7.1

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 and Focal Points that facilitate the continuous monitoring of risks, guaranteeing a timely flow of information to Risk Management. 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 certification on Quality, ISO 14001 on Environment and ISO 45001 on Occupational Health and Safety 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 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. 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. It cannot be ruled out that these measures, which are entirely extemporaneous for 2022 and the first months of 2023, may be further extended. The A2A Group, as part of its industrial activity of generating energy carriers and marketing them on a wholesale basis, is managing the volatility of the price of gas and electricity both by monitoring the limits of exposure to commodity risk and by optimizing its buying and selling strategies. It should also be noted that the Group, in its gas procurement activities, operates mainly on platforms. The A2A Group has also activated joint analyses with the electricity grid operator to define possible ways to maximise electricity production from fuels other than natural gas, and has equipped itself with gas storage space in accordance with the coverage strategy defined at the national level. 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 led to an increase in credit exposures to customers (even assuming constant volumes): credit risk is managed through a Credit Policy that provides for preliminary checks, insurance coverage, requests for guarantees, waivers as well as the management of 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 BU. This growth was calmed by proactive management. To date, no deterioration related to the increase in credit delinquency has been reported.

As regards possible tension on the financial markets, it should be noted that the Group's solid liquidity position, also supported by committed and uncommitted back-up lines (at December 31, 2022 equal to 2.4 billion euro), allowed for managing positions on the commodities market, temporary increases in working capital due to price increases and instalment plans granted

to customers and requests for cash collateral by clearing houses by way of a guarantee of operations in commodity derivatives. During the year, A2A successfully placed three ESG bonds for a total of 1.75 billion euro, thus partially anticipating its 2023 funding needs. In addition, medium-term bilateral credit lines were signed for 500 million euro, as well as a total of 560 million euro in revolving credit lines for back-up purposes, all confirming the Group's ability to access capital and banking markets. This strengthening of the Group's liquidity position continued in the first months of 2023: A2A first placed a new Green Bond for 500 million euro to support the investments envisaged in the new Business Plan, and subsequently increased its committed credit lines with a new 100 million euro bilateral transaction. 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 criminal groups and hackers.

The repercussions of this context and possible developments were taken into account in the risk assessment both in the identification of specific risk issues and in the increase and evolution of the most impacted risk factors.

Health emergency COVID-19 virus

With reference to the Coronavirus emergency, it should be noted that crisis management measures have been implemented, 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.

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 recent release of the Business Plan confirms the ambitious growth targets set in previous years, 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, the ongoing geopolitical tensions and the concomitant inflationary phase have led to 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 the 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.

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. On the procurement front, we operate through careful planning of requirements that takes into account the lengthening of acquisition lead times, the contracting of backup suppliers, the increase of inventories of strategic materials when possible and, for certain product categories, an automatic updating of price lists to ISTAT indices.

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 the sale of energy commodities, wholesale and retail, and other services to customers). In addition, as of 2018, the Energy Networks and Environment Regulatory Authority (ARERA) has been assigned responsibility for the waste cycle.

Considering the contribution of regulated activities to margins, the Group has adopted a regulatory risk monitoring and management policy in order to mitigate, as far as possible, the effects through a multi-level supervision, which primarily provides for collaborative dialogue with the institutions (ARERA, the Competition and Market Authority, the Communications Authority, the Transport Regulation Authority, the Ministry of the Environment and Energy Security) and with the technical bodies/entities of the sector (Gestore dei Servizi Energetici S.p.A., Gestore dei Mercati Energetici S.p.A., Terna S.p.A. and Snam S.p.A.) as well as active participation in trade associations.

To this end, the specific Regulatory Affairs and Competition organizational structure was set up, which works in close liaison with the Business Units and implemented constantly updated monitoring and control tools (including the 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 of the regulation on various companies. The organizational structure also oversees regulatory risk for the Acinque and AEB Groups in order to 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 S.p.A. that implemented the capacity market regulations. These appeals were rejected at the European level and a ruling by the Lombardy Regional Administrative Court is expected in 2023;
- the annual renewal of the essentiality regime with reinstatement of costs for the San Filippo del Mela power plant, which does not allow a medium-term vision of the site's future;
- concerning the granting of concessions for the gas distribution service;
- the termination of the water service concessions and their transfer for consideration to the Single Area Operator (with particular reference in the immediate term to the municipalities that have expired and/or are being managed on a transitional basis by A2A Ciclo Idrico S.p.A. and to the concessions of Azienda Servizi Valtrompia S.p.A. in the province of Brescia);
- the certification of energy savings and the consequent issue of White Certificates by Gestore dei Servizi Energetici S.p.A.;
- the impacts on the development of district heating due to the lack of a specific incentive instrument and the potential launch of a more stringent regulation of the sector by ARERA following the Report sent to Government and Parliament in November 2022;
- the provisions of the 2017 Competition Law regarding the termination of price protection regimes for domestic customers in the electricity and gas sectors, the end date of which has been further extended to January 10, 2024;
- the investigative proceeding PS12470 initiated by the AGCM against A2A Energia S.p.A. on December 13, 2022 for alleged unilateral changes in the price of electricity and natural gas supply in breach of Article 3 of the Aiuti bis LD on the suspension of unilateral changes to electricity and gas contracts.

Finally, with regard to the mechanisms for extracting the alleged 'extra profits' to be borne by energy operators activated by the Government in the course of 2022 in order to find resources to cover the many measures introduced to protect end customers in order to tackle the 'high energy price', the following should be noted:

- a) Art. 15 bis of DL Sostegni ter, which provided for a two-way refund mechanism on the price of electricity fed in from certain types of renewable plants (including existing hydro), initially from February 1, 2022 to December 31, 2022 and subsequently extended to June 30, 2023;
- b) Art. 37 of the Taglia-Prezzi LD, which introduced a tax of 25% on the increase in the balance between active and passive transactions, referring to the period from October 1, 2021 to April 30, 2022, compared to the balance of the corresponding period of the previous year for entities engaged in the production of electricity, extraction of methane gas and sale of energy carriers. The Budget Law 2023 specified that the contribution is due if at least 75% of the turnover in 2021 derives from the activities indicated therein;
- c) the Budget Law 2023, which, in implementation of EU Regulation 2022/1854, provided for a solidarity contribution in the form of an extraordinary tax on 2022 profits for entities producing, importing, distributing or selling electricity, natural gas or oil products, in the event that 75% of 2022 revenues are derived from such activities. The rate is 50% and is calculated on the amount of the portion of the total income determined for corporate income tax purposes for the tax year 2022 that exceeds the average of the total income determined for income tax purposes from 2018 to 2021 by at least 10%;
- d) the Budget Law 2023 which, implementing EU Regulation 2022/1854, provided for the application of a cap on market revenues obtained from the production of electricity from renewable energy sources not falling within the scope of Article 15-bis of LD Sostegni ter and from additional plants fuelled by non-renewable sources (including waste treatment plants). This is a one-way compensation mechanism, with a cap set at 180 €/MWh, effective from December 1, 2022 to June 30, 2023.

It cannot be ruled out that these measures, which are entirely extemporaneous for 2022, could also be extended for the whole of 2023.

Finally, it should be noted that in view of the numerous interventions of the AGCM on the sectors in which the A2A Group operates (in terms of initiating investigations for abuse of a dominant position and agreements, as well as fact-finding investigations, requests for information and moral suasion, particularly on the consumer protection side for alleged unfair commercial practices in the retail sale of electricity and gas, also in view of the completion of deregulation) the Board of Directors of A2A S.p.A. approved in 2019 the adoption of the Antitrust Compliance Programme with the consequent appointment of a Person Responsible for its implementation. In 2020, the Antitrust Code of Conduct and an Antitrust Guideline were adopted, which regulates the rules of conduct that Group employees must observe in order to avoid antitrust violations (document available on the company Intranet). In the meantime, training sessions continued for the personnel of the various Business Units, and a specific training tool was activated and disseminated to all Group personnel on an e-learning platform.

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 risks

Liquidity risk relates to the Group's ability to meet its financial and commercial obligations within the agreed terms and deadlines. To hedge this risk, the Group ensures the maintenance of adequate financial resources, as well as a liquidity buffer sufficient to meet unexpected commitments over a determined time frame. At December 31, 2022, the Group had cash resources equivalents totalling 2,584 million euro, as well as committed and unused credit lines totalling 1,662 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 as to enable the Group to timely resort to the Capital market. At December 31, 2022, this program amounts to 6 billion euro, of which 1,150 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 consolidated Financial Report illustrates in detail these risks related to the A2A Group. The same section also lists the loans that contain financial covenants. At December 31, 2022, there was no situation of non-compliance with the covenants on the part 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. The risk exposure relates both to the portion of existing variable-rate debt and to the possible incurrence of 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 whole of 2022 was strongly impacted 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 the supply chain;

this situation led to a significant worsening of conditions in the advanced economies later in the year due to declining confidence, high inflation and the rapid tightening of monetary policy globally. Added to this is the negative effect on global supply chains caused by the closure measures adopted in China with the zero-Covid strategy.

For the years to come, macroeconomic projections foresee a generalized deterioration in the face of persistent geopolitical uncertainties, high and steadily rising inflation, and restrictive financial conditions: tensions related to the reduction or interruption of gas and oil supplies from Russia, linked to the conflict with Ukraine, may negatively 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 or the installation of photovoltaic and wind farms) in the areas served, could hinder the regular operation of existing plants as well as the authorization process for new plants and therefore, the growth planned by the Group in some 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.

For the management of this risk, the Group has also adopted an IT platform for stakeholder and relationship mapping, which is useful for carrying out a gap analysis and supporting the planning of Stakeholder Engagement and improvement activities.

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 and medium-term and long-term, until 2030 and beyond. 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. The Disclosure in accordance with the Recommendations of the TCFD, including the economic-financial assessment, is published in detail in the Integrated Financial Statements. A qualitative summary of the main risks is presented below.

For physical climate risks (both chronic and acute), the A2A Group refers to the European Union's Climate-related Hazards Framework issued as part of the EU Taxonomy of Green Investments (Appendix A of the Delegated Regulation (EU) supplementing Regulation EU 2020/852 of the European Parliament and of the Council). 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.

Chronic climatic risks

The Group's hydroelectric and thermoelectric energy production and the continuity of the distribution services of drinking water provided by the Group may be affected by unfavorable variations in the rainfall regime both with regard to the total annual amount of rainfall and with regard to its distribution throughout the year. Reductions in the availability of water resources can also lead to conflicts between various stakeholders as well as restrictions on the operation of hydroelectric plants. Unfavorable winter rainfall patterns and rising temperatures also impact the availability of high-altitude water resources.

Sales of gas and heat for autumn/winter heating can be affected by particularly mild temperatures in the autumn and winter seasons.

These factors can have an unfavourable impact on the Group's production, sales and reputation and, consequently, have negative economic-financial impacts.

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 of thermal energy demand by end users compared to what was planned, the Group, through the Business Plan, implements the following risk reduction strategies: a) development of district heating networks and increase in the number of customers; b) optimization of energy costs with thermal waste recovery projects and revamping of existing plants. In addition, the Group monitors investment support policies for the development and extension of TLR networks, including in the area of efficient district heating, carries out studies on technological alternatives for heating, and participates in round tables with local authorities on environmental objectives;
- 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.

Acute climatic risks

As part of the operating activities of the electricity grids, the issue of continuity of service during periods of 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.

In order to mitigate this risk, 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.

Periods of drought, such as the one that occurred in 2022, especially if in conjunction with heat waves, can lead to limitations in the operation of thermal power plants due to the possible lack of sufficient or sufficiently cool water to cool production cycles.

Heat waves can also lead to a reduction in production for air-cooled plants as well as those cooled with seawater if there is a rise in sea temperature.

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.

Climate change and health, safety and environment

The Group also takes into account the possible effects of climate change on people as well as the environment and land. Collection and urban hygiene activities, those for network services and at plants and construction sites involve workers being outdoors, who are particularly exposed to heat waves. The Group has identified this risk, which can affect both individual well-being and the risk of accidents, and has put in place measures to mitigate it and inform its employees. Acute phenomena such as heavy rainfall and 'water bombs' can lead to flooding in plants and/or overflowing of containment tanks placed to protect any spills, with the risk of potential pollution of the soil or water bodies in the vicinity. To mitigate this risk, the Group modified the capacity of the containment systems in the most critical situations.

Transition risks

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.

Changes in the regulatory framework of the Emission Trading Scheme (EUAs) and the possible inclusion of activities currently excluded in the mechanism could have an unfavourable impact on the Group.

Uncertainties in the prices of CO_2 emission permits (EUAs) may give rise to unfavorable or favorable impacts on the profitability of power plants.

To contribute to the decarbonization process, the Group has undertaken to reduce its CO_2 emissions: the Business Plan 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. This virtuous path envisages the improvement of the Group's emission factor to 2030 compared to the target approved by the Science Based Targes initiative - SBTi (216 gCO_2/kWh in the current Plan vs 230 gCO_2/kWh certified SBTi). 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, with specific reference to the current context, 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 Plan that provides for the establishment of interdisciplinary management committees, organized at both Group and Business Unit level and coordinated among them.

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, inspections are carried out periodically 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. In 2022, the company achieved ISO 27001 certification, the international information security standard.

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 recently finalized its Disaster Recovery (DR) plan, which provides for the recovery of the most critical applications and related enablers within specific time frames, back-up and duplication of data. The DR plan can now count on the presence of two Data Centers, equipped with high levels of security in terms of service continuity, and a Group cloud strategy is being implemented

to make the company's information systems more usable and resilient.

Finally, the project aimed at having a Business Continuity Plan was completed: on the basis of the Business Impact Analysis, critical processes were identified and a Business Continuity Management System - SGCO was prepared. Thanks also to the above-mentioned Disaster Recovery Plan, the company obtained ISO 22301 (Business Continuity Management) certification for A2A S.p.A.. In the coming years, the certification scope will be extended to other Group subsidiaries.

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 adopts the requirements and protocols laid down in the current regulations and the guidelines issued by the competent bodies.

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 and/or profitability 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 (in particular, a working group has been set up to monitor the regulatory provisions relating to the European Green Deal) and is also present on the technical panels set up by the associations in order to highlight any critical issues related to regulatory developments.

8

Other information

8.1
Other information

Audit of the financial statements and disclosures pursuant to article 149-duodecies of the Consob Issuers' Regulations

The annual financial statements of A2A S.p.A. have been subject to a full audit by EY S.p.A. on the basis of their appointment for financial years 2016 to 2024 by shareholders in general meeting.

The following table provides a summary of the fees paid for audit work performed within the Group during 2022, analyzed between the leading auditor EY S.p.A. and other auditors.

Description thousands of euro	Leading Auditor	Other auditors
A2A S.p.A.		
Audit of annual financial statements	190	
Audit of consolidated financial statements	43	
Periodic tests of accounting	23	
Review of half-yearly report	86	
Audit of the separate annual accounts for ARERA	20	
Total	**362**	**-**
Subsidiaries		
Audit of annual financial statements	1,335	114
Periodic tests of accounting	258	
Review of half-yearly report	241	
Audit of the separate annual accounts for ARERA	101	
Other consolidated groups (Acinque, AEB)	400	
Total	**2,335**	**114**
Associates and joint ventures		
Audit of the information sent to shareholders for the consolidation	38	
Total	**38**	**-**
Total A2A Group	**2,735**	**114**

In addition to the above audit work, companies belonging to the EY network also performed other engagements in 2022 for fees amounting in total to 224 thousand euro, which mainly related to activities as the Company's legal auditor as specified by current legislation.

Treasury shares

"Treasury shares" had no value at December 31, 2022.

Secondary locations

The company does not have secondary offices.

Related parties and tax consolidation

Details of related party transactions are provided in note 39 to the consolidated financial statements and note 35 to the separate financial statements.

* * *

The information on corporate governance and ownership structures required by article 123-bis of Legislative Decree no. 58/1998, as amended, is contained in a separate document "Report on Corporate Governance and Ownership Structures for the year ended December 31, 2022", which forms an integral part of the financial statements documentation.

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 gruppoa2a.it.

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.