2022
Integrated Report
Consolidated Non-Financial Statement pursuant to Italian Legislative Decree 254/2016
This Report can be viewed on the website gruppoa2a.it and it is compatible with Apple and Android systems.

This Report can be browsed interactively on various devices, with multimedia insights, on the website gruppoa2a.it and it is compatible with Apple and Android systems.
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The letter to stakeholders is a moment for our Group to take stock and plan. Once again this year, we were forced 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 posing crucial challenges for our business - from the development of new energies, to the cost of raw materials, to customer relations - we chose to focus on the essentials, on what really counts for a business 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 culture daily, and it has been a priority in dealing with market volatility and geopolitical changes.

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

On the Circular Economy front, we invested over 1 billion euros in the two-year period 2021-2022, 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 (OFMSW) in Lecce (in Apulia) and Cavaglià, for the production of 13 million cubic metres of biomethane per year. The material treatment and recovery plants produced more than 392,000 tonnes of secondary raw material to be put back on the market. There was a contraction in the waste sorting service in the municipalities served in 2022 (-4% of municipal waste collected compared to 2021), but the proportion recovered as material or energy remained unchanged, respectively 70% the former and 30% the latter.

In the context of the Energy Transition, on which 11 billion euros of capital expenditure have been earmarked in the 2021-2030 Plan, 2022 will surely go down in history as the black swan of the energy transition. 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 consistent supply of energy to the Country for the years, but we had to reactivate the plants in San Filippo del Mela and Monfalcone in 2022. This obviously led to an increase in direct emissions generated by the Group (+2% compared to 2021), while the indirect emissions related to energy purchases were almost zero thanks to the confirmation of renewable energy purchases contracts at Group sites. Despite this context, when updating the latest Strategic Plan, we wanted to reaffirm our commitment to the ecological transition by declaring our intention to achieve Net Zero Scope 1 and Scope 2 emissions by 2040, and we initiated an internal working group focused on identifying strategic and technological solutions to achieve this goal. In particular, we consolidated our position among the leading operators in the generation of electricity from renewable sources in Italy in 2022 through the acquisition of new wind and photovoltaic portfolios located in Apulia, Sicily and Sardinia, and in Spain.

Also in this area, we continued to invest in supporting the electrification of consumption, which will see the construction of 16 new primary substations and 2,500 km of new grids laid by 2030. 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 15,000 people joined our Group, 4% of them under 30, giving many young people the chance to have a secure job (more than 7% of contracts are permanent), with a net increase of 307 new colleagues.

Engagement 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 engagement of A2A’s employees, and the Group’s first in-person Convention was held, a fundamental moment of sharing. We also launched our second Corporate Intrapreneurship initiative: the Call For Sustainability, which saw the voluntary participation of over 3,000 colleagues and the submission of 342 innovative ideas for the ecological transition.

Bearing in mind the complex macroeconomic context, throughout 2022 we strived to support our customers not only by 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 also strengthened engagement with the main stakeholders in the territories where we operate by holding 11 listening forums; moments for discussion with our local stakeholders organised with the aim of creating synergies on the actions necessary for the ecological transition. The meetings, held in 6 regions, resulted in 30 project proposals, contributing to the development of shared value ideas and initiatives in line with the Group’s goals.

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 corporate processes. Consistency, coupled with strategic thinking, has guided us in the decisions to be made 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 ourselves put into making it a 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 A2A’s Board, our most sincere thanks.

Chairman
Marco Patuano

Chief Executive Officer
Renato Mazzoncini

“ The relationship of trust with our stakeholders is strong because it is cultivated daily, and it been essential in dealing with market volatility and geopolitical changes”
Marco Patuano

“ It is essential to pursue a transition that is not only ecological, but also equitable and shared. This is what our Strategic Plan is all about”
Renato Mazzoncini
As a Public Interest Entity, in accordance with Italian Legislative Decree 254/16, the A2A Group publishes the Consolidated Non-Financial Statement (NFS) on an annual basis. This document represents that Statement for the year 2022.

The document (including its Supplement) represents the 15th edition of the Report that outlines A2A’s activities for its material sustainability topics, for the companies included in the scope of consolidation for the year ended December 31, 2022. The Report has been prepared in accordance with the GRI Standards of the Global Reporting Initiative (GRI) and, for some indicators, it refers to the GRI G4 Electric Utilities Sector Supplement. The document also takes as a reference the Integrated Reporting Framework (IR Framework), outlined by the International Integrated Reporting Council (IIROC).

Adopting the principles of the Integrated Report requires presenting the way in which an organization creates value over time. Therefore, the document follows the logic of capital, i.e., the variables that determine value creation:

- **Financial Capital**: set of economic resources involved in the production processes;
- **Manufacturing Capital**: real estate, infrastructure and physical means (plant, machinery, etc.) used for the production of the services offered by the company;
- **Natural Capital**: all the processes and environmental resources that contribute to the production of services offered by the company;
- **Human Capital**: all the expertise, skills and experience of the people that work at the company;
- **Intellectual Capital**: know-how represented by organizational knowledge and intellectual property of the Group;
- **Relational Capital**: the company’s ability to create relations with external stakeholders and share values in order to increase individual and collective well-being.

Through the analysis of the types of capital that influence, and are in turn influenced by, the Group’s activities, A2A aims to provide a clear account of the existing, necessary integration between economic and social and environmental aspects in corporate decision-making processes, but also in the definition of the Group’s strategy, governance and Business Model.

The initial chapters of the document describes the Group’s Business Model and the management tools applied, through which the various capitals are used to create value over time.

Following the recent prospective regulatory changes concerning Sustainability Reporting (i.e., Corporate Sustainability Reporting Directive - CSRd, as well as in order to meet the requirements of the new GRI 2021 Standards, the A2A Group has embarked on a path to annually update the materiality analysis. The goal of the new GRI materiality (Impact Materiality) is to identify what effects (positive and negative) a company causes on society and on the environment (generated impacts).

The topics reported in the consolidated financial statements must represent the organization’s most significant impacts on the economy, the environment and people, including their human rights. Therefore, the topics must be defined and updated according to an “impact-oriented” logic in order to provide a representation of the possible impacts, both positive and negative, that the Group and its value chain generates on a-vi stakeholders. In addition, in view of the CSRd coming into force in the coming years, the Group carried out an initial impact assessment exercise (Financial Materiality). This process was carried out taking as a reference the standards drawn up by the European Financial Reporting Advisory Board (EFRAG) which are in the process of being approved by the European Commission. They will become mandatory for A2A and for the other companies already subject to the non-financial reporting obligation starting from 2024, following a gradual approach. The analysis of material topics according to the double materiality method is not subject to the limited assurance engagement by EY SpA. More information on the new process of updating material topics can be found in section 4.3.

On the basis of the topics that emerged as material, the GRI standards and the related qualitative and quantitative disclosure, the material topics can be found in section 4.3.

A description of the material topics, associated risks/opportunities, and how they are managed, including policies implemented by the company, are provided at the beginning of each capital.

In addition, in order to give a clear view of the context in which the company operated during 2022, at the beginning of each capital a description of the national, European and International context on the subject of reference has been included. Within each chapter, the actions implemented by A2A and the KPIs (Key Performance Indicators) relative to the specific capital are therefore described.

According to the coverage of the GRI Standards and the Topci Standards associated with the material aspects and summarised in the GRI Content Index, the NFS was prepared “in accordance with the GRI Standards”.

For the third year, the document is also aligned with the Recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) to ensure dialogue on climate-related topics with the financial community, which is increasingly demanding reporting according to this logic. The reporting has been further enhanced with new insights dedicated to climate change. The TCFD Content Index, shown on page 221, indicates the relevant sections of the document in which the information required by the framework is reported. In order to comply with the requirements of Italian Legislative Decree 254/16, in 2017, the A2A Group equipped itself with an internal procedure aimed at drafting the NFS - Procedure 201/28 “Non-Financial Declaration Reporting Flow” - which defines the organisational structures involved, the methods used to collect, process and control the non-financial data included in this document. This procedure was updated with effect from 1 January 2023, following the implementation of the new materiality process.

The data collection, processing and control process was handled through the implementation of a specific software managed by the Sustainability Planning & Reporting structure, which allows for the definition, for each section of the NFS, of the data owner and various approval levels, through to the corporate senior management. The financial capital figures are aligned with the Consolidated Financial Statements, while those for the other capitals reflect the reporting scope of this document (specified in the section below). In this document and in its Supplement, where necessary, a specific note has been included to indicate changes in the second half of 2022 performance data with respect to that reported in the 2022 Integrated Report.

This document, submitted to the Board of Directors of A2A S.p.A. on March 16, 2023, was then subjected to a limited assurance engagement, with regard to the aspects relating to GRI reporting, by an external company, in accordance with the criteria laid down by the “International Standard on Assurance Engagements 3000 Revised” (ISAE 3000 Revised), which at the end of the work carried out issued the report attached to this document.

The quantitative indicators that do not relate to any general or topic-specific disclosures of the GRI Standards, which are reported on the pages indicated in the Content Index, are not subject to the limited assurance engagement by EY S.p.A.

For any restatements concerning previous years’ data and information, please refer to the specific notes in the document, as per GRI-2.4. Contact: Manuela Baudana 02 772 04 008 manuela.baudana@a2a.eu

The A2A Group was included in the KPIs of the 2022 NFS, in continuity with last year. The 2020 performance - for comparability and completeness - remains, as last year in the Supplement, in a dedicated section. The consolidation transaction, which was completed in the second half of 2020, did not make it possible to integrate all of the A2A Group’s indicators right away.

It is also noted that the plants – owned or leased – are consolidated 100% if they are included in the assets of the consolidated companies. In this sense, the data on the activity of the Ascona waste-to-energy plant, the Calvano plant and the thermoelectric plant of Scandalea, is not considered. The Group’s jointly owned material plants are consolidated proportionally. According to this principle, for environmental data, the Minco thermoelectric plant was 45% consolidated.

Finally, as required by EU Regulation 852/2020 (EU Taxonomy Regulation), as of this year, reporting is given in the dedicated section on the Group’s activities that are considered eligible and aligned with respect to the Climate Delegated Act, and the related performance KPIs (percentage of turnover, capital expenditure and operating expenditure).

The NFS includes all full subsidiaries consolidated on a line-by-line basis in the Consolidated Financial Statements, to which, however, a criterion of relevance and significance is applied. Indeed, companies can be excluded from the social and environmental performance data, with business that is not relevant or companies purchased/sold/liquidated during the year. Consequently, with the exception of “Financial Capital” and the chapter entitled “The A2A Group”, for which the scope coincides with that of the Consolidated Financial Statements, the following companies in liquidation are excluded from the list of consolidated companies in the remaining Capitals and also:

- RGL, a new company resulting from an M&A transaction in 2022 and only fully integrated in February 2023,
- the Acinque Group (formerly ACSM-AGAM) which, although fully consolidated in the Consolidated Financial Statements, will draw up its own NFS as an obliged party pursuant to Italian Legislative Decree 254/16. The main KPIs of the Group's performance will in any case be represented in the Supplement and aggregated on page 14. The Non-Financial Statement was approved by the Board of Directors of Acinque on March 16, 2023.

The AEB Group was included in the KPIs of the 2022 NFS, in continuity with last year. The 2020 performance - for comparability and completeness - remains, as last year in the Supplement, in a dedicated section. The consolidation transaction, which was completed in the second half of 2020, did not make it possible to integrate all of the A2A Group’s indicators right away.

It is also noted that the plants – owned or leased – are consolidated 100% if they are included in the assets of the consolidated companies. In this sense, the data on the activity of the Ascona waste-to-energy plant, the Calvano plant and the thermoelectric plant of Scandalea, is not considered. The Group’s jointly owned material plants are consolidated proportionally. According to this principle, for environmental data, the Minco thermoelectric plant was 45% consolidated.
The A2A Group and its Business Model
The A2A Group

The A2A Group is a Life Company, as it takes care of life, its most precious capital. Every day, it deals with the environment, water and energy which, thanks to the circular use of natural resources, are the necessary conditions for life and the quality thereof. It does so with the most advanced technology, because it looks far ahead. It promotes the Country’s sustainable growth through a long-term strategy, with capital expenditure dedicated to the development of the circular economy and energy transition: businesses that, more than others, are crucial to preserving everyone’s future.

Its business areas are attributable to the Business Units (BU) illustrated below.

### Business Units

#### Energy
- **Generation and Trading**
  - Electricity generation
  - Wholesale & Trading
- **Market**
  - Sale of electricity and natural gas
  - Energy Efficiency and VAS (Value Added Services)

#### Waste
- **Collection**
  - Waste collection
- **Treatment**
  - Material recovery
  - Energy recovery

#### Smart Infrastructures
- **Networks**
  - Electricity and gas distribution
  - Integrated water service
- **Heat**
  - Cogeneration and heat recovery
  - Distribution and sale of heat (district heating)
- **Other services**
  - Smart City
  - Public lighting
  - E-mobility

#### Innovation
- **Second largest energy operator in Italy**
  - for installed capacity
  - fourth among industrial renewables operators (for wind and solar)

#### Market
- **First waste operator in Italy**
  - per tonne treated

### Main activities covered

All these Business Units, where possible, operate in coordination to offer integrated services to citizens, as evidenced by the A2A value chain, in which the Group’s main activities are represented throughout their supply chain, from the raw material to the end customer.

### Group Values

The Group’s values represent the cultural identity of A2A and the rules of conduct that guide people in their daily activities. Thanks to an industrial project that allows to identify development opportunities for the business and for its stakeholders, together with the mission, the values are the foundation of the Group’s Business Model, which consolidate and stimulate an increasingly strong integration with the territories and the people who live there.

**Respect for the fundamental rights of the individual**
- maintaining professional relationships with all stakeholders, geared toward the respect for the dignity and fundamental rights recognised by national and supra-national law to all mankind.

**Excellence in results**
- achieving results and satisfying customers with competence and determination, recognising excellent contributions.

**Sustainability**
- being aware of the impact of our choices on the environment and on the community.

**Innovation**
- tackling change and evolution through brainstorming, flexibility and thinking outside the box.

**Responsibility**
- committing to giving our best, answering for our actions.

**Team spirit**
- reaching goals through cooperation, a shared vision and a focus on the individual.

### Mission

A2A aims to be a Life Company committed to generating a positive impact on the quality of people’s lives and protecting the planet, for which it makes its technology and skills available. By working to constantly regenerate the potential of every natural resource, A2A wants to become a protagonist in the sustainable growth of the Country, applying an economy that always creates new value, to help improve the lives of everyone. It works so that human, technological, financial and natural capital can grow together, in balance.
1.2 Geographic Location and Organization Size

In the following sections regarding the size of the organization and location of the geographical areas of activity, the information includes the Acinque Group, in order to provide complete information on the structure of the A2A Group, in line with the economic results of other corporate documents. For further details on the results of the Acinque Group, see the Supplement to this document.

A2A Group plants and services

**Plants**

**Energy**
- Thermoelectric
- Hydroelectric
- Photovoltaic
- Wind

**Waste**
- Waste-to-energy plant
- Waste treatment plant
- Material recovery plant
- Landfill
- Biogas production

**Services**

**Waste**
- Waste collection

**Distribution and transport**
- Electricity distribution
- Gas distribution
- Gas transport

**District heating**
- District heating

**Water**
- Integrated water service

**Public**
- Public lighting

**Electric mobility**
- Recharge stations e-Moving

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The Group: Geographical Location and Organization Size

A2A Value Chain

A2A Business Model

Governance

A2A’s Sustainable Strategy

Stakeholder Engagement and Materiality Analysis

Financial Capital

Manufacturing Capital

Natural Capital

Human Capital

Intellectual Capital

Relational Capital

Independent Auditor’s Report

GRI Content Index

TCFD Content Index
**The A2A Group and its Business Model**

**Geographic Location and Organization Size**

**A2A’s Value Chain**

**A2A’s Business Model**

**Governance**

**A2A’s Sustainable Strategy**

**Stakeholder Engagement and Materiality Analysis**

**Financial Capital**

**Manufacturing Capital**

**Natural Capital**

**Human Capital**

**Intellectual Capital**

**Relational Capital**

**Independent Auditor’s Report**

**GRI Content Index**

**TCFD Content Index**

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**Figure 1 Organization size**

<table>
<thead>
<tr>
<th>Revenues (M€)</th>
<th>2021</th>
<th>2022</th>
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<td>11,549</td>
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<td>10,732</td>
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<td>80</td>
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<td>1,861</td>
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<td>71%</td>
<td>70%</td>
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<th>Scope 1 emissions (kt CO₂eq)</th>
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<td>7,298</td>
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<th>Scope 2 emissions Market based (kt CO₂eq)</th>
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<td>21.0</td>
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<td>2,541</td>
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<th>Percentage ordered from Italian suppliers (%)</th>
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<td></td>
<td>96%</td>
<td>98%</td>
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<th>Electricity produced (GWhₐ)</th>
<th>2021</th>
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<td>18,241</td>
<td>19,549</td>
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<thead>
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<th>Electricity produced from renewable sources % of total</th>
<th>2021</th>
<th>2022</th>
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<tbody>
<tr>
<td></td>
<td>30%</td>
<td>21%</td>
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<th>Heating energy produced (GWhₐ)</th>
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<th>2022</th>
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<td>3,275</td>
<td>2,983</td>
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<th>Electricity distributed (GWhₐ)</th>
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<th>2022</th>
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<td>11,422</td>
<td>11,238</td>
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<tr>
<th>Emissions avoided (kt CO₂eq)</th>
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<th>2022</th>
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<td>3,700</td>
<td>2,380</td>
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<th>Emissions avoided (kt CO₂eq)</th>
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<td>1,531</td>
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<th>Total number of employees</th>
<th>2021</th>
<th>2022</th>
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<td>13,267</td>
<td>13,655</td>
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<td>1,368</td>
<td>1,531</td>
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<thead>
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<th>Number terminated</th>
<th>2021</th>
<th>2022</th>
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<td>1,083</td>
<td>1,218</td>
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<th>Turnover rate (%)</th>
<th>2021</th>
<th>2022</th>
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<tr>
<td></td>
<td>10%</td>
<td>8.9%</td>
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<th>Accident frequency index</th>
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<th>2022</th>
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<td></td>
<td>20.30</td>
<td>19.77</td>
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<th>2021</th>
<th>2022</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>5.09</td>
<td>0.54</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Contributions to communities (M€)</th>
<th>2021</th>
<th>2022</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>5.8</td>
<td>7</td>
</tr>
</tbody>
</table>
1.3 A2A’s value chain
**A2A’s Business Model**

A2A’s Business Model seeks to create shared sustainable value for the company over time and for its reference community. As a Life Company, the Group is oriented to improving the quality of life of local residents and businesses operating in the reference territories by offering essential services, guaranteed by the highest quality and efficiency standards: waste collection and treatment, production of electricity, sale of electricity and natural gas, distribution networks and district heating, water treatment, public lighting, charging infrastructure for electric mobility and IoT (Internet of Things) technologies for smart cities. The solidity of A2A’s presence meets the change of sectors that evolve constantly, giving rise to a constant path of sustainable growth.

Sustainability is at the heart of our strategy, which focuses on a fair, ecological and shared transition, and it is divided into the two pillars of circular economy and energy transition. A great deal of attention is paid to environmental sustainability, to the development of territories and communities, and to the empowerment of the Group’s people by building and spreading an inclusive approach in the corporate culture.

Our development model includes a selective approach on capital expenditure, aimed at achieving carbon neutrality, focusing on distinctive businesses and the domestic market, and with a more organic growth. Adopting a flexible approach on capital expenditure and economic/financial indicators will be crucial in ensuring stability for the Group.

The goal of the model is to make a concrete contribution to the achievement of 11 of the 17 Sustainable Development Goals of the UN 2030 Agenda, enhancing the six capitals (Financial, Manufacturing, Intellectual, Human, Natural, Relational) on which the organization depends to ensure its services. In fact, 85% of the capital expenditure made in the plan’s time frame (2021 - 2030) will be in line with the SDGs.

Our Strategy

- Energy transition
- Circular economy

Development Model

- Road to Net-Zero capital expenditure in renewables and new technologies to achieve Net Zero by 2040
- Financial Soundness: Flexible approach to capital expenditure and economic and financial indicators

Our Businesses

- Energy
- Waste
- Smart Infrastructures

Road to Net-Zero

Selectiv Approach

Focus on distinctive businesses, domestic market, organic growth

Selective Approach

Focus on distinctive businesses, domestic market, organic growth
Governance
Governance

On May 13, 2020, the Shareholders’ Meeting used the list vote mechanism to appoint the Board of Directors (BoD) consisting of 12 members for three financial years, as indicated in the table below:

<table>
<thead>
<tr>
<th>Role</th>
<th>Name</th>
<th>Year of birth</th>
<th>Executive (E) - Non Executive (NE)</th>
<th>Male/ Woman</th>
<th>Independence code</th>
<th>Independence CFA</th>
<th>Control and Risks Committee</th>
<th>Appointments and Remuneration Committee</th>
<th>ESG and Territory Relations Committee</th>
<th>Training/ professional area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chairman (C)</td>
<td>Marco Emilio Angelo Patuano</td>
<td>1964</td>
<td>E</td>
<td>M</td>
<td>_</td>
<td>_</td>
<td>C</td>
<td>Economic</td>
<td>_</td>
<td>_</td>
</tr>
<tr>
<td>Deputy Chairman</td>
<td>Giovanni Comboni</td>
<td>1957</td>
<td>NE</td>
<td>M</td>
<td>_</td>
<td>X</td>
<td>_</td>
<td>Economic</td>
<td>_</td>
<td>_</td>
</tr>
<tr>
<td>Chief Executive Officer/General Manager (*)</td>
<td>Renato Mazzonecini</td>
<td>1968</td>
<td>E</td>
<td>M</td>
<td>_</td>
<td>_</td>
<td>_</td>
<td>Scientific</td>
<td>_</td>
<td>_</td>
</tr>
<tr>
<td>Director</td>
<td>Stefania Baratti</td>
<td>1958</td>
<td>NE</td>
<td>W</td>
<td>X</td>
<td>X</td>
<td>_</td>
<td>Legal/ Academic</td>
<td>_</td>
<td>_</td>
</tr>
<tr>
<td>Director</td>
<td>Vincenzo Cardillo</td>
<td>1965</td>
<td>NE</td>
<td>M</td>
<td>X</td>
<td>X</td>
<td>_</td>
<td>_</td>
<td>M</td>
<td>Academic</td>
</tr>
<tr>
<td>Director</td>
<td>Federico Maurizio d’Andrea</td>
<td>1959</td>
<td>NE</td>
<td>M</td>
<td>_</td>
<td>_</td>
<td>M</td>
<td>Legal/ Academic</td>
<td>_</td>
<td>_</td>
</tr>
<tr>
<td>Director</td>
<td>Luigi De Parii</td>
<td>1949</td>
<td>NE</td>
<td>M</td>
<td>X</td>
<td>X</td>
<td>C</td>
<td>Academic</td>
<td>_</td>
<td>_</td>
</tr>
<tr>
<td>Director</td>
<td>Gaudiana Giusti</td>
<td>1962</td>
<td>NE</td>
<td>W</td>
<td>X</td>
<td>X</td>
<td>M</td>
<td>_</td>
<td>_</td>
<td>Academic</td>
</tr>
<tr>
<td>Director</td>
<td>Fabio Laurini</td>
<td>1954</td>
<td>NE</td>
<td>M</td>
<td>_</td>
<td>X</td>
<td>_</td>
<td>_</td>
<td>M</td>
<td>Scientific</td>
</tr>
<tr>
<td>Director</td>
<td>Christine Perrotti</td>
<td>1971</td>
<td>NE</td>
<td>W</td>
<td>X</td>
<td>X</td>
<td>M</td>
<td>_</td>
<td>_</td>
<td>Economic</td>
</tr>
<tr>
<td>Director</td>
<td>Secondina Giulia Ravera</td>
<td>1968</td>
<td>NE</td>
<td>W</td>
<td>X</td>
<td>X</td>
<td>_</td>
<td>_</td>
<td>_</td>
<td>Scientific</td>
</tr>
<tr>
<td>Director</td>
<td>Maria Grazia Speranza</td>
<td>1957</td>
<td>NE</td>
<td>W</td>
<td>X</td>
<td>X</td>
<td>_</td>
<td>_</td>
<td>M</td>
<td>Academic</td>
</tr>
</tbody>
</table>

Note: C: Chair - M: Member
(*) Mr Mazzoncini was appointed Chief Executive Officer and General Manager by the Board of Directors at the meeting held on May 14, 2020.

In the Board of Directors, the female component, today equal to 41% of the members, is well above the Italian and sector average, thus aligning itself with the regulations of the New Corporate Governance Code. It should be noted that the Chair does not hold any other office within the organisation.

The average age of the members is 61.3.

In compliance with the provisions of the Corporate Governance Code, the Board of Directors conducted its assessment on the size, composition and functioning of the Board and on its Committees.

The results of the Board Review were presented and discussed during the session of the Board of Directors of December 22, 2022.

In order to bring A2A in line with the best practices on transparency and good international governance, in July 2022 the members of the Board of Directors answered a self-assessment questionnaire structured in 2 sections: “Sector expertise” using the MSCI GICS Framework as a reference framework and “Soft skills”.

During 2022, the Board of Directors was engaged in 3 Induction sessions related to ESG topics (macroeconomic environment, geopolitical environment, impacts of climate change on business).

Figure 2 Industry experience

Figure 3 Cross-cutting skills

A description of the appointment and selection processes of the BoD and its Committees and the criteria used to appoint and select BoD members (such as stakeholder interests represented, diversity, independence, and relevant expertise) is given in the Report on Corporate Governance and Ownership Structures published together with this document and available on the website www.gruppoa2a.it.
2.1 Sustainability governance

The ESG and Territory Relations Committee is responsible for assisting the Board of Directors with information, advice and proposals regarding, among other things: (i) the definition and analysis of material topics for the Group and stakeholders relating to the areas of sustainability reported in the Sustainability Report; (ii) spreading the culture of sustainability among employees, citizens, schools and, more generally, stakeholders; (iii) implementing and promoting structured methods for dialogue with the territories in which the Group operates, including through the implementation of initiatives for engaging all stakeholders (Multi-stakeholder Forum or Listening Forum); (iv) implementing and monitoring the actions proposed during stakeholder engagement; (v) promoting a programme to develop the Group’s ESG positioning within the financial market; (vi) analysing the evidence emerging from the assessments of ethical rating agencies; (vii) analysing the regulatory developments on ESG topics at a European and Italian level; (viii) defining the Group’s Net Zero strategy to 2040; and (ix) preparing the 2021 Sustainability Report.

The Committee also assessed the performance of the Group’s sponsorship and image promotion activities.

Roles and Responsibilities for Climate Change Mitigation

A2A’s commitment to maintaining and strengthening its governance system in support of the Group’s strategy to combat climate change is implemented with the continuous and constant collaboration between the Board Committees and internal structures. In fact, the governance processes for climate change-related topics described consists of a strategic governance level and of a more operational level of coordination and management. Information flows between the committees, the Enterprise Risk Management, Sustainability Development, HSE corporate departments and the Business Units ensure alignment and synergy between the two levels of the process (as defined by the Internal Control and Risk Management Guidelines).

In addition to the role played by the ESG and Territory Relations Committee, some of the key processes for monitoring climate change within the Group are described below.

The Control and Risk Committee, in accordance with the Guidelines of the Internal Control and Risk Management System and with the Enterprise Risk Management Policy, is informed about climate risks on a six-monthly basis simultaneously with the presentation of Risk Assessment results. Once again this year, the process of approving the Group material matrix saw the engagement of the Committee, together with the ESG and Territory Relations Committee, with the aim of verifying that all the topics were covered by the analyses and assessments contained in the Enterprise Risk Management risk sheets.

As part of the activities to combat climate change, the Sustainable Finance Committee has established itself as a strategic and indispensable player both inside and outside the Group. The interaction between this Committee, the ESG and Territory Relations Committee, the Capital Expenditure Committee and the heads of the Business Units engaged in the various projects ensures that all capital expenditures are fully aligned with the Group’s commitment to promote a low-carbon business model and that the best opportunities in the sustainable finance market are exploited (see page 84).

This constant alignment also took the form of continuous sharing between the Chief Executive Officer, the strategic planning departments, the Business Units and the Sustainability Development department, during the definition of the 21-30 Strategic Plan, in order to regularly monitor all the implications in terms of the sustainability of the goals over the term of the Plan. A central role is played by the CEO, who promotes sustainability within the Group, and more specifically the fight against climate change, identifying it as one of the drivers behind the Strategic Plan (see page 45).

Periodic meetings are also scheduled throughout the year to monitor the progress of the targets and their status. Sustainability indicators are in fact an integral and qualified part of the 21-30 Strategic Plan, and the process for defining and monitoring them, as well as for drafting the integrated document, engages all the business controllers of the Group BIAs. In this regard, several annual meetings are scheduled, where topics related to climate change are discussed and there is coordination of all related activities, such as periodic meetings of the Quality, Health and Environment Committee (both at company and Business Unit level) or during the steering committee.

All Group’s employees have a significant responsibility to achieve the goals of the Strategic Plan. In fact, this is also reflected in the Remuneration Policy, starting with the CEO and cascading down to all his/her first reports, and a target linked to the decarbonization and climate change path undertaken by the Group has been set for 2022. Overall, about 30% of the Group’s executives have been assigned specific targets within their remuneration scheme.

The methodology and the process for assessing climate risks are integrated into the Enterprise Risk Management process in place within the Group. For the in-depth analysis of climate risks, the internal interlocutors were identified (Risk Owner, Process Owners, Risk Specialist and Controller), with whom to share the topics, as well as the main assumptions for the economic and financial assessment of the impacts. The Group’s management also plays a fundamental and decisive role in the process of identifying and assessing risks and defining response strategies, which are articulated in mitigation actions as discussed in greater detail in the section “Analysis and Management of Risks and Opportunities” on page 54.

The climate risk assessment is updated semi-annually during the periodic assessments envisaged by the Enterprise Risk Management Policy and it is examined by the Control and Risk Committees. The Enterprise Risk Management organisational structure coordinates the entire process.

Figure 4 Process and key players for governing risks and opportunities related to climate change in the A2A Group

25
Organization, Management, and Control Model pursuant to Italian Legislative Decree 231/01

On December 22, 2022, the A2A S.p.A’s Organization, Management, and Control Model pursuant to Italian Legislative Decree 231/01 was updated. Among the companies subject to A2A’s management and coordination, 93 (ninety-three) companies, which are also consolidated, have adopted their own Organization, Management and Control Model pursuant to Italian Legislative Decree 231/01 as a tool to prevent the commission of the offenses envisaged in Italian Legislative Decree 231/01. The Administrative Body of each company with a Model has appointed a Supervisory Body entrusted with the task of supervising the functioning and compliance of the Model and its constant updating. Each Supervisory Body annually defines the plan of monitoring the activities that it shall carry out in the year of reference, also taking into account the audits planned by A2A S.p.A.’s Internal Audit Department relating to the checks pertaining to the relevant profiles pursuant to Italian Legislative Decree 231/01 and their results, as well as the checks planned by A2A S.p.A.’s HSEQ Compliance Review and Improvement department on the subject of the Environment, Health and Safety. All Group’s stakeholders can report any violation or suspected violation of the Code to the Supervisory Body or Internal Audit organisational structure through the appropriate channels for communicating confidential information.

In order to facilitate the receipt of reports, including anonymous ones, the A2A Group has implemented a specific IT platform called “A2A Reporting” (Whiteboiling), which constitutes an alternative channel to those already existing and it is accessible from the corporate intranet and from all the Group websites. The communication channels set up for sending reports are described in the A2A Group’s Guideline for Reports, including anonymous form (Whiteboiling) published on the A2A websites. Employees can also report illegal conduct or violations of the 231 Model of companies of which they have become aware in the context of their employment relationship. The reports are handled by the corporate Whiteboiling Committee or, if the facts reported are relevant pursuant to Italian Legislative Decree 231/01, by the competent Supervisory Body. The Group guarantees the protection of the whistleblower’s identity and confidentiality of the information received, and penalties are envisaged for those who violate the measures to protect the whistleblower and for those who make unfounded reports. In 2022, the awareness programme on the topic of compliance culture was continued through the provision of an on-line training course dedicated to the Code of Ethics.

Anti-Corruption Policy

All Group companies are systematically monitored in terms of risks connected with corruption. In line with what is outlined in the Group Code of Ethics and the specific regulatory document “A2A Group’s Anti-Corruption Policy”, the Group bans all forms of corruption, unlawful favours, collective conduct, requesting of advantages, confinement of material and immaterial benefits and other advantages aimed at influencing one of representatives of institutions or their relations, and Group’s employees. The Anti-Corruption Policy adopted by the A2A S.p.A’s BoD and implemented by the respective Administrative Bodies of the Group companies provides a systematic reference framework in the fight against corruption and it applies to Group’s staff and to all those who work for or on behalf of Group companies, within the scope of their activities and within the limits of their responsibilities, including the Corporate Bodies.

In 2022, the awareness programme on the topic of compliance culture was continued with the provision of an on-line course dedicated to the Anti-Corruption Policy. With reference to criminal proceedings concerning corruption allegations engaging A2A Group companies and/or their employees, it should be noted that in 2019, the Group became aware of a proceeding engaging the company Linea Ambiente S.r.l. that was the target of the anticorruption control authority, the Province of Taranto, of the authorisation for the expansion of the landfill managed by the company itself, which was assessed by the Company for compliance purposes pursuant to article 25, paragraph 2, of Italian Legislative Decree 231/01 in the preliminary hearing stage. In 2019, the Group further became aware of the proceedings against the Company for bribery offences pursuant to article 25, paragraph 2, of Italian Legislative Decree 231/01 in the preliminary hearing stage. In 2019, the Group further became aware of the proceedings concerning a corruption hypothesis contested by the Milan Public Prosecutor’s Office, in relation to the accused party assigned by AMSA S.p.A. and which of the Group became aware in 2019: this trial is still pending before the Court of Milan and AMSA as the offended party is a “civil party”. In 2021, the Group became aware of two proceedings related to the alleged offence of corruption engaging senior management of A2A Group companies: (i) one proceeding concerns alleged bribery for facts dating back to 2015-2017 in relation to certain tenders by Gelsia Ambienti S.p.A., which is the offended party; the case before the Court of Monza, in which Gelsia Ambienti, as the offended party, made itself a “civil party”, was settled in the first instance in 2022 with a plea bargain for the defendant who requested it, while the former director of the company was acquitted of the offence of bribery, but found guilty of the other alleged violations; (ii) the other proceeding concerns the merger between A2A and AEB and an alleged over-assessment of the assets contributed by A2E. Preliminary investigations are currently underway. In 2020, a bribery case came to light concerning an employee of AMSA S.p.A. at the time of the events, who later resigned, who was responsible for collecting and transporting municipal waste.

For a fee, this individual recovered and disposed of waste on behalf of third parties without making the necessary reports and deliberately failed to identify the group assigned to him by AMSA. The latter is an offended party to the crime and will be a “civil party” in the trial whose preliminary hearing has been set for 2023.

Human Rights Policy

The A2A Group’s commitment as a Life Company has led to the adoption by the A2A S.p.A’s BoD and the subsequent transposition by the respective Administrative Bodies of the Group Companies, of a policy aimed at protecting and promoting the recognition and safeguarding the dignity, freedom, equality of human beings, the protection of work, trade union freedoms, occupational health and safety, also with reference to its external collaborators, partners and suppliers. This tool identifies the groups of people most at risk of being impacted by the corporate activities and it promotes a commitment to respect human rights throughout the value chain adopted and in the implementation of projects aimed at supporting those in particular situations of economic and social vulnerability. The Human Rights Policy has been adopted, in addition and complementary to the Code of Ethics, in order to reaffirm the commitment of all the companies belonging to the Group to the promotion and support of all the values and principles affirmed by the institutions and International Conventions on the subject of human rights, to which the A2A Group adheres. The Policy applies to Group’s staff and to all those who work for or on behalf of Group Companies, within the scope of their activities and within the limits of their responsibilities, including the members of Corporate and Supervisory Bodies pursuant to Italian Legislative Decree 231/2001.

A training course on the A2A Group’s “Human Rights Policy” will be provided in 2023. As part of the Enterprise Risk Management process, the A2A Group periodically monitors the risk relating to any failure to comply with the principles of ethical and social responsibility envisaged by the standardSA8000, as well as any engagement in investigations and/or criminal proceedings for non-compliance or misconduct on the part of management and/or employees. With reference to the supply chain, the A2A Group periodically monitors a risk relating to the lack of ethical requirements of contracted supplies, also by means of a reputational analysis tool. To date, no episodes of human rights violations have been recorded. The A2A Group intends to initiate assessment activities as part of which any remedial action may be identified.

Code of Ethics

All of the Group’s activities and relations, both internal and external, are inspired by the observance of the principles, values and rules of conduct set out in the Code of Ethics. The A2A Group’s Code of Ethics, approved by A2A’s Board of Directors and implemented by the respective Administrative Bodies of the Group Companies, is an integral part of the Model pursuant to Italian Legislative Decree 231/01 and it defines the fundamental ethical principles, rules of conduct and responsibilities that the Group recognizes, respects and assumes as a binding value for the Group Companies, which are also consolidated, have adopted their own Organization, Management and Control Model pursuant to Italian Legislative Decree 231/01 as a tool to prevent the commission of the offenses envisaged in Italian Legislative Decree 231/01. The Administrative Body of each company with a Model has appointed a Supervisory Body entrusted with the task of supervising the functioning and compliance of the Model and its constant updating. Each Supervisory Body annually defines the plan of monitoring the activities that it shall carry out in the year of reference, also taking into account the audits planned by A2A S.p.A.’s Internal Audit Department relating to the checks pertaining to the relevant profiles pursuant to Italian Legislative Decree 231/01 and their results, as well as the checks planned by A2A S.p.A.’s HSEQ Compliance Review and Improvement department on the subject of the Environment, Health and Safety. All Group’s stakeholders can report any violation or suspected violation of the Code to the Supervisory Body or Internal Audit organisational structure through the appropriate channels for communicating confidential information.

In order to facilitate the receipt of reports, including anonymous ones, the A2A Group has implemented a specific IT platform called “A2A Reporting” (Whiteboiling), which constitutes an alternative channel to those already existing and it is accessible from the corporate intranet and from all the Group websites. Employees can also report illegal conduct or violations of the 231 Model of companies of which they have become aware in the context of their employment relationship. The reports are handled by the corporate Whiteboiling Committee or, if the facts reported are relevant pursuant to Italian Legislative Decree 231/01, by the competent Supervisory Body. The Group guarantees the protection of the whistleblower’s identity and confidentiality of the information received, and penalties are envisaged for those who violate the measures to protect the whistleblower and for those who make unfounded reports. In 2022, the awareness programme on the topic of compliance culture was continued through the provision of an on-line training course dedicated to the Code of Ethics.
The 231 Model, the Code of Ethics, the Anti-Corruption Policy and the Human Rights Policy are published both on the corporate intranet and on A2A’s website, which can also be accessed by external stakeholders. The principles and the rules of conduct contained therein are incorporated within the corporate procedures that describe and regulate these processes and which employees must adhere to in carrying out their corporate activities.

In 2022, 15395 hours of training were provided on the subject of Italian Legislative Decree 231/01, engaging 35% of employees. With reference to training on the principles of the Code of Ethics and the other A2A Group documents related to ethical/behavioural principles (i.e., the general section of the 231 Model, the Anti-Corruption Policy and the whistleblowing system), as at December 31, 2022 a total of 84% of employees, both full-time and part-time, had been trained.

It should also be noted that in 2021, the new Sustainable Procurement Policy (see page 20) and the Stakeholder Engagement Policy (see page 70) were also published.

International Trade Compliance

The A2A Group is subject to International Trade Compliance regulations issued by the Italian Government and the European Union and it applies, for contractual commitments with funding bodies, the provisions of specific laws and regulations issued by some other Countries and supranational bodies of international nature.

In this series, the A2A Group has adopted a specific procedure to regulate information flows, the methods of verifying counterparts and the standards of the clauses to be used in commercial contracts and agreements and it has provided additional training sessions, via webinars, to staff working in areas subject to ITC regulations. The Group uses a special IT tool for the automatic daily verification of the relevant counterparts under the ITC regulations to which it is subject or applies voluntarily.

Tax Compliance

In addition, in order to guarantee a correct tax management process, the Group is continuing to implement and include in the context of the Internal Control and Risk Management System (ICRMS), the Tax Risk Management and Control Model (Tax Control Framework - TCF) in line with the OECD guidelines and with the domestic regulations that implement them. The Tax Control Framework was implemented in 2017 in A2A Energia S.p.A., in 2018 in A2A S.p.A. and in UNARITI S.p.A., in 2020 in A2A Cido Ictalo S.p.A., in 2021 in A2A Ambiente S.p.A. and in 2022 in A2A Smart City S.p.A. In 2019, A2A and UNARITI were admitted to the collaborative Compliance Scheme with the Revenue Agency. This Regime, based on a relationship of collaboration and transparency between the taxpayer and the Financial Administration, provides for constant and preventive dialogue and favourable and rewarding measures for taxpayers who adhere to it. The implementation of the Tax Control Framework required the adoption of the Group’s Tax Strategy, a document approved by the Group Board, the purpose of which is to set out the principles and guidelines for the uniform management of taxation, in order to guarantee the correct and timely settlement of taxes and tax obligations. It should be noted that the Group operates mainly in Italy in terms of number of employees, revenues and taxes. It should be noted that the Group acquired some photovoltaic and wind power plants in Spain in 2022, where taxes in the amount of 2.4 million euro were paid. No controlled entity resides in blacklisted Countries or in tax havens, except for a small entity residing in a Country with a privileged tax regime.

Data Privacy

As part of their activities and/or services, the Group companies may become aware of and manage personal data, i.e., information relating to identified or identifiable individuals. Therefore, the Group considers it of fundamental importance to comply with current privacy legislation (e.g., Privacy Regulation (EU) 679/2016 and Italian Legislative Decree 196/2003) and to correctly and securely process any personal data of which it becomes aware.

To this end, the Group has equipped itself with a Personal Data Organisation and Management Model in which the roles actively engaged in the management of data protection topics within the Group are identified and their tasks and responsibilities are outlined, in particular, in addition to the figures envisaged by current legislation (e.g., Data Controller, Data Protection Officer, etc.), the Group has identified further roles of oversight at corporate level. In addition, the Group has implemented a series of procedures to regulate key privacy topics, such as personal data retention, risk analysis and impact assessments, and the management of data breaches.

Both the aforementioned Model and the relevant procedures are always available to workers on the corporate intranet. Awareness-raising training and communications are envisaged for staff specifically authorised to process personal data, and targeted training courses are provided for those who hold privacy roles or perform activities relevant to data protection.

The protection of personal data also takes place through the precise mapping of processing operations in special registers. The associated risks of such processing are assessed, and in the event of a high level of processing on the freedoms and rights of the data subjects, an assessment is also made of the adequacy of the security measures adopted. If the security measures are not completely adequate, an action plan is drawn up to implement solutions to mitigate the risks of unauthorized access or unwanted loss or modification of personal data. In the event of any data violations (data breach), an internal communication flow will be promptly activated in accordance with a specific corporate procedure to collect essential information and analyse the importance of the violation.

In addition, Group companies provide the persons to whom the processed data refer (data subjects) with information on such processing by providing privacy policies. The main policies are also published on the websites of the Group companies.

Requests and complaints from data subjects relating to privacy topics (e.g., requests for deletion or access to data, etc.) are handled according to a specific procedure issued at Group level. The data subject may request information on the processing of their personal data at any time by contacting the Data Controller or the Data Protection Officer at dpo.privacy@a2a.eu. These requests are subject to timely verification by the competent organisational structures, which then proceed to draft the responses, after discussion with the Data Protection Officer and/or the internal structure providing specialist support in the field of privacy.

As a general rule, any remedial actions are identified as a result of the verifications served to prepare the feedback and implemented within a short period of time.

With reference to third parties (e.g. suppliers) who process personal data on behalf of the Group companies, it is foreseen that specific agreements will be signed appointing them as data processors, containing the obligations and instructions that the third parties undertake to comply with, and the possibility for the Data Controller companies to carry out verification activities on the correct operation of the suppliers from the point of view of privacy. dpo.privacy@a2a.eu.

HSEQ Organizational Model

The Group has defined an organizational model for Environment, Health, Safety and Quality, in order to:

- identify HSEQ risks and responsibilities in positions close to the sources of risk to ensure their effective management, attributing the necessary powers to the figures who operate to manage the activities;
- identify, at the various levels, figures and corporate structures responsible for guidance, coordination and control tasks and others to support the businesses in the pursuit of strategies and corporate goals.

Figure 5 Total number of certificates issued
In 2022, all the companies that were ISO45001-certified as at 12.31.2021 maintained this certification, subject to scope changes, such as mergers or company transfers.

The implementation of these policies is also operated through the adoption of certified management systems according to the major voluntary standards recognized at the international level, such as ISO 14001 for the environment, ISO 9001 for Quality and ISO 45001 for Occupational Health and Safety, or within the European Community, such as EMAS Registration, which refers to Regulation (EC) 1221/2009. During 2022, the Parent Company obtained two new certifications in innovative areas: Information Security (standard ISO/IEC 27001) - Information Security Management System and Business Continuity (standard ISO 22301 - Business Continuity Management System). Interest in Social Accountability certification in accordance with the international SA8000 standard was confirmed, and a second Group Company (A2A Calore & Benzi) obtained the certification. To date, 91% of our plants are ISO 140001/EMAS certified.

Figure 6 Certifications Coverage

Safety (OHSAS 18001 and ISO 45001) / Number of employees

<table>
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<tr>
<th>Category</th>
<th>Drivers</th>
</tr>
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<tbody>
<tr>
<td>Natural events</td>
<td>Commodity</td>
</tr>
<tr>
<td>Financial</td>
<td>Legislative and regulatory amendments</td>
</tr>
<tr>
<td>Competitive regulatory environment</td>
<td>Macro-economic context</td>
</tr>
<tr>
<td>Strategic direction</td>
<td>Strategic initiatives and business plan</td>
</tr>
<tr>
<td>Drivers</td>
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<td>Category</td>
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<tr>
<td>Operational</td>
<td>Internal</td>
</tr>
<tr>
<td>Human Resources</td>
<td>Information technology</td>
</tr>
<tr>
<td>Information Technology</td>
<td>Strategic initiatives and business plan</td>
</tr>
</tbody>
</table>

Figure 7 The A2A Group’s risk model

23 Analysis and Management of Risks and Opportunities

The Group has set up a Risk Management Department that uses a risk measurement and detection process on the basis of the Enterprise Risk Management (ERM) method, developed in order to make business risk management an integral and systematic part of the corporate management processes. Such activities are carried out in accordance with the “Guidelines for the Internal Control and Risk Management System” approved by the Board of Directors and adopted by Group companies. The ERM process and method are formalized in the internal regulatory document “Enterprise Risk Management Policy”.

Through the engagement of all corporate structures, the risk measurement process is regularly activated, enabling the identification of the most significant critical issues, the measures to monitor them and the mitigation plans.

The risk profile of the Group and its companies, identified in the periodic (every 6 months) assessment process, is analysed by the respective BoD of the companies. In addition, ERM risk management integrates with the A2A Group’s management systems for Quality, Environment, Health and Safety and supports the development and maintenance of the respective certifications in accordance with ISO 9001, ISO 14001 and ISO 45001, as well as in accordance with SA8000 (Social Responsibility), ISO 39001 (Road Safety), ISO 27001 (Information Security), ISO 22301 (Business Continuity Management), and in general with management system standards which include the identification and management of risks among their requirements.

The ERM process takes into account all possible risks and it assesses their impact on the company, as regards both the financial and reputational aspects. To this end, the main risk factors considered relate to the company’s mission and to the relationship with the community, the nature and diversification of its business units, its growth plan, strategic goals, competitive and regulatory environment, macroeconomic and social-environmental scenario, topics related to climate changes, and the expectations of interested parties, characterized by increasing sensitivity towards climate change, environmental, health and safety topics, and sustainability topics more generally. In fact, during each periodic assessment, there are information flows with the Sustainability Development organizational structure, as well as with the Group’s Environment, Health and Safety structure. This comparison aims to share any changes in context and to further investigate risk/opportunity topics related to sustainability goals and it allows for a synergistic management of risk management activities and the results of stakeholder engagement activities. All of the above has highlighted a strong correlation between material sustainability topics and risks: in fact, all material sustainability topics are linked to one or more risks identified in ERM.

The Enterprise Risk Management methodology and process implemented by the Group also include the identification and management of opportunities, understood as scenarios with positive uncertainty that are linked to a risk scenario and whose expected benefit exceeds the mere elimination of potential negative impacts of the risk or that constitutes a possible positive (favourable) change in a parameter, compared with what was planned. To date, the opportunities identified mainly cover the following types: “strategic and plan initiatives”, “climate change”, “socio-environmental context”, “health and safety”, “commodity”, “cost of capital” and “fiscal and taxation”, the expected benefits are both for the Group’s reputation and economic and financial.

In addition, an analysis of the associated risks and opportunities and safeguards in place for material topics was conducted, and the details are illustrated in the tables presented at the beginning of each capital, apart from those linked to governance topics, which are given in the table below.
Group's Ethics and Integrity
The Group promotes the ethical conduct of its business, adopting specific prevention measures and standards (such as the Code of Ethics, the 231/01 Model, the Anti-Corruption Policy and other procedures to protect the corporate activities, also to protect human rights throughout the value chain), in order to prevent cases of corruption and money laundering that could create damage for the territory, for the market and for the Group's stakeholders. At the same time, A2A encourages the spread of an ethical corporate culture based on the principles of integrity, honesty and respect for human rights, launching specific information and training activities, as well as providing suitable systems for reporting irregularities and unlawful conduct.

#Anti-corruption #Compliance #Human Rights #Whistleblowing

Management approach (MA)

Mitigate
Adoption of a new Code of Ethics, valid for all Group companies. Adoption of the Quality, Environment, Health and Safety Policy and of the related system of internal procedures. Risk monitoring policy through organizational models pursuant to Italian Legislative Decree 231/01. Adoption of the Reporting procedure for the preparation of the NFR. ISO 9001, (Quality) ISO 14001 (Environment) and ISO 45001 (Health and Safety) certifications. Models and procedures for integration following M&A transactions. Internal training. Monitoring the main KPI subject to regulatory compliance. Adoption of the TCF - Tax Control Framework.

Risk factors

Any incompleteness of accounting and non-financial disclosures. Any “compliance” failures with regulations (e.g., in the areas of privacy, antitrust, bribery, business practices, tax, environment, health and safety, etc.) and/or authorisations may result in negative image impacts or fines or disqualifications. Any critical organisational and management issues resulting from M&A transactions.

Opportunity factors

Adherence to the Cooperative Compliance regime in the tax field.

Management approach (MA)

Mitigate
Responsible management of the supply chain, for example: investigation activities to counter contracting suppliers that do not comply with the A2A Group’s ethical requirements; obligations for the supplier to sign an ethical pact and a declaration of compliance with the legality protocol; progressive extension of ESG ratings to the A2A Group’s vendor list. Compliance with rules governing human rights by Group’s employees, by adopting the Code of Ethics. Creation of a non-profit organization to combat poverty and social vulnerability.

Risk factors

Topic of ethical conduct of suppliers or sub-suppliers. Failure to respect human rights by employees, suppliers, customers and partners.

Opportunity factors

Development of SA8000 certification for certain Group Companies.

2022 Actions

• We updated the A2A S.p.A’s Organization, Management, and Control Model pursuant to Italian Legislative Decree 231/01.
• We delivered a dedicated training course on the Code of Ethics, Whistleblowing, Anti-Corruption Policy and 231 Model.
• Two new certifications in innovative areas, such as Information Security and Business Continuity.

What we have done

• We updated the A2A S.p.A’s Organization, Management, and Control Model pursuant to Italian Legislative Decree 231/01.

What we are doing

• SA8000 Certification for A2A Calore e Servizi
• We carried out an initial assessment of respect for human rights, taking into account the indications of the new GRI Standards.

Sustainability plan actions

Compliance/ business ethics

2022 Actions

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Sustainability plan actions

Compliance/ business ethics
Sustainability in Governance
The Group adopts a holistic approach which, starting with the assessment of risks and opportunities on sustainability topics and the constant monitoring of regulatory developments in the ESG area, allows for the sustainable and responsible management of corporate activities, and at the same time, to respond promptly to the demands of legislators. The Group is also committed to achieving the sustainability goals of the United Nations’ 2030 Agenda through the adoption of specific measurable ESG KPIs and the integration of these into the corporate Management MBs.

Risk factors
Possible insufficient integration of ESG topics into corporate governance.
The risk of change: possible resistance to change in processes, systems, activities, models, tools, etc. in implementation of the integration of ESG policies in governance (e.g., diversity and inclusion).
Possible insufficient analysis of environmental and social impacts in the management of new acquisitions.

Opportunity factors
Training, internal communication, and projects to enhance ESG policy integration at all levels of the organization.

Management approach (MA)
Programmes to increase the awareness of the BoD with regard to sustainability topics.
Adoption of an Internal Board Committee dedicated to ESG topic and relations with territories.
Adoption of a Board Committee dedicated to risk control, which also reviews climate, environmental, social and compliance risks.
Progressive integration of ESG topics into due diligence processes.

Mitigate
Adoption of the Internal Control and Risk Management System Guidelines.
Adoption of the Enterprise Risk Management Policy procedure.
Integration of sustainability topics in Group’s Enterprise Risk Management (ERM) activities.
Constant updating processes and alignment between the Group’s ERM, SUD and HSE Departments.
Adoption of a risk model that includes risk types related to all A2A Group’s material topics.

What we have done
2022 Actions
• the ESG and Territory Relations Committee met 9 times
• We carried out 2 questionnaires on “Sector experience” and “Soft skills” of the BoD
• We conducted 3 Induction sessions in the Board of Directors on ESG topics

What we are doing
Sustainability plan actions
Sustainability governance

What we have done
2022 Actions
• Semi-annual assessment of the Audit and Risk Committee on climate change topics
• Coverage of all the material topics identified through risk and opportunity analyses
• Periodic alignment meetings between structures for sustainability context assessment

What we are doing
Sustainability plan actions
Risk Management
A2A's Sustainable Strategy
3 A2A’s Sustainable Strategy

The founding elements of A2A’s business - energy, water and environment - represent the levers through which the Group intends to stimulate a change towards a true ecological transition that represents an opportunity for everyone.

For this reason, in 2021 the Group decided to include its own purpose in its name - Life Company. In fact, being a Life Company means aiming at a sustainable quality of life for the land, the environment and people, preserving resources and combating climate change. This concept is at the heart of A2A's strategy and of the services it brings to its territories every day.

Main national and international networks and associations on sustainable development topics of which A2A is a member

Since 2019, A2A has been a member of the United Nations Global Compact, subscribing to the 10 founding principles relating to human rights, working conditions, the environment and the fight against corruption. As part of the network, every year A2A publishes its own Communication on Progress (CoP), which coincides with this document.

Since 2017, A2A has been a member of the Climate and Clean Air Coalition (CCAC) aims to construct, share and foster the implementation of policies and practices aimed at reducing climate pollutants over the next decades. More specifically, the Coalition supports action in the field through 11 initiatives. Since 2017, A2A has been one of the players engaged in the initiatives aiming to mitigate climate pollutants in the municipal solid waste sector.

Since January 2018, A2A has been a member of the Sustainability Makers, a network that brings together professionals in all types of organizations who are dedicated to the management of social, environmental and sustainability issues related to corporate activities.

In 2019, the A2A Group’s AEM Foundation adhered to the Italian Alliance for Sustainable Development and it has since played an active part in its activities and working parties.

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In 2022, A2A joined the Foundation for Sustainable Development. In line with the goals of promoting a green economy, the Foundation acts as a national and international reference point on climate and energy topics and works to stimulate and support the transition of all sectors of the economy towards climate change goals.

A2A has been a promoter of Italy for Climate since 2022, the initiative of the Foundation for Sustainable Development with the aim of promoting the implementation of a climate roadmap for Italy, in line with the European indications of the Green Deal and the goals of the Paris Agreement.

3.1 Background information and scenarios

Reference energy scenarios

The new report “Climate Change 2022: Impacts, Adaptation and Vulnerability” of the Intergovernmental Panel on Climate Change (IPCC) confirms that the extreme climate events this year, mainly caused by human activity, have led to irreversible impacts on nature and people, and it emphasises the need to limit global warming to below 1.5°C in order to achieve a just, equitable and sustainable world. The report also highlights the importance of increasing ambition in both adaptation and mitigation and placing these topics at the centre of political agendas and public attention.

2022 was a particularly difficult year for the energy sector. The International Energy Agency (IEA) points out in its World Energy Outlook (WEO) 2022 how Russia’s invasion of Ukraine has triggered one of the most complicated global energy crises - an unprecedented shock in complexity due to Russia’s primacy as a fossil fuel exporter. With the energy commodity prices reaching historic highs and the resulting inflationary pressures, the number of people without access to modern means of energy is increasing for the first time in a decade.

The IEA illustrates three main scenarios showing different potential evolutions of the global energy system depending on underlying assumptions. Simulated through a framework reflecting the interactions between policy, cost and capital expenditure choices, these scenarios take into account the latest market and cost data that have emerged due to the current international environment. The common point of each scenario is the growing global demand for energy, driven by economic trends and demographic forces.

The Announced Pledges Scenario (APS) assumes that governments will fully achieve their climate targets on time. The scenario shows how the combined implementation of all the announced net-zero ambitions and those stemming from the COP26 Global Methane Pledge could lead to a global CO₂ emission reduction compatible with a temperature increase of +1.7°C by 2100 (with 50% probability).

In the Stated Policies Scenario (STEPS), the IEA illustrates the evolution of the energy markets on the basis of the actual measures implemented by governments in order to achieve their targets. This scenario presents growth in energy demand to 2030 at an annual rate of about 1%. Almost all of it is met by renewable technologies, especially in advanced economies. The cost advantages of mature renewable technologies and the prospects for new technologies, such as green hydrogen, are driven in this scenario by the US Inflation Reduction Act. In the STEPS scenario, the IEA sees a definitive peak in global demand for fossil fuels for the first time, while the scenario being based on the current policy framework. The STEPS scenario takes global CO₂ emissions towards a trajectory compatible with an increase in planetary temperatures to +2.5 °C by 2100 (with 50% probability).

The Net Zero Emissions by 2050 (NZE) scenario represents the normative scenario produced by the IEA that demonstrates a possible path for stabilising global temperatures at +1.5 °C compared to the pre-industrial era. In contrast to the analysis produced in its previous publication, the IEA notes that the efforts required to achieve this goal have increased. In this scenario, the advanced economies show that they achieve this goal earlier than emerging economies actually could. The scenario integrates the achievement of the UN Sustainable Development Goals related to energy.

According to the “Renewable Energy Market Update 2022”, in many Countries, governments are devising actions to limit rising energy prices, reduce dependence on Russian gas supplies and accelerate the transition to renewable energies, focusing mainly on wind and solar energy. In fact, compared to 2020, the total cost of capital expenditures in onshore photovoltaic and wind power plants is estimated to rise from 15% to more than 25% in 2022.
The UN Climate Change Conference and the European and National Strategies

Also for 2023, the latest output of the Global Risk Report places climate change-related risks on the podium of the top risks for the next 10 years. Failure to mitigate climate change, Failure of climate-change adaptation, Natural disasters and extreme weather events.

The fact that the failure of risk climate mitigation actions retains the same place as the first risk is illustrative of the fact that the current climate commitments of States will not be sufficient to limit the temperature increase by 2°C by 2050. COP26, the United Nations Climate Change Conferences, held in November 2021 in Glasgow and concluded with the definition of the Glasgow Climate Pact, certainly marked a change of course in national and international policies supporting the ecological transition and the fight against climate change. However, according to an analysis conducted by the International Energy Agency - IEA, current commitments cover less than 5% of the gap in emission reductions that needs to be closed by 2030 for the 1.5°C target to still be achievable. Nonetheless, COP26 was the most attended conference by the business world, marking a shift from top-down reliance on governments to bottom-up action, encouraging the growth of initiatives in this regard, such as the Glasgow Financial Alliance for Net Zero.

Moreover, coal and fossil fuels were explicitly referenced for the first time, outlining that commitments should converge on progressively reducing coal power and moving away from subsidies for inefficient fossil fuels. Additionally, the governments of 193 Countries were asked to update and strengthen their Nationally Determined Contributions - NDCs and the Paris Rulebook for implementing the Paris Agreement was finalized, containing rules for reporting and monitoring emissions and rules establishing new carbon markets.

Following COP26, COP27 was held in Sharm El Sheikh in November 2022. The participating Countries did not reach a final agreement on reducing emissions and phasing out fossil fuels. However, one of the milestones achieved was the establishment of the Loss and Damage fund, dedicated to the poorest and most vulnerable Countries that have suffered the most severe effects of climate change.

The European Union has assumed a key role in the fight against climate change and it firmly supports the transition to a cleaner, more efficient and sustainable economy, placing itself as a leader thanks to its considerable efforts and highly ambitious legislation, in which multiple sectors and players are engaged.

Already in 2019, the European Union approved the Green Deal, the EU strategy to achieve carbon neutrality by 2050, which included a target to reduce CO2 emissions by at least 55% compared to 2005. The Green Deal was then reinforced in 2021 with “Fit for 55”, a new package updating climate, energy and transport regulations. The main goals for Fit for 55 include a 40% share of energy from renewable sources in the energy mix by 2030, a 35% reduction in energy consumption in final energy consumption and a 95% reduction in primary energy consumption. The European legislators are also working on an update of these targets, with the approval in September 2022 of a revision of the Renewable Energy Directive that envisages an increase of the share of renewables in the energy mix by 45% by 2030, a reduction of final energy consumption by at least 40% and a reduction of primary energy consumption by at least 42.5% compared to 2007 figures. In addition to decarbonization, the circular economy is key to achieving the ecological transition in a systemic way. In fact, 55% of climate-changing emissions are attributable to the energy sector and the remaining 45% to production.

In order to ensure the achievement of the European goals, the European Commission has developed further specific measures and plans. Among them, the “REPowerEU Plan” was approved in 2022 to make Europe independent of fossil fuels before 2030, following the effects of the Russian invasion on Ukraine. The plan is based on 3 main points: diversifying sources of supply, saving energy use and accelerating the spread of clean energy. In addition, the new plan has increased the European energy efficiency target to 15% compared to 2020.
Macroeconomic Context and Plan Update

2022 was characterized by a complex geopolitical and economic environment and by a volatile energy scenario: the price of electricity reached 700 €/MWh in August, inflation in the EURO zone soared to 10% in July, and the 12-month Euribor interest rate exceeded 3% in September. While on the one hand the outlined framework generated great economic uncertainty, on the other hand it made the goals of A2A’s Plan even more relevant. Indeed, a renewed push towards decarbonization and the need to increase the level of energy autonomy is emerging in Europe. We have also witnessed a renewed commitment to support the construction of plants in Italy aimed at contributing to the Country’s energy independence: the strong focus on energy autonomy drives the enhancement of the resources available on the territory to unlock the potential of renewable sources, in line with the Group’s main lines of development.

The uncertain economic environment and the impacts generated (e.g., increase in procurement costs, increase in the nominal value of receivables, accrual of customer payments and increase in the cost of debt) make it opportune to update the next few years of the Plan, with a greater focus on managing the risks arising from the changed environment, reshaping capital expenditures, while keeping the ten-year targets unchanged (16 billion euro cumulated between 2021 and 2030 in line with the first ten-year Plan).

Circulatory Economy

On the Circular Economy front, A2A has already invested more than 1.6 billion euro in the two-year period 2021-2022 and it envisages total capital expenditures of around 5 billion euro in the Plan, focusing on closing the waste cycle, recovering materials, energy and heat and developing bioenergy, achieving an EBITDA of 0.8 billion euro by 2030. With the Plan update, the Group will increase its waste treatment and enhancement capacity by consolidating its leading role in Waste-to-Energy and a significant position in the biomethane market segment. Thanks to its capital expenditures, by 2030 A2A will have plants capable of producing 19 TWh of thermal energy for district heating and plants for treating organic waste and agri-food waste to produce 170 Mt Biom from biomethane. Leveraging the Group’s leadership in the circular economy, A2A will launch the lithium battery recycling business. Thanks to this new business, A2A will be able to process around 10 tonnes of batteries each year.

Figure 8 Circular Economy: the Value Chain of Planned Capital Expenditures to 2030

- 3.6 Mt Energy recovery
- 0.4 Mt Bioenergy recovery
- 3 Mt Biomethane

Energy Transition

A2A’s Energy Transition Plan envisages total capital expenditures of around 11 billion euro, mainly focused on the development of renewable energies, consumption flexibility and electrification, with a target EBITDA to 2030 of around 17 billion euro. The Plan aims to build a 5 GW portfolio of hydro, solar and wind power, capable of producing around 9 TWh of green energy.
In order to ensure greater penetration of non-programmable renewables, it will also be necessary to invest in the flexibility of the electricity system. To this end, A2A will develop a combination of solutions that will contribute to the 1.7GW increase of new flexibility by 2030, thanks to a new gas-fired combined cycle enabled by blending\[5] with hydrogen (winner of a Capacity Market auction\[5]), a new gas peaker\[6] already authorised, electrochemical storage solutions and upgrades aimed at increasing the flexibility level of the plants (two of which have already been implemented). The Group’s commitment to supporting the electrification of consumption also continues, which will be enabled by capital expenditures in strengthening and developing A2A’s electricity grid, with the construction of 18 new primary substations, laying 2,500 km of new grids and more peak power managed. On the market side, the customer base will be expanded by proposing new VAS\[7] solutions, promoting electric mobility and the development of distributed generation and self-consumption through small-scale solar and energy communities. In A2A’s vision, the circular economy and energy transition complement each other, developing synergies between the Business Units.

By 2030, the Group will produce a total of around 13 TWh of green energy and energy recovery, combining the contribution of hydroelectric, photovoltaic and wind power with that of waste-to-energy and bioenergy.

Environment, Social and Governance

The commitment to ESG remains at the heart of the Business Plan, focused on a fair, ecological and shared transition. A great deal of attention is paid to environmental sustainability, to the development of territories and communities, and to the enhancement of the Group's people by building and spreading an inclusive approach in the corporate culture.

The update of the 2021-2030 Plan confirms the decarbonization targets that see A2A reach net-zero by 2040, ten years ahead of EU targets, and the strategy focused on increasing energy production from renewable sources and the use of new technologies.

A2A’s approach to diversity and inclusion is based on the principles of respect, integrity and protection of the individual within the working environment. In 2022, the presence of women on the Boards of Directors of Group companies stands within the working environment. In 2022, the presence of women on the Boards of Directors of Group companies stands at 48%, while 25% of managers are women. A2A continues to set itself challenging goals for the coming years (e.g., 90% BoD with women by 2030). 25% of employees with disabilities were included in enhancement projects and 12% of the Group’s people had formally assigned targets: the target is to reach 100% for both KPIs by 2030.

Work also continued on making the Supply Chain sustainable, confirmed by the progress achieved in 2022 with 60% of orders awarded to suppliers with ESG scoring. The Plan confirms the commitment to achieve an incidence of sustainability criteria in the vendor rating process of more than 30% by 2030, with 90% awarded to suppliers with ESG scoring.

Engagement with the main stakeholders in the reference territories was strengthened in 2022: 9 multi-stakeholder forums and developing A2A’s electricity grid, with the construction of 16 which will be enabled by capital expenditures in strengthening and developing A2A’s electricity grid, with the construction of 18 new primary substations, laying 2,500 km of new grids and more peak power managed. On the market side, the customer base will be expanded by proposing new VAS solutions, promoting electric mobility and the development of distributed generation and self-consumption through small-scale solar and energy communities. In A2A’s vision, the circular economy and energy transition complement each other, developing synergies between the Business Units.

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### Circular Economy

<table>
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<th>2022</th>
<th>2026</th>
<th>2030</th>
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<td>6</td>
<td>Water</td>
<td>Linear water losses (cm/km/day) (average)</td>
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<td>19.2</td>
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<td>Districtization of the aqueduct grid - A2A perimeter Water cycle (% of total)</td>
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<td>Waste recovery and treatment</td>
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<td></td>
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<td>Waste sent for material recovery (Mt)</td>
<td>1.0</td>
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<td>Municipal waste collected sent to landfill (% of total)</td>
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<td>Partnerships launched for circular economy initiatives (number)</td>
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<td>CO₂ avoided thanks to TLR (kt/y)</td>
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<td>-300</td>
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<td>-391</td>
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## Energy Transition

<table>
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<td>7</td>
<td><strong>Renewables</strong></td>
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<td>Total installed RES capacity (GW) - Italy perimeter</td>
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</tr>
<tr>
<td>13</td>
<td></td>
<td>Percentage of renewable energy produced on the total - Generation BU</td>
<td>30%</td>
<td>19%</td>
<td>32%</td>
<td>52%</td>
</tr>
<tr>
<td>11</td>
<td><strong>Emissions</strong></td>
<td>Develop actions aiming to reduce the environmental footprint, like direct and indirect emissions of greenhouse gases</td>
<td>Emission factor (gCO2eq/kWh) - perimeter aligned with SBTi approved target (Scope 1 + Scope 2)**</td>
<td>332</td>
<td>386</td>
<td>289</td>
</tr>
<tr>
<td>13</td>
<td></td>
<td>Scope 2 emissions (kCO2eq) - energy purchase</td>
<td>21</td>
<td>21</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>9</td>
<td><strong>Smart Grid</strong></td>
<td>Develop solutions to offer a better information access infrastructure (Smart Grid) and improve the grid resilience and to contribute to the growing electrification of consumption</td>
<td>User interruptions in LV - SAIFI (#/year/POD)</td>
<td>1.61</td>
<td>1.84</td>
<td>1.26</td>
</tr>
<tr>
<td>7</td>
<td><strong>Green energy – end-use energy efficiency</strong></td>
<td>Contribute to the reduction of emissions of end customers through the sale of green energy and the development of energy efficiency measures for public and private real estate assets</td>
<td>Green energy sold to the market (TWh)</td>
<td>4.7</td>
<td>7.0</td>
<td>10.8</td>
</tr>
<tr>
<td>11</td>
<td></td>
<td>Loyal customers with energy efficiency services of total</td>
<td>1.9%</td>
<td>3.9%</td>
<td>11.5%</td>
<td>23.5%</td>
</tr>
</tbody>
</table>

* The value of KPI for total perimeter (Italy + Spain) is 2,504 MW.
** Note that the direct emissions component (Scope 1) accounts for 99.98% of the numerator of the emission factor approved by SBTi, which in 2022 results in 8.6 mln tons CO2. The contribution of indirect energy emissions (Scope 2) is negligible, amounting to 1319 tons.
Letter to stakeholders

Note on Method

1. The A2A Group and its Business Model
2. Governance

3. A2A’s Sustainable Strategy

Background Information and Scenarios
The 2021-2030 Strategic Plan
The Sustainability Plan
Risk Management and Climate-related Opportunities

4. Stakeholder Engagement and Materiality Analysis

5. Financial Capital

6. Manufacturing Capital

7. Natural Capital

8. Human Capital

9. Intellectual Capital

10. Relational Capital

Independent Auditor’s Report

A2A 2022 Integrated Report

SDG Action KPIs 2021 2022 2026 2030

**Quality**
Maintain high quality standards of the services supplied by keeping high customer satisfaction levels

- Quality
  - Number of supplies billed (thousands)
    - 2021: 1,314
    - 2022: 1,619
    - 2026: 3,053
    - 2030: 5,513

- Quality
  - % of customer satisfaction
    - 2021: 14%
    - 2022: 18%
    - 2026: 24%
    - 2030: 28%

**Innovation and R&D**
Develop capital expenditures in research and development, increasing the number of partnerships with international research centres and universities. Develop new technologies, patents for technological innovation.

- Innovation and R&D
  - Initiatives of crowd sourcing of ideas and solutions (e.g., scouting, innovation brokers, etc.) to address sustainability goals
    - 2021: 8
    - 2022: 13
    - 2026: 15
    - 2030: 15

**Cyber & O.T. Security**
Infrastructure improvement projects, as well as of IT/OT/IoT platforms and applications. Development of defence mechanisms and protection against logical, viral attacks.

- Cyber & O.T. Security
  - Digital contacts of total customers
    - 2021: 14%
    - 2022: 18%
    - 2026: 24%
    - 2030: 28%

SDG Action KPIs 2021 2022 2026 2030

**Sustainability in planning and capital expenditure processes**
Adoption of sustainable finance tools to support the funding strategy.

- Sustainability in planning and capital expenditure processes
  - Sustainable debt of total (%)
    - 2021: 44%
    - 2022: 58%
    - 2026: 79%
    - 2030: >90%

**ESG rating**
Participation in assessments to evaluate the Group’s ESG performance, and implementation of activities to continuously improve the rating.

- ESG rating
  - Improve the score in at least 2 sustainability ratings/year
    - 2021: 5
    - 2022: 3
    - 2026: >2
    - 2030: >2

**Business Ethics**
Proactively promote a culture of compliance and respect for the main national and international guidelines on ethical topics among the Group’s stakeholders.

- Business Ethics
  - Employees trained in privacy matters
    - 2021: 82%
    - 2022: 84%
    - 2026: >80%
    - 2030: >80%

**Risk Management**
Verify that the system used to identify, manage and prevent corporate risks adequately covers sustainability risks (and, in particular, social-environmental risks), also in organizational terms.

- Risk Management
  - Identify ERM risks on all material topics
    - 2021: 100%
    - 2022: 100%
    - 2026: 100%
    - 2030: 100%
<table>
<thead>
<tr>
<th>SDG</th>
<th>Action</th>
<th>KPIs</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Health and safety</td>
<td>Accident Frequency Index (If) with gate on Severity Index (Ig) calculated taking into account only the first progress (2021: 20.02, 2022: 19.66, 2026: 15.13, 2030: 12.72 (gate Ig&lt;=0.26))</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Number of accesses to health promotion initiatives (2021: 5,100, 2022: 9,087, 2026: 11,600, 2030: 15,000)</td>
</tr>
<tr>
<td>6</td>
<td>MbO and Performance Management</td>
<td>Employees with formally assigned goals (% of total employees) (2021: 12%, 2022: 13%, 2026: 50%, 2030: 100%)</td>
</tr>
<tr>
<td></td>
<td>Welfare, diversity and equal opportunities</td>
<td>Women in positions of responsibility (% of total managers) (2021: 24%, 2022: 26%, 2026: 29%, 2030: 35%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Disabled employees engaged in specific support/inclusion projects (% of total employees belonging to protected categories) (2021: 10%, 2022: 27%, 2026: 80%, 2030: 100%)</td>
</tr>
<tr>
<td>2</td>
<td>Training</td>
<td>Employees engaged in training on sustainability, SDGs, Diversity and Inclusion (% of employees to whom content is made available) (2021: 60%, 2022: 100%, 2026: 100%, 2030: 100%)</td>
</tr>
<tr>
<td>11</td>
<td>Responsible procurement</td>
<td>Incidence of sustainability criteria in the vendor rating process (2021: 17%, 2022: 17%, 2026: &gt;25%, 2030: &gt;30%)</td>
</tr>
<tr>
<td></td>
<td>Education</td>
<td>Stakeholders engaged in environmental education initiatives (2021: 44,000, 2022: 63,410, 2026: 35,000, 2030: 40,000)</td>
</tr>
</tbody>
</table>
3.4 Risk Management and Climate-related Opportunities

The A2A Group has a system in place for identifying, assessing and managing climate change risks and opportunities that is integrated into the Group Enterprise Risk Management process. The main features of the system with reference to climate risks are described below. The risks identified for the A2A Group are the result of the materiality analysis carried out based on the following references:

- climate-related hazards as classified by the EU Taxonomy and the delegated acts issued in implementation of the EU Regulation 2020/852 on Green capital expenditures
- the risk categories outlined in the recommendations of the Taskforce on Climate-related Financial Disclosures (TCFD)
- the businesses operated and the services offered by the Group, as well as the risks already included in the Group’s risk profile.

The analysis was also supported by the document “Climate Change, Infrastructure and Mobility” prepared by the Ministry of Infrastructure and Sustainable Mobility and presented at the conference with the same name held at the Milan Polytechnic University of Milan on September 28, 2022.

Climate Hazards and Critical Issues for the A2A Group

A systematic assessment has been underway since 2021 regarding the exposure of the A2A Group companies and assets to climate-related hazards as classified by the EU Taxonomy and the Delegated Acts issued in implementation of EU Regulation 2020/852 (see note). To this end, more than 25 ad hoc interviews have been conducted by the Enterprise Risk Management structure.

Figure 11 shows the main climate critical issues for each of the A2A Group’s Businesses.

**Integrated Water Service**

The Group companies operating in the integrated water service are exposed to the risk of interruptions in the drinking water distribution service caused by the potential scarcity of water resources mainly as a result of any prolonged periods of drought, which could lead to the depletion of supplies of source that are more sensitive to seasonal fluctuations and rainfall patterns, normally located in mountainous municipalities. The consequences of this risk for the Group are represented by possible reputational impacts in relation to a possible lowering of the level of public satisfaction, as well as economic impacts for possible penalties in case of non-compliance with the service quality indicators established by the Authority. Assessments and ways for managing these risks are contained in the Table 12.

**Thermoelectric Production**

Thermoelectric power plants based on a thermodynamic cycle require a cold source to cool the steam used in the generators, in order to condense it and return it to the boiler to restart the power generation cycle. The cold source can be a surface watercourse (river or canal), the sea or ambient air, depending on the plant. Periods of drought, especially in conjunction with high waves and/or shorter increases in summer temperatures of the air, watercourses or the sea can lead to the need to reduce the load of the plants due to the unavailability of sufficient quantities of water (excessively low watercourse levels) and because there are limits on the maximum seasonal fluctuations and rainfall patterns, normally located in mountainous municipalities. The consequences of this risk for the Group are represented by possible reputational impacts in relation to a possible lowering of the level of public satisfaction, as well as economic impacts for possible penalties in case of non-compliance with the service quality indicators established by the Authority. Assessments and ways for managing these risks are contained in the Table 12.

**Other Businesses**

Acute or chronic water shortages resulting from any changes in the rainfall event regime in the short and medium/long term also entail minor risks for other A2A Group’s businesses/assets:

- district heating in the event of chronic shortages, possibly lowering of the water level of water drawn for the operation of heat pumps and possible need to deepen wells;
- biomass plants: possible reduced availability of biomass from crops;
- waste treatment plants: changes in the moisture content of waste entering the plants and possible critical issues in normal operation.

This assessment has made it possible to build an initial database that includes the physical climate change adaptation measures implemented by the various Group companies and to have a knowledge base to identify the most relevant areas for conducting future in-depth studies on forecast climate parameters, which may be useful for improving the assessment and optimizing the adaptation and risk reduction measures.

**Water Scarcity**

The A2A Group’s activities and its various businesses significantly depend on the availability of water resources. The following is a description of the main interdependencies and risks of acute or chronic water shortages resulting from possible changes in the precipitation event regime in the short and medium/long term due to climate change.

**Hydroelectric Production**

The production of electricity with hydroelectric plants, whether reservoir or flowing water, is closely dependent on the availability of water in reservoirs or in rivers. Lowering of the water level of the reservoir or river can affect the production of the plants by lowering the flow of water available for the production of electricity, with possible effects on the efficiency of the production process. In the event of acute water shortages, the plants can also be forced to operate in a mode not designed for this purpose, reducing their efficiency and performance.

**Other Businesses**

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- biomass plants: possible reduced availability of biomass from crops;
- waste treatment plants: changes in the moisture content of waste entering the plants and possible critical issues in normal operation.
The following table describes the climate risks and opportunities for the A2A Group, identified in accordance with both the Task Force on Climate-related Financial Disclosures (TCFD) reporting standards and the UN’s Risk Management Methodology and processes. For each climate topic, the line of business affected, the classification according to the “TCFD” categories and the time horizon over which the climate risk or opportunity may occur are indicated. In addition, the impacts to the Group and the management strategy are described. The economic-financial or reputational assessment of physical climate risks concerns the relevant critical issues arising from the analysis of climate-related hazards in Figure 12.

Climate risks and opportunities are identified on the basis of three time horizons: short-term, corresponding to the current year and next year; medium-term, corresponding to 5 years; and long-term, corresponding to 10 or more years, until 2050 and beyond. The choice of these horizons was based on an analysis of the relevant climate, economic, regulatory and financial context (hereafter referred to as scenario analysis) and it overlaps with the planning period of the Industrial Plan and Sustainability Plan.

### Figure 12: Task Force on Climate-Related Financial Disclosure

#### Table note: time horizon

<table>
<thead>
<tr>
<th>Code</th>
<th>TCFD classification</th>
<th>Risk/opportunity topic</th>
<th>Impact and probability</th>
<th>Management and capital expenditure strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td>CC1</td>
<td>Generation and Trading Business Unit</td>
<td>Physical and Social</td>
<td>Lower /greater volumes and margins of hydroelectric plants</td>
<td>Development of tools to improve precipitation event and output forecasts. Development of analysis and engineering models to support the planning of hydroelectric plants, both short and medium term.</td>
</tr>
<tr>
<td>CC2</td>
<td>Generation and Trading Business Unit</td>
<td>Physical and Social</td>
<td>Lower /greater volumes and margins of hydroelectric plants</td>
<td>Development of tools to improve precipitation event and output forecasts. Development of analysis and engineering models to support the planning of hydroelectric plants, both short and medium term.</td>
</tr>
<tr>
<td>CC3</td>
<td>Generation and Trading Business Unit</td>
<td>Environmental and Social</td>
<td>Lower /greater volumes and margins of hydroelectric plants</td>
<td>Development of tools to improve precipitation event and output forecasts. Development of analysis and engineering models to support the planning of hydroelectric plants, both short and medium term.</td>
</tr>
</tbody>
</table>

For the presentation of climate risks, the impact scales refer to impacts on EBITDA (downside for risks and upside for opportunities).

- Low less than 10% (S/M/L)
- Medium between 10% and 20% (S/M/L)
- High more than 20% (S/M/L)

Impact <10% Unlikely; >10% and <=50% Possible; > 50% Probable

For the presentation of climate opportunities, the impact scales refer to impacts on EBITDA (downside for risks and upside for opportunities).

- Low less than 5 M€
- Medium between 5 M€ and 20 M€
- High more than 20 M€

Probability: <10% Unlikely; >10% and <=50% Possible; > 50% Probable

The Business Plan includes:
- the development of district heating grids and strategies to increase the number of customers;
- projects for the recovery of “heat waste” and reusing of existing plants, in order to optimize energy costs and maintain competitiveness.

These capital expenditures, in addition to mitigating risk, are aimed at developing the district heating business.

CapEx aiming to approximately 34 M€ eligible according to the EU Taxonomy for Green capital expenditure (Regulation 2020/852). A share of 3.8 M€ is financed through NIRSP.

Presence of corporate units dedicated to elaborating engineering analyses and models to support the management and optimization of heat production/supply also in relation to demand trends.

Adoption of IT tools which allow gas demand forecasting, use of weather forecast service providers.

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- projects for the recovery of “heat waste” and reusing of existing plants, in order to optimize energy costs and maintain competitiveness.

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Presence of corporate units dedicated to elaborating engineering analyses and models to support the management and optimization of heat production/supply also in relation to demand trends.

Adoption of IT tools which allow gas demand forecasting, use of weather forecast service providers.
**CC8: Smart Infrastructure Business Unit**

**Physical Chronic**

### CC8: Smart Infrastructure Business Unit

|------|---------------------|------------------------|--------------------------|-----------------------------------------|
| **Relevance of electricity distribution networks** Risk of interruptions of electricity distribution service caused by: - peaks in demand for summer air conditioning as a result of heat waves - flooding caused by heavy rain - greater energy demand as a result of the electrification of services (electric car development of public transport heating).
| Opportunity probability: Likely |
| Impact Reporting impacts on the grid in case of prolonged service interruptions. |
| Probability: Possible |
| Creation of a working group for “Mill heat wave preparedness” to coordinate initiatives for the prevention and reduction of power failures and communication. |
| Penalties for failure to meet minimum service continuity levels. |
| Financial and the business risk. |
| **Risk probability:** Possible |
| Impact Remuneration of risk management capital expenditures with predetermined rates within AREERA regulated business. Margins already included in Business Plan forecasts. |
| Adhesion to a new bonus mechanism granted by AREERA to encourage the implementation of specific interventions to increase the reliability of the grid. |
| **Opportunity probability:** Likely |
| Impact Mapping of leaks from aqueducts in order to identify the most critical parts. Studies to use in conditions of scarcity emergency – freshwater reserves (lakes) to supplement upstream sources. |
| Participation in the “Water Stressed Areas” project mapping the municipalities most at risk and rating the monitoring of the quantities of treated, dispersed and lost water. |
| Continuous monitoring of source and reservoir levels. |
| Emergency management with road tankers and mobile tanks, also with the support of the Civil Defence. |
| The Business Plan includes capital expenditures for: reduce leakage from the water grid - implement new capture from new sources of supply - interconnect aqueducts in order to create a “collaboration” between sources of supply and distribution grids. |
| CapEx around 90 M€ eligible according to the EU Taxonomy for Green capital expenditures (Regulation 2020/852). Since they reduce the risks arising from possible drought phenomena, they are configured as climate change adaptation activities within the EU Taxonomy. |

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**CC7: Smart Infrastructure Business Unit**

**Physical Chronic**

### CC7: Smart Infrastructure Business Unit

<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td><strong>Scarcity of water for drinking water use</strong> Risk of failure to continuously supply drinking water in the event of prolonged periods of drought and/or changes in the hydrogeological regime. Opportunities to make remunerated adaptation capital expenditures.</td>
<td></td>
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<td></td>
</tr>
<tr>
<td><strong>Opportunity probability:</strong> Likely</td>
<td></td>
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</tr>
<tr>
<td>Impact Reporting impacts in the case of interruptions of water supply service for prolonged periods and/or on significant portions of territory.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Probability: Possible</td>
<td></td>
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<td>Impact Remuneration of risk management capital expenditures with predetermined rates within AREERA regulated business. Margins already included in Business Plan forecasts.</td>
<td></td>
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<td></td>
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</tr>
</tbody>
</table>

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**Code**

|------|---------------------|------------------------|--------------------------|-----------------------------------------|
| **CC8 A2A Group** | **Physical Acute** | Extreme weather phenomena Risks to Group’s assets and business continuity as a result of acute physical weather hazards (e.g., floods, landslides, water bombs, tornadoes, etc.) which affect Group and/or third-party plants and infrastructure.
| Impact Direct damage to Group’s assets. Indirect damage due to the need to interrupt production activities. Economic and reputational impacts should such extreme events not be managed in an optimal way for the purpose of territorial safety in the areas where the Group operates. |
| Probability: Possible |
| Insurance contracts with extended coverage also for damages from natural phenomena. |
| Improvement plans in terms of loss prevention, shared with the insurance broker. |
| Procedures and emergency plans to promptly and optimally manage the onset of any acute weather phenomena. |
| Implementation of plant modifications (e.g., wind and photovoltaic) carried out while considering the features of the territory and local climatology (e.g., slope stability, windiness, etc.). |

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**CC9 A2A Group**

**Market (financial mark)**

### CC9 A2A Group

| Sustainable Finance Framework Opportunity for the Group to support its strategy of funding “green” capital expenditures outlined in the Business and Sustainability Plan with sustainable finance tools. |
| Impact Advantages on economic conditions in the subscription of financing tools, in connection with the achievement of sustainability goals. |
| Probability: Possible |
| Establishment of the Sustainable Finance Committee with the aim of monitoring potential “green” sustainable capital expenditures initiatives and guaranteeing the implementation of capital expenditure projects subject to financing. |
| Development of the Sustainable Finance Framework in accordance with the Green Bond Principles published by the International Capital Market Association (ICMA) and the Green Loan Principles published by the Loan Market Association (LMA).

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**Code**

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<tr>
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<td>A part of the capital expenditures in the Industrial Plan comprises climate risk adaptation measures, mostly consisting of the replacement of grid sections. These capital expenditures amount to about 240 M€ in the period 2023-30, of which a share of about 14 M€ constitutes the 2022-24 resilience plan defined in accordance with the AREERA resolutions.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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**Code**

<table>
<thead>
<tr>
<th>Code</th>
<th>TCFD Classification</th>
<th>Risk/Opportunity Topic</th>
<th>Probability and Probability</th>
<th>Management and capital expenditure strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Human Capital</strong></td>
<td><strong>Physical Acute</strong></td>
<td>Extreme weather phenomena Risks to Group’s assets and business continuity as a result of acute physical weather hazards (e.g., floods, landslides, water bombs, tornadoes, etc.) which affect Group and/or third-party plants and infrastructure.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Studies with the Group Data Officer organizational structure to define algorithms for prioritising control room interventions to optimize emergency management. The Business Plan includes a ten-year capital expenditure programme for the maintenance and development of the electricity grid, enabling both adaptation to physical climatic risks and the progressive electrification of energy services (heat pump heating, electric mobility, induction cookers, etc.), improving efficiency and reducing CO₂ emissions. In particular, the plan includes interventions to upgrade and rationalize grids, secondary substations, primary substations and expansion of remote asset management systems.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CapEx around 1440 M€ eligible according to the EU Taxonomy for Green capital expenditures (Regulation 2020/852).</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A part of the capital expenditures in the Industrial Plan comprises climate risk adaptation measures, mostly consisting of the replacement of grid sections. These capital expenditures amount to about 240 M€ in the period 2023-30, of which a share of about 14 M€ constitutes the 2022-24 resilience plan defined in accordance with the AREERA resolutions.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

**Insurance contracts with extended coverage also for damages from natural phenomena.**

**Improvement plans in terms of loss prevention, shared with the insurance broker.**

**Procedures and emergency plans to promptly and optimally manage the onset of any acute weather phenomena.**

**Implementation of plant modifications (e.g., wind and photovoltaic) carried out while considering the features of the territory and local climatology (e.g., slope stability, windiness, etc.).**
Adoption of weather forecasts when bidding on plant availability in the market.
Continuous monitoring systems of the temperature of the cooling water withdrawn and discharged, as well as of the temperature of the wastewater downstream of the discharge at some plants. All-risk insurance coverage that also covers direct and indirect damages caused by natural phenomena.

Experimental projects for the capture and sequestration of CO₂ emitted by waste-to-energy plants. Monitoring regulatory developments and assessing possible impacts.

The following table summarizes the main assumptions made in assessing climate risks and opportunities reported in this Integrated Report:

<table>
<thead>
<tr>
<th>Code</th>
<th>TCFD classification</th>
<th>Risk/opportunity topic</th>
<th>Impact and probability</th>
<th>Management and capital expenditure strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td>CC1</td>
<td>Physical: Chronic</td>
<td>Plant cooling</td>
<td>Risk of plant operation limitations due to difficulty in adequately cooling the thermoelectric cycle in the event of rising summer temperatures of water reservoirs, heavy waves, and periods of drought.</td>
<td>Impact: Lower volumes and margins of thermoelectric production. Probability: Unlikely</td>
</tr>
<tr>
<td>CC1</td>
<td>Physical: Chronic</td>
<td>Plant cooling</td>
<td>Impact: Lower volumes and margins of thermoelectric production. Probability: Unlikely</td>
<td>Management and capital expenditure strategy: Adoption of weather forecasts when bidding on plant availability in the market. Continuous monitoring systems of the temperature of the cooling water withdrawn and discharged, as well as of the temperature of the wastewater downstream of the discharge at some plants. All-risk insurance coverage that also covers direct and indirect damages caused by natural phenomena.</td>
</tr>
</tbody>
</table>

**Note on Method: Risk reduction capital expenditures and EU Taxonomy**

The planned risk management capital expenditures shown in the table in Figure 10 have the effect of reducing the economic-financial and reputational risks for the A2A Group. The table shows the capital expenditures that are eligible according to the EU Taxonomy of Green capital expenditures. The Business Plan also includes other risk-reducing capital expenditures for the Group, which are however not eligible according to the Taxonomy, and that have therefore not been shown in figure 10.

The climate risk assessment, which is fully integrated into the Enterprise Risk Management process, is carried out by difference relative to the goals of the Business Plan. The risk assessments reported in this disclosure are therefore the result of punctual estimation models for each risk developed by the Enterprise Risk Management structure and they are shared with each Risk Owner and with the Risk Specialists. Once the model is shared, the quantification is carried out with the support of management control, which provides the necessary budget and business plan values.

**The 2021-2030 Strategy**

The Sustainability Strategy of the A2A Group aims to achieve the achievement of the Triple Bottom Line, in line with the SDGs, which makes it a referent for the sustainability of the Group's activity and performance.

**The Earnings 2022**

The Earnings 2022 of the A2A Group (€ million) are structured as follows:

- Energy Solutions (€ 11,213.0)
- Infrastructure (€ 232.1)
- Gas (€ 932.9)
- Renewable Energy (€ 317.5)
- Emission Rights (€ 120.9)
- Gas Management (€ 18.7)
- Net profits (€ 2,957.6)

**The Integration of Climate Change in Business Strategies**

The Climate Change integration in Business Strategies is a key aspect for the Group, as it affects all areas of activity and requires a multidisciplinary approach. The A2A Group has developed a Climate Change Management System (CCMS) that includes a Risk Management System (RMS) and a Sustainability Management System (SMS). The CCMS is designed to identify, assess, and manage climate-related risks and opportunities, aligning the Group's strategy with the long-term goals of the Paris Agreement. The RMS, in particular, focuses on identifying, assessing, and managing climate-related financial risks to ensure the Group's resilience and sustainability. The SMS, on the other hand, is aimed at integrating sustainability considerations into the Group's business activities and decision-making processes. The A2A Group's commitment to climate action is further reflected in its participation in the Task Force on Climate-related Financial Disclosures (TCFD) and its engagement with the Sustainability Accounting Standards Board (SASB). These initiatives demonstrate the Group's commitment to transparency and accountability in managing climate-related risks and opportunities, ensuring that its activities contribute to a sustainable future.
Sensitivity analysis - price changes of CO₂ emission permits (EUAs)
The A2A Group estimates the range of impact on EBITDA resulting from a change in the value of EUAs (European Union Emission Allowances) that differs from the values taken as a reference in the preparation of the Business Plan.

Method: changes in the A2A Group's EBITDA are estimated as a result of a deviation in EUA prices of +/−10% compared to Business Plan forecasts. Sensitivities are made with different assumptions about the correlation between the EUA price and the single national electricity price (PUN). Full correlation (100%) means that the entire CO₂ cost is passed on in the energy price; vice versa, no correlation (0%) means that the CO₂ cost is not passed on in the price and it is entirely translated into increased costs of fossil fuel production. Intermediate degrees of correlation correspond to a partial transfer of cost to the PUN.

Results: the histogram shows the range of variability of the average annual impact on EBITDA calculated over the 8 years of the 2023-2030 Business Plan for each individual degree of correlation (0%; 25%; 50%; 75%; 100%).

The values are normalised to the highest impact with 0% correlation:
- Green shows the possible favourable impacts
- Red shows the possible unfavourable impacts

Figure 13 Sensitivities of impacts on EBITDA for EUA price changes of +/− €10
Range of average annual impacts over the period 2023-2030 with different correlation assumptions between EUA price and PUN (normalised values)

The graph shows that extreme degrees of correlation (0% and 100%) produce potential amplified impacts on the A2A Group's EBITDA. In fact, if there is no correlation with the PUN (which means that the cost of CO₂ is passed on to the energy price), the impacts are “driven” by changes in the marginality of thermelectric production, whereas if there is full correlation with the PUN (which means that the cost of CO₂ is passed on to the energy price), the impacts are “driven” by changes in the marginality of hydroelectric production. On the other hand, intermediate correlation values tend to mitigate the impacts of EUA-price volatility. The EBITDA impact assessments shown in the graph were carried out on the A2A Group’s power generation forecasts by source as defined in the Business Plan for the period 2023-30.

The quantification of the CC3 risk shown in the table in figure 12 was made considering the correlation trend between the EUA and PUN in the Plan years that the A2A Group considers most likely in the context of energy transition and which sees, in particular, a progressively decreasing correlation from 100% to 25%. In fact, it is expected that the increasing spread of electricity production from renewable sources will result in the cost of CO₂ emission permits becoming less and less of a factor in the price of electricity.

Summary of climate risks and opportunities and quantification of impacts on economic-financial results
The reference scenarios illustrated above are taken into account in the analyses carried out by the ERM Department to identify the risks and opportunities connected with climate change, helping to provide management with insights to ensure the resilience of the A2A business model.

In the following figures, the risks and opportunities described in the previous table are briefly represented on the impact - probability heatmap.

Figure 14 Heatmap impact - probability risks and opportunities

For transition risks and opportunities, the impact on the Group’s total EBITDA projected in the Business Plan is estimated between -2.3% and +0.8%.
Stakeholder Engagement and Materiality Analysis
4 Stakeholder Engagement and Materiality Analysis

4.1 Stakeholder Engagement Initiatives

Consistent with the Davos World Economic Forum's 2020 Manifesto, "The Universal Purpose of a Company in the Fourth Industrial Revolution"¹, to be truly sustainable a company must engage all the relevant stakeholders in the pursuit of its mission in order to create shared and lasting value through processes that harmonize the divergent interests of its stakeholders, committing to policies and actions geared towards building long-term prosperity.

For A2A, the creation of shared value, the preservation of resources and the care for the well-being of communities are not only primary goals but elements of identity. With this approach, the Group consistently engages its stakeholders, listening to them, involving them in dialogue and committing itself to identifying solutions geared towards achieving the common good.

At the beginning of 2022, a Policy on Stakeholder Engagement was published, defining the Group’s guidelines for stakeholder engagement. This document formalises the way relations with the various stakeholders are managed, the mapping of stakeholder categories and engagement initiatives.

Through the cooperative use of a digital platform, more than 20 corporate structures, guided by Engagement Ambassadors - contact persons for each A2A company and Business Unit (for more details see the dedicated box) - mapped more than 850 stakeholders and more than 1500 engagement activities carried out with them. These initiatives follow a unified approach formalized in the "Stakeholder Engagement Toolkit"² developed in collaboration with The European House Ambrosi.

The model aims to promote the creation of a professional community oriented to the exchange of know-how for the shared capitalisation of relational capital.

Mapping was carried out at a granular level in 2022, identifying not only areas of focus by categories and groups, but also the most influential individual actors and territories requiring a higher level of attention. The results of the activity are shared and accessible internally through an interactive report. For each stakeholder category and sub-category, a matrix is used to identify the sensitivity and any critical issue of the stakeholders and measure their expected level of engagement. By extracting comparable indicators across categories, territorial levels and business units, the model monitors relationships with the relevant stakeholders.

The following figure shows the stakeholder categories identified and the distribution of engagement activities by category. In the 2022 mapping, A2A’s relevant stakeholders were grouped into the following categories: Customers, Community, People, Market, Institutions, Supply Chain and Shareholders and Investors, with over 900 registered stakeholders.

In continuation of the analysis conducted in 2021, the stakeholders were assessed for familiarity, influence and relationship status by internal contact persons engaged in the engagement activities. The overall results show that the engagement level proposed by the Group’s initiatives is in line with the external expectations. The data collected for each stakeholder includes the material topics, the interests and the strategic goals related to that stakeholder, making it possible to assess the consistency of engagement activities and to track any critical issues associated with the stakeholders.

Figure 15 Stakeholder map and distribution of engagement activities by category

¹ The size of the bubbles indicates how the engagement initiatives in 2021 were distributed across the different stakeholder categories.

² For more details, please refer to the full text of the Davos 2020 Manifesto (link).
Engagement initiatives are mainly focused on certain material topics: “Community listening and engagement”, “Circular economy”, “Infrastructures for the ecological transition” and “Accountability and quality in service provision”. Although each stakeholder type is an expression of particular interests, at a general level, 4 relevant cross-cutting interests emerged for all the mapped categories: • Community well-being and protection of the environment and of the territory • Business development • Control, regulation and compliance • Knowledge of plants and services information

In 2021, in collaboration with The European House Ambrosetti, A2A formed a network of A2A’s people formally charged Sustainability Focal Points and Engagement Ambassadors, a network of about 50 people who oversee the monitoring of stakeholder relations in coordination with A2A's Sustainability Stakeholder Engagement structure. These contact persons periodically report on the progress of relations and engagement initiatives implemented by updating the stakeholder management database.

The strengthening of stakeholder management activities led to the introduction of new figures, the Engagement Ambassadors, a network of about 50 people who oversee the monitoring of stakeholder relations in coordination with A2A's Sustainability Stakeholder Engagement Structure. These contact persons periodically report on the progress of relations and engagement initiatives implemented by updating the stakeholder management database.

In the interest of future generations: the reform of Article 9 of the Italian constitution

Article 9 of the Italian Constitution promotes development and scientific and technical research, as well as the protection of the landscape and of the historic and artistic heritage of the nation. As of February 2022, the legislature has introduced a new sub-paragraph of fundamental importance, especially for the prosperity of future generations, enshrining the protection of the environment, biodiversity and ecosystems.

The constitutional amendment makes it necessary to look at these topics today with the broader meaning of the need to ensure a sustainable development process for today’s and tomorrow’s generations.

The new constitution reflects the A2A Group’s ethics and identity, which turned to Francesco Clementi, Professor of Comparative Public Law at the Sapienza University of Rome, to write the dedicated paper “In the interest of future generations. The reform of Article 9 of the Italian Constitution and the challenge of thinking about the future again”. The paper explored environmental protection as a topic of intergenerational solidarity, highlighting how development in the economic and social spheres can only be defined as sustainable if it can also guarantee future generations an intact environment, biodiversity and ecosystem.

The paper was the subject of analysis and debate during the National Forum “In the interest of future generations” organized by A2A in collaboration with the Foundation for Sustainable Development. The event was an opportunity for dialogue and discussion for institutions and young people from Generation 2: 30 students selected by Giffoni Innovation Hub and Scuola Zoo participated, as well as a delegation from Giovani Legambiente and Fridays for Future.
Territorial Sustainability Reports
In 2022, A2A again drafted territorial sustainability reports, created with the aim of enabling all citizens to know and assess the Group’s commitment and results in specific geographic areas. The reports of 9 territories were published during the year: Brescia (eighth edition), Valtellina-Valtavenza (seventh edition), Bergamo (seventh edition), Milan (sixth edition), Friuli Venezia Giulia (sixth edition) and Piedmont (fourth edition) were all already engaged in previous years, to which the regional areas of Sicily, Apulia and Calabria were added this year.

The Sustainability Report told by the younger generations
In 2022, A2A committed to a project aimed at engaging young people in the sustainability debate: the drafting of the Group’s first Sustainability Report dedicated to Generation Z. The report, covering data from the year 2021, was written and produced together with a selection of young talents who were immersed in A2A’s sustainable reality for a week. With the support of Giffoni Innovation Hub and Deloitte, they 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 to the new generations. “In viaggio con Azzurra” was also presented at the Festival, 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 topics. She tells the story of the “sustainable journey” of four young people who decide to reach a concert on foot, emphasizing the importance of individual conduct for the benefit of the whole community.

4.3 Material Analysis and Topics
Thanks to the process of updating the materiality matrix, every year A2A analyses the topics relevant to the Group and its stakeholders. This year, taking into account the main changes in the context, the Group set out to update the matrix in accordance with the new GRI standard and the logic of “double materiality”. This concept is introduced by the EU Corporate Sustainability Reporting Directive (CSRD) approved in November 2022 by the European Union. The new directive proposes an approach that consists of a two-way method with which to assess corporate governance and how sustainability topics are managed: how these affect a company’s financial performance and long-term value (impacts incurred) and what effects the company has on the society and on the surrounding environment (impacts generated).

This year’s materiality analysis therefore consisted of the following main phases:

• Analysis of internal and external sources and key ESG ratings in order to build a list of 196 impacts that the organization has on the external context, which were then grouped into 18 macro-topics;
• Consultation of a panel of 43 stakeholders: 23 external and 20 colleagues, in order to capture information useful for assessing the “significance and likeliness” of the possible impacts generated (impact materiality) and suffered (financial materiality). The materiality update process engaged the administration of a qualitative-quantitative survey to different categories of stakeholders. For the assessment of materiality, a survey of 14 key opinion leaders on the generated impacts was collected, assigned according to their varying expertise, followed by an assessment of the internal departments and employees represented by the different business units on the generated impacts related to staff topics. Starting this year, A2A has also analysed financial materiality, i.e., sustainability aspects related to sustainability risks and opportunities that affect or that may affect the Group’s financial position substantially. Therefore, in order to develop the financial materiality, an assessment of the impacts suffered was collected from 9 experts representing the financial community. The assessment was based on the parameters proposed by the EFRAG framework;
• Processing of results and preparation of a summary report detailing the impacts generated and suffered (double materiality);
• Engagement of top management and members of the BoD through the assessment of material topics from an impact-oriented perspective and approval of topics by the BoD.

A2A’s Board of Directors considered all 18 topics analysed to be material and representative of the impacts generated and suffered by the Group, highlighting the 5 priorities. Compared to the 17 material topics of 2021, a new topic has been added: “Energy Autonomy”.

Figure 17 Material topics and impacts

Also for the 2022 edition, the reporting narrative unfolds according to the key words: Planet (environmental sustainability), People (social sustainability), Prosperity (economic sustainability) - the areas identified by the World Economic Forum with the document, “Measuring Stakeholder Capitalism: towards common metrics and consistent reporting of Sustainable value creation”. The reports are available in the Sustainability section of the website with the possibility of downloading the Key Performance Indicators (KPIs) for the last 3 years in open format.
The table below shows, for the first 5 material topics, the main impacts generated and suffered associated with them and their relative degree of impact.\(^1\)

<table>
<thead>
<tr>
<th>Topic</th>
<th>Materiality</th>
<th>Type of impact</th>
<th>Impacts</th>
<th>Degree of impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Climate Change</td>
<td></td>
<td></td>
<td>Generation of greenhouse gas emissions that contribute to climate change</td>
<td>Medium</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Accelerating the transition to renewable energy at national level</td>
<td>Medium</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Potential operational losses due to climatic events</td>
<td>Medium</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>causing damages to infrastructure and/or resources (e.g., tropical storms, water bombs, etc.)</td>
<td>Medium</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Increased market competitiveness through the development of CO₂ capture technologies from fuel gas</td>
<td>Medium</td>
</tr>
<tr>
<td>Circular Economy</td>
<td></td>
<td></td>
<td>Contribution to the depletion of virgin raw materials due to</td>
<td>Medium</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>insufficient reuse of resources</td>
<td>Medium</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Supporting the sustainable development of the territories in which the</td>
<td>Medium</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Group operates through the</td>
<td>Medium</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>acquisition of companies with circular business models.</td>
<td>Medium</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Improved productivity (operational bases) resulting from the</td>
<td>High</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>development (lack of development) of a</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>regulatory framework that incentivizes action and capital</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>expenditures in the circular economy.</td>
<td></td>
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<tr>
<td>Infrastructure for the</td>
<td></td>
<td></td>
<td>Contribution to accelerating the energy transition</td>
<td>Medium</td>
</tr>
<tr>
<td>ecological transition</td>
<td></td>
<td></td>
<td>through increased capital expenditures in digitization and</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>infrastructure innovation.</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Increased productivity and production efficiency</td>
<td>High</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(positive operational losses) through capital</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>expenditures in infrastructure for the ecological transition</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>due to insufficient development</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>of infrastructure for the ecological transition with related</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>consequences in terms of business continuity and</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>quality of services provided.</td>
<td></td>
</tr>
<tr>
<td>Energy autonomy</td>
<td></td>
<td></td>
<td>Contribution to the Country’s energy autonomy</td>
<td>Medium</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>through efficient management of</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>waste-to-energy practices.</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>On the Group’s brand image and attractiveness through</td>
<td>High</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>capital expenditures in decarbonating the energy mix and</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>developing RES.</td>
<td></td>
</tr>
</tbody>
</table>

\(^1\) The thresholds for the assessment of Impacts (low, medium, high) were calculated based on the standard deviation of the mean of the scores obtained. For “low” generated/immediate impact value is \( \pm 2.76 \); for “medium” generated/immediate impact value between \( \pm 2.76 \) and \( \pm 4.37 \) and for “high” generated/ immediate impact value is \( \pm 4.37 \).
As further evidence of the Group’s commitment to promoting and guaranteeing the protection of human rights, as part of the 2022 materiality analysis update, A2A carried out an assessment on respect for human rights, taking into consideration the indications of the new GRI Standards, divided into the following three main phases:

- **Analysis of internal sources**, such as policies, procedures and other regulatory documents adopted by the Group, and external sources, such as international standards and frameworks (e.g., OECD Guidelines, Corporate Sustainability Due Diligences, etc.), in order to identify the areas connected with A2A’s business within which human rights violations could occur;
- **Engagement of corporate departments**, in order to assess the Group’s level of human rights protection, both in terms of governance maturity and the internal practices put in place to monitor and mitigate the risk of human rights violations (e.g., policies, procedures, monitoring actions, etc.);
- **Analysis of results**, **identification of gaps** and definition of **areas for improvement**.

A table summarizing the results of the assessment process is set out below, which indicates for each human rights principle under investigation: the material topics associated therewith, the main stakeholders impacted in the event of a breach of the principles, the level of supervision that emerged from the assessment and the reference to the pages of the Integrated Report where the policies, practices and actions that A2A adopted in order to oversee the activities/corporate areas where potential breaches of these principles could occur can be found.

<table>
<thead>
<tr>
<th>PRINCIPLE OF HUMAN RIGHTS INVESTIGATED</th>
<th>MATERIAL TOPIC</th>
<th>MAIN STAKEHOLDER IMPACTED</th>
<th>COVERAGE LEVEL</th>
<th>ACTIONS/SAFEGUARDS REFERENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work-life balance</td>
<td>Enhancement of human capital</td>
<td>People</td>
<td>High</td>
<td>pag. 138; 147-148</td>
</tr>
<tr>
<td>Fair and favourable working conditions</td>
<td>Enhancement of human capital/Occupational health and safety</td>
<td>People</td>
<td>High</td>
<td>pag. 16-28; 148-150</td>
</tr>
<tr>
<td>Digital inclusion and access to innovation</td>
<td>Innovation and digital transformation</td>
<td>People</td>
<td>High</td>
<td>pag. 142-144; 146-150</td>
</tr>
<tr>
<td>Protection from sexual harassment and physical or psychosocial harassment</td>
<td>Occupational health and safety</td>
<td>People</td>
<td>High</td>
<td>pag. 26; 150</td>
</tr>
<tr>
<td>Protection of the environment</td>
<td>Biodiversity/Climate change/Circular economy/Responsible water management</td>
<td>Community</td>
<td>High</td>
<td>pag. 114-131</td>
</tr>
<tr>
<td>Elimination of forced labour and abolition of child labour</td>
<td>Responsible management of the supply chain</td>
<td>Community</td>
<td>Medium-High</td>
<td>pag. 27-28</td>
</tr>
<tr>
<td>Occupational health and safety</td>
<td>Occupational health and safety</td>
<td>People</td>
<td>Medium-High</td>
<td>pag. 29-30; 152-155</td>
</tr>
<tr>
<td>Fight against corruption</td>
<td>Group’s ethics and integrity</td>
<td>Customers</td>
<td>People</td>
<td>pag. 26-27</td>
</tr>
<tr>
<td>Adequate remuneration</td>
<td>Enhancement of human capital/Responsible supply chain management</td>
<td>People</td>
<td>Supply Chain</td>
<td>Medium</td>
</tr>
<tr>
<td>Respect for diversity, inclusion and equal opportunities</td>
<td>Diversity and inclusion/Responsibility/quality in the provision of services</td>
<td>People</td>
<td>Customers</td>
<td>pag. 150-151</td>
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In light of the controls adopted by the A2A Group and of the context in which it operates, i.e., mainly in Italy, there are no potential significant risks. Although the Group has a medium-high level of human rights protection, A2A has nevertheless identified some areas for improvement in terms of monitoring actions and safeguards to be implemented, linked to certain areas of investigation.

In particular, the Group undertakes to:

- strengthen the already existing and structured stakeholder engagement process, focusing on the social needs of the territory, in order to constantly increase cohesion with local communities;
- implement further solutions to reduce possible negative environmental impacts on the communities;
- strengthen the process of listening to customers belonging to vulnerable groups, in order to better take into account their needs and expectations within corporate strategies.

Lastly, with the aim of closing the gaps identified and increasingly spreading the culture of respect for human rights on the one hand and best practices useful for improving human rights monitoring in the corporate activities on the other, the Group will launch a human rights **training course** for all employees in 2023. The course will be structured in 7 interactive modules with intermediate tests to check the effectiveness of the content.
Financial Capital
Interest in ESG issues and sustainable finance on the part of investors, stakeholders and institutions is steadily growing.

The Regulation will require financial market participants to indicate, through the calculation of an appropriate percentage of Revenues, OpEx and CapEx, the degree to which their activities are aligned with the objectives climate change mitigation and adaptation.

Although there has been a decline since 2021, with analysts pointing to the impact of inflation and geopolitical tensions, the volume of securities on offer has quadrupled since 2018.

Consequently, the market share of sustainable funds is also growing. Morningstar calculated that European bond and equity funds labelled as sustainable under the SFDR increased by almost 3% in the third quarter of 2022 compared to the same period in 2021, reaching 4.3 trillion euro in assets under management (AUM). Of the total issued, the largest slice is made up of Green bonds, i.e., bonds whose issuance is linked to projects that have a positive impact on the environment, such as energy efficiency, clean energy production, sustainable land use, etc.

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The centrality of sustainability issues is evidenced by the volume of Green, Social and Sustainability (GSS) bonds issued on the market in 2022. According to reports, they totalled 850 billion euro. Of the total issued, the largest slice is made up of Green Bonds, i.e., bonds whose issuance is linked to projects that have a positive impact on the environment, such as energy efficiency, clean energy production, sustainable land use, etc.

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Some data

- Issuance for a total Green, Social and Sustainability bond volume of 850 billion in 2022
- 50% of sustainable European funds in accordance with the SFDR.

Impacts for A2A

- 90% of Sustainable Debt
- 57.5% of EU Taxonomy-aligned CapEx
- 22,460 million euro economic value distributed
- 1,240 million euro CapEx investments

Sources:
- Green and sustainable bonds, 850 billion issued in 2022, auto sector grows - ESG News
- Sustainable Investments and Green Bonds: Green and sustainable bonds, 850 billion issued in 2022, auto sector grows - ESG News

For A2A

- Sustainable Economic Value - Sustainable Finance
- 50% of EU Taxonomy
- 703 million euro EBIT financing
- 2,080 million euro GSS bonds issued
- 900 million euro CapEx
- 1,240 million euro CapEx investments
Sustainable Economic Value
The Group creates and distributes economic and social value among its stakeholders, generated through the conduct of its business, thus also contributing to the growth of the territories. A2A also contributes to the energy transition by promoting the use of renewable energy sources and energy efficiency mechanisms.

Sustainable Finance
The Group constantly monitors financial market developments in the ESG area and adopts sustainable finance instruments in line with the European strategy. Also in order to reinforce the confidence of the financial community and meet the expectations in the ESG area and adopts sustainable finance instruments in line with the European strategy. Also in order to reinforce the confidence of the financial community and meet the expectations of investors and institutions, A2A develops actions and projects aimed at ensuring compliance with ESG reporting regulations and is committed to progressively aligning with European sustainability objectives, such as those related to the EU Taxonomy.

Management Approach (MA)

**Mitigate**
- ERM (Enterprise Risk Management) process
- Structured financial management by return on investment
- Attention to ESG aspects:
  - for impacts of commodity market prices;
  - for the choice of investments and business conduct
- Verification of A2A’s ESG data on data providers
- Presence of Investor Relations Policy
- Traditional and ESG investor involvement
- Transparent sustainability performance communication

**Seize**
- Adoption of sustainable finance tools to support the funding strategy (Green Bonds, KPI Linked Bond)
- Establishment of the Sustainable Finance Committee with the aim of monitoring potential green sustainable investment initiatives and guaranteeing the implementation of investment projects subject to financing
- ESG investor involvement
- Issue of financial products related to sustainability performance or sustainable taxonomy
- Transparent sustainability performance communication

2022 actions
- EIB investments
- Improvement in COP Water and S&P CSA assessments
- Timely and transparent communication with stakeholders
- Improved alignment with TCFD recommendations
- Obtained an EE+ rating from Standard Ethics, becoming the highest rated Italian company in the reference sector

What we have done
- Underwrote a General Liability policy linked to the achievement of five sustainability goals
- New ESG-linked Revolving Credit Facility
- Update of the Sustainable Finance Framework
- Publication of an ESG Dossier, a document that complements A2A’s historical KPIs that are most meaningful to investors and analysts
- Underwrote a General Liability policy linked to the achievement of five sustainability goals
- Sustainability-Linked Bond and Green Bond issues
- KPI-linked Revolving Credit Facility
- Update of the Sustainable Finance Framework
- Publication of an ESG Dossier, a document that complements A2A’s historical KPIs that are most meaningful to investors and analysts
- Underwrote a General Liability policy linked to the achievement of five sustainability goals

What we are doing
- ESG Rating
- Sustainability Plan
- Sustainability in planning and investment processes
- ESG Plan
- Enhanced accountability of the Management Board with the aim of monitoring potential green investment projects subject to financing
- ESG investor involvement
- Issue of financial products related to sustainability performance or sustainable taxonomy
- Transparent sustainability performance communication

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Risk factors
Opportunity factors
See "Sustainable Finance" opportunities.
5.1 **Economic Value Distributed**

Alignment with the GRI framework continued in 2022.

The economic value directly generated represents the wealth produced by the Group. The economic value distributed instead measures the economic impact of the Group’s activity of creating value for its stakeholders.

In 2022, the Economic Value Generated by the Group was 23,396 million euro. Of this, 22,460 million was distributed to various stakeholders: suppliers of goods and services (93%), employees (5%), venture capital providers (1%), P.A. and communities (2%) and shareholders (1%). Approximately 4% of the economic value generated was retained by the Group as profits, provisions and amortization.

**Figure 19 Economic Value Distributed**

- 1 Shareholders
- 2 Risk capital providers
- 3 P.A. and communities
- 4 Employees
- 5 Suppliers of goods and services

%

5.2 **Relations with Shareholders**

The parent company A2A S.p.A. is listed on the Milan stock exchange. The A2A share is traded on the electronic stock market and belongs to the FTSE-MIB segment and falls within the “Public Services” sector. Under article 9 of the company’s By-laws, no excess of the 5% limit have no voting rights.

**Figure 20 A2A shareholding structure (at December 31, 2022)**

<table>
<thead>
<tr>
<th></th>
<th>2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>Municipality of Milan</td>
<td>25.0%</td>
</tr>
<tr>
<td>Municipality of Brescia</td>
<td>25.0%</td>
</tr>
<tr>
<td>Other municipalities</td>
<td>4.6%</td>
</tr>
<tr>
<td>Market</td>
<td>45.4%</td>
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</tbody>
</table>

A2A has about 76,000 shareholders, divided between institutional investors and retail investors.

The institutional investors (investment funds and other financial institutions) hold about 30% of the share capital. 44% of the free float in the hands of institutional investors is held by US investors, 21% by British investors, 16% by Italian investors, 6% by French investors and 4% by German investors. Approximately 35% of the shares held by institutional investors are in funds that integrate ESG analyses into their investment processes.

There are approximately 75,000 retail investors (natural persons and legal entities in this category), holding 15% of the share capital. Almost all of the retail shareholding is resident in Italy, and in particular 58% in Lombardy. The investors residing in the provinces of Milan and Brescia hold 26% and 14%, respectively, of the total retail.

5.3 **A2A in the Stock Market Indices**

The global equity markets were heavily impacted by the geopolitical environment and the significant rise in inflation in 2022, mainly driven by increases in energy prices, which prompted central banks to adopt repeated restrictive monetary policy interventions.

The company-specific factors instead relate to:
- the two updates of the 2021-2030 Strategic Plan with the confirmation of developments related to the circular economy and energy transition;
- growth of the dividend distributed;
- good quarterly results;
- 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.

**Relations with Shareholders and Investors**

A2A is constantly committed to providing answers as precise and exhaustive as possible to the needs and specific requests of financial stakeholders. In particular, the Investor Relations team assists top management in its dialogue with investors and in the continuous monitoring of the expectations of the financial markets on the company’s performance.

In 2021, the Group approved the “Policy for Managing Dialogue with General Shareholders and Other Stakeholders Relevant to the Company”, which is available on the Company’s website. In accordance with the Policy, multiple communication tools and channels are used in order to maintain proactive, constant engagement with investors and analysts:
- ad hoc documentation (Investor Guidebook, Investor Databook);
- meetings on the main international financial scenes (road shows, one-to-one meetings, group meetings, conference calls, etc.). In 2022, the activities were held both in-person and virtually on meeting platforms;
- participation in various industry conferences organized by various brokers and Borsa Italiana;
- discussions/meetings with equity analysts covering A2A stock (at the end of 2022, the company was followed by seven Italian and international brokers).

In 2022, A2A expanded its provision of information related to ESG, providing investors with an ESG Database, a document that compiles A2A’s historical KPIs that are most meaningful to investors and analysts. The project involves the constant updating and expansion of KPIs over the following years.

Furthermore, during Italian Sustainability Week of Borsa Italiana, a presentation dedicated to the Sustainability Plan and other relevant ESG issues was published on the company website.

Lastly, to facilitate the usability of information, the Group’s main ESG policies have been grouped together in a dedicated section of the A2A website.

2022 was also marked by the high number of information requests and questionnaires from ESG investors and analysts. In addition, the increasing relevance of passively and quantitatively managed funds (e.g., ETF) and the growing number of bond investors has led to the need to monitor the accuracy of public financial databases, which are the preferred information channel for this category of funds. To meet the needs of these stakeholders, the Investor Relations team has been pursuing a multi-year project (Zero Gap) to reduce data provider errors and inconsistencies since 2020. Lastly, the engagement has continued in a structured manner with the main proxy agencies that provide institutional investors with voting recommendations on the items of the agenda of the Shareholders’ Meeting. 3 Proxy Agency published the pre-meeting report.
5.3 A2A in the Sustainability Ratings

Over the past few years, the volume of investments subject to assessments related to environmental, social and governance issues has increased more and more, and new indices and portfolio standards have been developed for which inclusion is based on sustainability performance.

A2A is present in the following ethical indices:
- MIB ESG
- FTSE4Good Index
- ECPI Euro ESG Equity
- Ethibel Sustainability Index Excellence Europe.
- EURO STOXX Sustainability Index.
- Euronext Vigeo: Index: EU. D.
- Standard Ethics Italian Index.
- Solactive Climate Change Index.
- Bloomberg Gender Equality Index.

A2A is also included in the Ethibel Excellence Investment Register and in the Ethibel Pioneer Investment Register.

In 2022, A2A improved the score of the CDP Water Questionnaire for the second year running, obtaining A-, while it confirmed the score A- in the climate change assessment, confirming itself as a leader in the fight against climate change.

In addition to its commitment to environmental issues, the Group also pays attention to issues related to the development and protection of diversity, responding for two years to the Refinitiv Diversity and Inclusion Assessment, and to Bloomberg's Gender Equality Index questionnaire. The latter included A2A in its index for the third year in a row.

In addition, A2A participates in the assessments of Vigeo-Eiris, S&P Global, Sustainalytics, MSCI, FTSE4Good, “Top 100 Green Utilities” (FDI Intelligence Group), Data Research and Corporate Knights.

In 2022, the Group was included in the S&P Global Sustainability Yearbook, the initiative that recognizes globally listed companies with the best sustainability performance based on their score in the Corporate Sustainability Assessment, the ESG assessment model developed by the international rating agency. This year, over 7500 companies were evaluated for potential inclusion in the Yearbook and only 716 were included. A2A ranked 7th out of 67 companies evaluated in the ‘global water and multi utilities’ sector.

The evaluation by Standard Ethics, an independent rating agency that measures the sustainability of companies, also continues annually. In 2022, Standard Ethics ranked the Group’s Corporate Rating to E+ from the previous EE, maintaining the “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 practices. 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.

5.4 Sustainable Finance

Over the past few years, a very strong relationship has developed between finance and sustainability. Not only have new financial instruments been created (e.g. Green, Social, Sustainable Bond, Sustainability-Linked Bond, Green Loan, Sustainability-Linked Loan, EIB subsidized investments), which also include sustainability impacts in their logics, but the assets managed according to sustainable and responsible investment strategies have increased exponentially.

The difficult macroeconomic environment influenced by the outbreak of war in Ukraine and the high volatility in the market in 2022 led to a reduction in bond issuance volumes compared to the previous year. As a result, issues with ESG characteristics also decreased in absolute terms compared to 2021 (E50 billion euros vs 1050 billion euros in 2021), although their weight in total issues increased slightly. Despite this decline in the volume of new ESG bond issues in 2022, new ESG bonds offered to the market have nevertheless quadrupled over the past four years.

For A2A, Sustainable Finance is an important lever for achieving the two pillars of the Group’s strategy: energy transition and circular economy. The Strategic Plan updated in November 2022 includes the specific target of achieving more than 90% sustainable debt by 2030.

In order to achieve this goal, in May 2021 A2A established a new Sustainable Finance Framework which, for the first time in Italy, combines two approaches: Green - Use of Proceeds, which allows for maximum transparency about the use of proceeds in the short term for specific projects, and the Sustainability-Linked component, which allows for an overall reading of the Group’s longer-term strategy by linking debt instruments to one or more of the Group’s sustainability goals. The selected KPIs (Scope 1 CO2 emission factor; installed capacity from renewable sources; treated waste amount and recovery) identify sustainability targets that contribute to the achievement of United Nations SDGs 7, 11, 12 and 13. The Framework was updated in February 2022, incorporating the more ambitious sustainability targets of the 2021-2030 Strategic Plan updated in January 2022.

The Sustainable Finance Framework, which covers any type of financial instrument, was prepared in compliance with the Green Bond Principles and Sustainability-Linked Bond Principles published by the International Capital Market Association (ICMA), and the Green Loan Principles and Sustainability-Linked Loan Principles 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 to its alignment with ICMA and LMA principles. The agency also highlighted A2A’s commitment to the development of sustainable finance and its “Advanced” position as an issuer.

In the two-year period 2021-2022, the Group structured the following main operations in the area of sustainable finance:
- June 2021: First share buyback programme involving a donation to Banco dell’Energia.
- July 2021: New KPI-Linked Revolving Credit Facility of 500 million euro with a maturity of five years; the line is linked to two sustainability objectives included in the Sustainable Finance Framework (installed capacity from renewable sources and treated waste amount at recovery) and provides for an annual donation to Banco dell’Energia.
- Sustainability-Linked Inaugural Bond of 500 million euro with a ten-year maturity: the coupon of the bond instrument is linked to the achievement of the 2025 target (approved by the Science Based Target Initiative in March 2020) of Scope 1 CO2 emission factor.
- October 2021: New Green Bond of 500 million euro with 12-year maturity: the proceeds of the bond instrument will be used to finance green projects aligned with the environmental objective of climate change mitigation of the European Taxonomy (EU Taxonomy Regulation 2020/852).
- March 2022: New 500 million euro Sustainability-Linked Bond with six-year maturity: the bond coupon is linked to the achievement of the 2024 target for installed capacity from renewable sources.
- June 2022: New Green Bond of 600 million euro with four-year maturity: the proceeds of the bond instrument will be used to finance green projects aligned with the environmental objective of climate change mitigation of the European Taxonomy (EU Taxonomy Regulation 2020/852).
- New 410 million euro KPI-Linked Revolving Credit Facility with a maturity of three years, linked to the achievement of three social and governance objectives (accident frequency index, percentage of orders to suppliers assessed with ESG indicator; gender pay gap) and includes an annual donation to Banco dell’Energia.
- September 2022: New Green Bond of 650 million euro with eight-year maturity: the proceeds of the bond instrument will be used to finance green projects aligned with the environmental objective of climate change mitigation of the European Taxonomy (EU Taxonomy Regulation 2020/852).

Thanks to the actions taken during the year, A2A’s share of sustainable debt has reached 58% of total December 31, 2022 debt.

In December 2022, A2A published its second Green Bond Report on the allocation of proceeds from its second 500 million euro Green Bond issued on October 25, 2021. The entire proceeds of the Green Bond were used to finance Eligible Green Projects, 100% aligned with the EU Taxonomy of Sustainable Activities, confirming A2A’s role as the first Italian issuer to issue a bond fully aligned with the Taxonomy. In January 2023, A2A issued a new 500 million euro Green Bond with a maturity of 11 years. The proceeds of the bond will be used to finance green projects eligible for the European Taxonomy.

To further expand its range of sustainable tools by extending them into the insurance arena, in 2022 A2A took out a Public and General Liability policy linked to the achievement of five sustainability goals – which cover occupational health and safety - and are built around the “Social factor” of ESG (Environmental, Social and Governance) criteria. Among these: inspection visits to the A2A Group’s construction sites; access to initiatives on health proposed by A2A and to the safety training for its employees; percentage of orders placed to suppliers evaluated with ESG indicators; verification of the maintenance of the number of ISO45001 certified Group companies. The enhancement of the Group’s ESG initiatives and investments, as well as the measurement of A2A’s positioning, were driving components in the insurance arrangements with insurance companies, including during the renegotiation of the entire insurance package for 2023. In particular, the insurance solution in Civil and General Liability was confirmed using four targets selected from the above. Sustainability goals have also been integrated into the occupational component of the Group’s accident policy.
In order to strengthen its commitment, identify and develop sustainable finance tools, ensure the correct management of the project selection and fund allocation process, as well as monitor the positive impact on environmental metrics, A2A created an inter-functional Green Financing Committee in 2019, chaired by Finance and consisting of Planning and Control, Sustainability Development, Strategy and Innovation. Following the publication of the new Sustainable Finance Framework, the committee has been renamed the Sustainable Financing Committee. This Committee was set up with the aim of monitoring potential sustainable investment initiatives, underwriting any type of financial instrument dedicated to specific green projects and then guaranteeing their implementation.

A2A also has a solid and long-standing relationship with the European Investment Bank (EIB) to support the Group’s investment programme. The European Institute finances specific investment projects that meet particular sustainability requirements, applying generally more advantageous economic conditions than the most common forms of financing. The EIB’s periodic appraisal and monitoring process includes requests for information, including technical and financial information, and the possibility of inspecting the sites/plants concerned by the projects financed. At December 31, 2022, the value of these loans in the Group amounted to about 703 million euro.

Furthermore, the Group continues to be a member of the Corporate Forum on Sustainable Finance, of which it has been a member since 2019. It aims to support and develop sustainable finance as a means of combating climate change and promoting a more sustainable economy through innovative financing instruments. Over the past three years, the Corporate Forum on Sustainable Finance, whose 25 members come from nine countries and four business macro-sectors, has responded to the most important consultations held by the European Union covering the topics: EU taxonomy, EU standard for green bonds, EU climate benchmarks and ESG disclosure on benchmark indices, renewed EU strategy for sustainable finance and EU review of the Non-Financial Reporting Directive.

Lastly, A2A has been part of the Nasdaq Sustainable Bond Network since January 2023, a Sustainable Finance platform that brings together investors, issuers, investment banks and specialist organizations. Its entrance was celebrated with a customization of the Nasdaq Tower in Times Square in New York City with the Life Company’s logo and colours, is an important recognition of A2A’s commitment and leadership in Sustainable Finance and will allow the Group to get in touch with a wide network of potential international investors attentive to sustainability issues.
5.5 Capital Expenditure
In 2022, the Group made investments in line with the Business Plan, based on the two main pillars of circular economy and energy transition, totalling 1,240 million euro.

5.6 European Taxonomy
The Regulatory Environment and Reporting Obligations for 2022
EU Regulation 2020/852 (known as the Taxonomy) is part of the regulation aimed at ensuring the ecological transition of the European Union towards the goal of zero net greenhouse gas (GHG) emissions by 2050, with an intermediate target of a 55% reduction in emissions by 2030 compared to 1990 levels. In particular, the Taxonomy aims to establish the criteria to determine whether an economic activity can be considered environmentally sustainable and consequently determine the degree of sustainability of an investment. According to the regulations, activities that contribute to at least one of the following environmental objectives are considered environmentally sustainable, as long as they do not cause significant damage to the other objectives (so-called DNSH criteria) and they are carried out in compliance with minimum social safeguards:
- climate change mitigation;
- climate change adaptation;
- sustainable use and protection of water and marine resources;
- transition to a circular economy;
- pollution prevention and control;
- protection of ecosystems and biodiversity.

In June 2021, the European Commission formally adopted the first Technical Delegated Act (hereinafter: Climate Delegated Act) that defines the list of economic sectors and activities currently included in the Taxonomy and the related technical screening criteria that allow to assess whether they contribute substantially to the achievement of environmental objectives for climate change mitigation and adaptation. Additional Technical Delegated Acts on the remaining environmental objectives are expected to be published during 2023.

As of January 1, 2022, in line with the reporting obligations set forth in Article 8 of EU Regulation 2020/852 and in accordance with the methods and timing indicated in EU Delegated Regulation 2021/278, the A2A Group published the portion of revenues, capital expenditure (CapEx) and operating expenditure (OpEx) associated with its economic activities considered potentially eco-sustainable (known as “eligible economic activities”) for the environmental objectives of climate change mitigation and adaptation.

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 which:
- 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;
- do not cause significant harm to any of the other environmental objectives (abbreviated as DNSH); and
- are carried out in compliance with minimum safeguards.

Eligible Economic Activities of the A2A Group
In order to ensure compliance with the requirements of EU Regulation 2020/852, last year the A2A Group had already implemented a specific project aimed at identifying its “eligible” and “aligned” economic activities in accordance with the Regulation itself. During 2022, the appointed Working Group reviewed the A2A Group’s classification within the scope of the economic sectors and activities included in the Climate Delegated Act and coordinated the conduct of the checks necessary to qualify the economic activities as Taxonomy “eligible” and “aligned”, providing for the active involvement also of the relevant Business Units in this process. For each identified economic activity, verification of compliance with the technical screening and DNSH criteria was conducted in order to qualify it as “aligned”. In particular, the verification of the former was carried out by involving the technical functions of each Business Unit involved, in order to ascertain whether the individual plants complied with the requirements of the Regulation. For the DNSH criteria, on the other hand, the verification involved additional functions, including the Group’s Enterprise Risk Management Department as the owner of A2A’s Climate Risk Assessment, with which it verified whether the requirements of the relevant Delegated Acts were met in terms of risks identified and mitigation measures identified and implemented. The DNSH for the other objectives were instead checked with the technical functions of the individual business units.

This process led to the identification of the following categories of “eligible” economic activities:
- 4.1. Electricity generation using solar photovoltaic technology;
- the generation of electricity from photovoltaic panels by the Generation BU is an eligible, and for most of the Group’s plants, aligned activity. The only plants

3 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.”
that do not pass the Do Not Significant Harm criteria on the circular economy are those installed at the Chivasso, Sermide, Brindisi and San Filippo del Mela power plants. Furthermore, the photovoltaic plant in Sermide does not pass the Do Not Significant Harm criterion on biodiversity. These plants were therefore not considered aligned.

4.3. Production of heat/cold from fossil gaseous fuels in an efficient district heating and cooling system: the production of heat from natural gas in the Smart Infrastructures BU plants was included as an eligible activity, but not aligned, as the technical screening criteria of the Regulation are not passed.

5.1. Construction, extension and operation of water collection, treatment and supply systems: this includes water distribution plants owned and operated by the Group (Smart Infrastructures BU) and the networks connected to them. This activity is partially aligned, as the technical screening criteria are not passed by all Group assets.

5.3. Construction, extension and operation of wastewater collection and treatment: this includes the effluent treatment plants owned and operated by the Group (Smart Infrastructures BU) and the sewerage networks connected to them. This activity is partially aligned, as the technical screening criteria are not passed by all Group assets.

5.5. Collection and transport of non-hazardous waste in source segregated fractions: includes all waste collection activities of the Waste BU and its transport to disposal plants. This activity is fully aligned.

5.6. Anaerobic digestion of sewage sludge: this includes the Cornolona sludge plant and the Agropower biogas plant (Waste BU). Both plants pass the technical screening criteria and are therefore eligible and aligned.

5.7. Anaerobic digestion of bio-waste: for this activity, the OMSW plants of Laccenella and Cavaglia (BU Ambienti) were considered, both of which are aligned with the criteria set out in the Regulation.

5.9. Material recovery from non-hazardous waste: this activity includes the non-hazardous waste treatment plants of the Waste BU. Some of these do not pass the technical screening criteria (Castañedello, Fombio, Cogogno, Muggiano and Cavaglia plants), which require the conversion of 50% by weight, of incoming waste into secondary raw material.

5.10. Landfill gas capture and utilization: plants installed at the Group’s landfill sites (Waste BU) fall under this activity. Some installations are not considered aligned, as they do not pass the technical screening criteria of the Regulation.

6.15. Infrastructure enabling low-carbon road transport and public transport: the activity covers the installation of charging points for electric vehicles on public land. This activity is considered to be fully aligned with the Regulation.


7.3. Installation, maintenance and repair of energy efficiency equipment: this activity includes interventions concerning public lighting and energy efficiency services at third parties, conducted by the Smart Infrastructures BU and considered aligned with the Regulation.

7.4. Installation, maintenance and repair of charging stations for electric vehicles in buildings and (parking spaces attached to buildings): the activity covers the service of installing charging points for electric vehicles at third-party assets. This activity is considered to be fully aligned with the Regulation.

7.6. Installation, maintenance and repair of renewable energy technologies: this includes the maintenance and installation of technologies for generating electricity from renewable sources (e.g., photovoltaic panels) on third-party assets. The activity is aligned with the criteria envisaged by the Regulation.

8.1. Data processing, hosting and related activities: these activities are carried out by A2A Smart City which are not considered aligned for the reporting year because they do not meet the technical activity screening criteria.

Subsequently, in coordination with the Planning and Management Control Department, the process of collecting data on revenues, capital expenditure (CapEx) and operating expenditure (OpEx) relating to the aforementioned economic activities was managed centrally in order to quantify and report the indicators required by the Taxonomy. This involvement was also necessary in order to ensure consistency between the amounts reported as part of the disclosure envisaged by the Taxonomy and those determined in the context of financial reporting, as required by the regulations. The entire analysis was implemented on a dedicated computer application that allowed the mapping of individual income statement items associated with the eligible and aligned activities.

Below are the three KPIs determined downstream of the results of the above activities, which are designed to represent the extent to which the activities carried out by A2A Group are ‘eligible’ and ‘aligned’ under the Taxonomy Regulation. The standard reporting templates required by EU Delegated Regulation 2021/2718, as well as some methodological specifications, are included in the Supplement to this document, on page 22.
It should be noted that the indicators were calculated on a consolidated basis, taking care to avoid the risk of double counting. In particular, the elimination of intercompany items was taken into account and the necessary adjustments were made in the case of revenues, capital expenditure and operating expenditure common to several economic activities. In the final calculation, the company Acinque was excluded, as it is subject to separate reporting obligations according to Italian Legislative Decree 254/16 (see the Note on Method on page 6).

Finally, it should be noted that the A2A Group operates in compliance with the 'minimum safeguards' required by the legislation and has robust procedures in the areas of human rights, anti-corruption, taxation management and management of competitive practices. For more details on the policies adopted, the management model, risk analysis and specific actions on these areas, please refer to the following sections within this document: Governance on page 20 and Dispute Management in the Supplement on page 82.

The difference with respect to the percentage values found in FY 2021 concerning the eligibility and alignment of business activities is primarily due to the greater degree of analysis, as well as an increased involvement of different business areas, which allowed for the implementation of a more robust and accurate process supported, among other things, by the implementation of dedicated software.

55.4% Eligible
41.8% Aligned

Figure 28 OpEX
In 2022, the fight against climate change was forced to face the geopolitical, economic and social challenges brought about by the war in Ukraine.

The conflict exacerbated the supply chain management difficulties that had already emerged during the pandemic, with sharp increases in energy and commodity prices as well as growing delays and price increases in logistics, hampering normal business operations.

The energy markets suffered a real global crisis: the price of natural gas reached record levels, and consequently, so did the price of electricity. Highly vulnerable when it comes to gas supplies due to its historical dependence on Russia, Europe had to review its decarbonization and energy transition policies in order to mitigate the current emergency.

In this context, the study ‘Towards Italian energy autonomy: water, wind, sun, waste our raw materials’, carried out by The European House - Ambrosetti in collaboration with A2A, was presented. The research aims to qualify how the valorisation of energy sources available in Italy can contribute to the country’s energy autonomy. According to the indicator elaborated by Ambrosetti, Italy is currently fifth to last in Europe in terms of energy autonomy, producing only 22.5% of the energy consumed on its territory, but is second in terms of availability of renewable resources in its territory. The full exploitation of indigenous sources would triple Italy’s independence from foreign energy supplies: an almost four-time increase over the last 20 years, to the benefit of citizens and businesses.

With regard to photovoltaics, with existing technologies and regulatory constraints, the development opportunity in Italy is an additional 105 GW, almost five times today’s installed capacity. As far as wind power is concerned, the exploitation of development opportunities in the country’s territories - with technologies and regulatory constraints in place - enables an increase in power of 21 GW compared to today, i.e., almost twice the currently installed capacity. Furthermore, through the repowering of existing plants and the development of mini-hydro plants, hydroelectric plants would be increased by more than 20% compared to the hydroelectric capacity currently installed (concentrated in Lombardy, Trentino Alto Adige and Piedmont). Lastly, proper management of the waste cycle, including through the use of energy recovery, makes it possible to both reduce the use of landfill and to contribute to increasing national electricity production and the development of the biomethane chain.1

Infrastructure for the Ecological Transition

The Group strives for excellence in its operating performance in terms of reliability, quality and safety of services offered, promoting continuous maintenance activities of company plants, the use of the BAT (Best Available Technology) and the application of innovative tools and technologies. In addition, A2A contributes to the ecological transition (climate change adaptation and mitigation) by engaging in investments aimed at innovation and the digitalization of existing infrastructures, with a view to energy efficiency, and encourages research and development activities related to sustainable mobility and the development of renewables.

#Energy transition #Mobility #Sustainable innovation #Resilience #Adaptation #Efficiency

Risk factors

Opportunity factors

Strategic plan focused on ecological transition over a ten-year horizon.

Energy autonomy

NEW: Through its energy efficiency activities and investments to develop the Renewable Energy Sources (RES) available in the country, the Group contributes to the country’s transition towards energy autonomy.

In order to increase national energy self-production, A2A also promotes the energy valorization of waste and agricultural and food production waste in order to support the development of the biomethane chain, providing incentives for investments in production plants.

#FER #Renewable sources #Energy mix #Waste valorization #Energy security

Risk factors

Opportunity factors

Regulatory framework favourable to the implementation of the energy transition.

What we have done

Management Approach (MA)

Mitigate

Development of energy efficiency initiatives; construction of plants for the recovery and treatment of waste and purifiers; increase in assets of generation from renewable sources, etc.

What we are doing

Sustainability Plan Actions

District heating

Water

Sustainable Mobility

Smart grid

Cybersecurity

2022 Actions

- Technological upgrades of gas turbines at the Cassano d’Adda, Chivasso, Seriate and Piacenza power stations
- Awarded 190 million euro in funding under the NRIP “Strengthening the smart grid” call
- Inaugurated the new primary cabin at San Cristoforo in Milan
- Construction work started on the new Volbaro purification plant and the Caviasco purification plant
- Tenders awarded for the implementation of the remote network for reading drinking water meters with LoRaWAN technology in the cities of Turin and Naples

What we have done

Management Approach (MA)

Mitigate

Implementation of investments defined in the Strategic Plan aimed at achieving 13 TWh energy production by 2030, through the energy transition and circular economy pillars.

What we are doing

Sustainability Plan Actions

Renewables

Energy efficiency in end uses

Waste recovery and treatment

2022 Actions

- Italian wind companies Daunia Calvello and Daunia Serracapriola, Mimiani and Montegrighine acquired
- Photovoltaic companies De Stern and Cerveteri with plants in Puglia and Lazio acquired
- Acquired SEA Energia, the company that supplies electricity and heat to the two airports Milan Linate and Milan Malpensa
- Inaugurated two plants for processing OFMSW, which will allow the production of 13 million cubic metres of biomethane
The plants managed by the Waste Business Unit cover all phases of the integrated waste cycle: from recycling management, ecological platforms and landfills through to energy and material recovery and processing plants.

6.1 Manufacturing Capital in the Waste Business Unit

The plants entering the Group’s plants amounts to 3.6 million tonnes, of which approximately 3 million tonnes is treated at the plants and disposed of in various ways. The waste treated in plants managed on behalf of third parties (e.g., Acea waste-to-energy plant and Caivano CSS plant) and in the Acinque Group plants (Como waste-to-energy plant) is not included.

The amounts of waste entering the Group’s plants have been stable over the last three years. There is a slight increase of about 3% in electrical energy (amounting to 1454 GWh) in 2022 and a decrease of 9% in thermal energy (amounting to 1,452 GWh) from waste utilisation. There is a slight increase of about 3% in electrical energy (amounting to 1454 GWh) in 2022 and a decrease of 9% in thermal energy (amounting to 1,452 GWh) from waste utilisation.

In line with the Strategic Plan, the Group further strengthened its presence along the supply chain in 2022, increasing its capacity for material treatment and recovery and biomass energy production. Two plants for the treatment of the organic fraction of municipal solid waste (OFMSW) were inaugurated in 2022. The first plant was inaugurated in Giussago - Laccavanello (PV) and allows the treatment of about 100,000 tonnes of waste between wet and urban green waste. Thanks to the natural fertilizer produced (about 20,000 tonnes per year of certified compost) and made available to farmers, it will allow to reduce the use of chemical fertilizers in local agriculture. Furthermore, it will be possible to obtain 8 million cubic metres of biomethane annually (equal to the annual needs of about 20,000 people). The second plant was inaugurated at the Cavaglia (BG site; the new plant has 60,000 tonnes per year of authorized treatment capacity, allows the production of 5 million cubic metres of biomethane and 10,000 tonnes of certified compost for agriculture per year.

The research broadly investigated the possible critical issues related to extensive use of sludge in agriculture, and thus the potential and implications inherent in the alternative process consisting of pre-conditioning (pre-treatment), waste-to-energy and recovery of nutrients from ash, in particular phosphorus recovery.

The dissemination campaign organized during the course of the project involved all stakeholders, with the aim of raising awareness among organizations and citizens about the potential for exploiting and recovering sludge in the soil and in energy recovery.

The Fanghi project developed within the Lombardy Energy Cleantech Cluster working groups and financed by the Lombardy Region from POR FESR 2014-2020 resources ended on 30 November 2022. The goal set by the partnership - consisting of the lead partner A2A Ambiente S.p.A. (BrianzaSludge S.r.l.), Istituto di Ricerche Farmacologiche Mario Negri (IRCCS), Lariana Depot S.p.A., MM S.p.A. and TCF Tescora S.r.l. - was to test and validate new sewage sludge treatment technologies to optimize its management with a view to sustainable development.

The project envisaged an ambitious work plan developed by the partners with an integrated approach, combining technological innovation, experimental and frontier modelling activities aimed at identifying the most advantageous single or combined strategy in terms of health, environmental, energy and economic sustainability.

The results achieved allowed, through pre-treatment and combustion tests (also mono - in a dedicated plant) and pollutant removal tests (PFAS), the development of:
- 1. an innovative methodology within the framework of the Health Impact Assessment (HIA) guidelines for both the agricultural and waste-to-energy scenarios;
- 2. new instrumentation for sampling and analysis of gaseous effluents in air;
- 3. phosphorus extraction processes from sludge combustion ash, resulting in a phosphorus solution that can be used as a fertilizer.

The dissemination campaign organized during the course of the project involved all stakeholders, with the aim of raising awareness among organizations and citizens about the potential for exploiting and recovering sludge in the soil and in energy recovery.

Progress of the flue gas filtration system revamping project with heat recovery at the Brescia waste-to-energy plant

Work continued in 2022 on the flue gas treatment system (with the installation of an innovative system to further reduce emissions) and the heat recovery system from combustion gases. Work was completed on combustion line number three: the related flue gas treatment and heat recovery system began regular operation in December. The work will also be completed on the remaining two lines by 2023.

As a result of the above-mentioned measures, around 3 GWh of thermal energy was recovered from flue gas in December 2022, and nitrogen oxide emissions from line 3 were reduced by around 22% compared to the average of the previous months, while the acid-component emissions were reduced by more than 50%. The Fanghi project developed within the Lombardy Energy Cleantech Cluster working groups and financed by the Lombardy Region from POR FESR 2014-2020 resources ended on 30 November 2022. The goal set by the partnership - consisting of the lead partner A2A Ambiente S.p.A. (BrianzaSludge S.r.l.), Istituto di Ricerche Farmacologiche Mario Negri (IRCCS), Lariana Depot S.p.A., MM S.p.A. and TCF Tescora S.r.l. - was to test and validate new sewage sludge treatment technologies to optimize its management with a view to sustainable development.

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6.2 Manufacturing Capital in the Energy - Generation and Trading Business Unit

The Energy - Generation and Trading Business Unit is responsible for managing the Group's portfolio of generation plants and for trading in all energy commodities (natural gas, electricity and environmental certificates) on domestic and foreign markets. The production of electricity (and the balancing of the grid) takes place in an increasingly diversified and sustainable way through different types of plants, whose capacities are shown in the table below.

<table>
<thead>
<tr>
<th>Type</th>
<th>No. of Plants</th>
<th>Location</th>
<th>Capacity (MW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wind</td>
<td>6</td>
<td>Basilicata, Campania, Apulia, Sardinia, Sicily, Spain</td>
<td>245</td>
</tr>
<tr>
<td>Synchronous couplers</td>
<td>2</td>
<td>Apulia</td>
<td>286</td>
</tr>
<tr>
<td>Thermoelectric*</td>
<td>9</td>
<td>Abruzzo, Emilia-Romagna, Friuli-Veneto Giulia, Lombardy, Piedmont, Apulia, Sicily</td>
<td>6,457</td>
</tr>
<tr>
<td>Photovoltaic</td>
<td>106</td>
<td>Abruzzo, Calabria, Campania, Emilia-Romagna, Lazio, Lombardy, Marche, Piedmont, Apulia, Sardinia, Sicily, Tuscany, Trentino-Alto Adige, Spain</td>
<td>3,07</td>
</tr>
<tr>
<td>Hydroelectric units</td>
<td>5</td>
<td>Lombardia, Friuli-Veneto Giulia, Calabria</td>
<td>2,071</td>
</tr>
</tbody>
</table>

*Excluding the Scandole power plant, which is not consolidated in the data of this document.

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 Montfalcon 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.

The BU’s energy production in 2022 stands at 172.97 TWh, of which about 14 TWh from thermoelectric production. The Cassano d’Adda, Chiavasso, Seremide and Piacenza power plants were involved in technological upgrades of the gas turbines with the aim of increasing the overall power of the combined cycle (about 60/80 MW per plant). At the same time, the interventions also led to an improvement in plant efficiency2, with a net electrical efficiency of 45.6% and 48.5%.

The interventions include the installation of hardware components that improve efficiency and thus environmental performance. The activities were completed in 2022, except for the Piacenza power plant for which the work will be completed in 2023. The additional power deriving from the upgrade of the Chiavasso and Cassano d’Adda power plants falls within the capacity allocated in Terna’s Capacity Market3 auction with delivery in 2022, while that of the upgrade of the Seremide and Piacenza power plants falls within the capacity allocated in the auction with delivery in 2023.

A project was started in 2022 to build a photovoltaic carport to cover the inner and outer car parks of the Gissi thermoelectric power plant with a capacity of 204.76 kW and 546 modules. The annual electricity production from renewable sources is estimated at around 260 MWh. The sustainability of the project also includes the forthcoming installation of electric charging stations for electric cars and the creation of a biological corridor for local fauna.

In 2022, the photovoltaic plants located at the Seremide and Chiavasso power plants were revamped and repowered. Reusing existing fixed structures, state-of-the-art PV modules with increased power and efficiency were installed. The Chiavasso PV system increased from 900 kW to 1259 kW, while the Seremide PV system increased from 907 kW to 1604 kW.

A major investment of almost 4 million euro was made in the San Pietro Sovera hydroelectric plant in 2022, a floating water plant in the Province of Como capable of producing 15 million kWh/year of renewable energy. The investment covers the upgrading and complete revamping of all the electromechanical components of the power plant, which have now reached the end of their technical life, and the efficiency upgrading of the hydraulic capture and derivative system in general. Between July and December 2022, the existing turbine-alternator unit was replaced in the power plant with new high-efficiency machinery including modern auxiliary systems, new automation, supervision and remote control equipment. In the hydro-civil sector, on the other hand, the main investment made during the winter period concerned the renovation of the main intake work to change its type and make it more efficient, replacing and modernizing the hydraulic organs responsible for intercepting and discharging the flowing loads; a new remote control system of the hydraulic works was also implemented, which will optimize the operation of the plant as well as the works’ and operators’ safety, especially during flooding events. Overall, the intervention has increased the plant’s value, extended its useful life and brought it in line with current regulations, increased its efficiency, performance, reliability and operating flexibility, and increased the expected output by around 15%.

6.3 Manufacturing Capital in the Smart Infrastructures Business Unit

The Smart Infrastructures Business Unit is responsible for developing and maintaining the infrastructures that enable the provision of electricity and natural gas distribution services, heat production and distribution, management of the integrated water cycle (aqueducts, sewers and purifiers), recharging of electric vehicles through the appropriate columns, access to broadband connectivity and Smart City services (installation and monitoring of sensors, data collection and analytics development). The maintenance and evolution of these infrastructures are among the key factors necessary to achieve the national and European energy policy goals.

Figure 31 Plants of the Smart Infrastructures BU for the distribution of electricity and gas
Electricity and natural gas distribution service

The electricity distribution grid has an extension of 15,974 km in high, medium and low voltage, of which 87% of the total is underground. The grid is also supported by 34 primary stations and substations and 9,779 secondary stations. In contrast, the length of gas distribution infrastructure is 11,238 km in medium and high pressure. In March 2022, the extraordinary transaction for the sale of gas ATENAs considered non-strategic for the A2A Group was completed. The size of the transferred grid amounts to almost 36% in Lombardy, Veneto and Abruzzo, and involves about 170,000 users for a RAB (Regulatory Asset Based) value of 90 million euro. The grid has 176 primary and secondary stations (ORSs). The electricity distribution activity is managed by Unareti, LD Reti and Retipiù in Lombardy in the provinces of Milan, Brescia, Monza and Cremona. The gas distribution activity is managed by the same companies in addition to A3V7, with the most important share of the networks located in Lombardy, in the provinces of Milan, Brescia, Bergamo, Cremona, Lodi, Monza and Pavia.

In 2022, the electricity distributed amounted to 110,876 GWh, while gas distribution amounted to 2,250 MM^3. Through the subsidiary Retragas S.r.l., the Group also manages the regional transmission of natural gas in Lombardy, Trentino Alto Adige and Piedmont, with more than 410 km of network moving 368 MM^3 of natural gas in 2022.

The integration of Renewable Energy Sources (RES) into the energy mix has been identified as the main path to be pursued in the energy transition process. In this scenario, the development, upgrading and renewal of the electricity distribution network are therefore some of the main interventions to be implemented in order to enable the increase of electricity consumption and thus make it available to the system in an efficient and flexible manner.

At the end of 2022, the Group was awarded a grant of no less than 160 million euro as part of the ARP+ “Strengthening the Smart Grid” call. The outcome of the call for tenders consolidates the process of adapting Unareti’s electricity grids to the requirements for energy transition, the electrification of consumption and the development of distributed generation from renewable sources. This important financing will allow the construction of seven new Primary Stations, the modernization of 100 km of the medium-voltage network in the municipality of Milan (and its surroundings) and three new reactive energy compensation plants to be built by the first half of 2026. These are fundamental interventions for improving the quality of service, the availability of electrical power and the capacity of the network to accommodate new generation distributed in the areas of Milan, Brescia, Varese and Treviso. The activity will have a total duration of about six years and will impact the local distribution system by enabling a total electrification increase of 43.06 MW, benefiting 610,000 end users.

In 2022, the new primary substation in San Cristoforo in Milan was inaugurated. Primary substations serve to ensure the resilience of the city’s electricity grid, to distribute energy in an integrated and capillary manner and to increase the reliability of the networks. After that of Rizzano, San Cristoforo is the second of 14 primary substations to be built in Milan.

2030 (Unareti’s Ten-Year Plan). It was designed precisely to meet the growing energy demand (about 15MW are expected to be needed to power the new neighbouring urbanizations), allowing energy loads to be streamlined and balanced while guaranteeing high standards of quality and service continuity.

San Cristoforo also provides power (about 17 MW) for the new M4 metro line and the charging hub (8 MW) for ATM’s ‘Giambellino’ electric buses.

Training activities for the project that Unareti started in 2021 with the aim of using Unmanned Aircraft System (UAS) devices, commonly called “drones”, to search for faults on overhead power lines, check for the deterioration of plants and equipment serving electrical assets, and check for potential interference from trees, all important analyses to improve the technical-quality of the electricity service, were concluded in 2022.

Water leakage detection and reduction activities continued in 2022: more than 1,070 km of network were inspected. The Aquarius project is also advancing, which involves the installation of noise (noise loggers) to detect early signs of the ‘noise’ of a leak from a pipeline in real time, thereby changing the paradigm of water network management. The project was expanded in 2022, the installation of 376 sensors in December 2022. Always with a view to technological innovation, the experiment to test the effectiveness of utility meters with an integrated noise detection module continued in 2022 as well.

Activities continued in 2022 for the renewal and energy efficiency of the plants, both related to the water service and those related to the sewers and purifiers. For the aqueducts, work was carried out on wells and repumping with the installation of more efficient pumps and the renovation of around 20 electrical power and control panels. With regard to the sewerage treatment plants, on the other hand, the project involving the replacement of the motors in about 20 plants was completed. Overall, more than 50 plants were involved. The consequent activity underway to reduce water dispersion has also begun, and will continue to bring positive impacts in terms of reducing electricity consumption (more than 330,000 kW) of the water service’s collection and repumping plants.

Planned work on the resolution of European infringements on the Italian purification network also continued during 2022. Where not already resolved, all the work related to the agglomerations with infringements is in the process of being resolved, some being completed, others in the planning stage, with a forecast of complete resolution by 2025. In this regard, work was completed on the construction of the new purification plant in Afflano (6,000 population equivalent served) and the elimination of the non-purified terminals in the municipality of Offlaga was completed. Construction work also began on the new Volano purification plant (719 population equivalent served) and the Calvisano purification plant (3041 population equivalent served).

As part of the plan to reduce water losses, the districtization of the distribution water network is an important action which is useful for refining aqueduct monitoring, installing flow measurement points at the inlet of each district in doing so, anomalous trends in the flow regime led to the district, which is indicative of possible leaks, can be detected. In addition, where possible, districtization allows the implementation of pressure management logics: the reduction of operating pressures allows both a reduction in the volume of water lost from leaks already present and a lesser burden on the pipes, thereby preventing future ruptures. Since the start of the plan (2018), 33% of the distribution network managed throughout the Province of Brescia, or 1080 km, has been districtized.

The plan includes a special focus on the city of Brescia, where four districts will be implemented in 2022, bringing the total number to eight. The hydraulic model of the city’s network was also completed, which will allow to speed up the implementation of the missing districts in the coming years, being able to simulate their optimal layout.

The new Vel Trompia district purification plant was inaugurated in December. This work was fundamental for the municipalities in the area and has been awarded for many years by its families and companies. It will produce important environmental benefits for the area passing along the Mella River from the Trompia Valley to Bassa Bresciana, passing through the city of Brescia. The plant, for which 38 million euro has been invested, is located in Comeza, Dossò Boscone - a highly urbanized area - on the left bank of the Mella River and will serve the municipalities of Bozeno, Pezzago, Tavemola sul Miela, Lodrino, Marcheno, Gardone Val Trompia, Barison, Lumezzane, Polaveno, Villa Caronia and Concesio. The purification plant that has been commissioned can treat the waste water generated by 86,000 population equivalents and is already planning a second expansion phase that will allow it to serve up to 138,000 population equivalents.

District Heating Plants and Networks

Through its subsidiaries A2A Calore e Servizi and Linea Green, the Group develops and manages the district heating plants and network in Milan, Sesto San Giovanni (Mi), Cassano d’Adda (Mi), Cologno Monzese (Mi), Baveno (Bi), Biassono (Bi), Condove (Bi), Borgosesia (CN), Corgno (SO), Pollenzo (TO) and Rovereto (TN) for BM and Giuliano (MB) for a length of over 1,260 km, with a service capacity of 500,000 equivalent apartments and a volume of 120 million cubic metres served. In 2022, the distributed heating and cooling energy will amount to 3,056 GWh.

### Integrated Water Service

Through its subsidiaries A2A Cico Idrico and AVST, the A2A Group manages services related to the integrated water cycle in almost all the provinces of Brescia. In all, the Group distributed 4,267 mln cubic metres of water in 2022. In the municipalities overseen for the sewage and treatment service as well, approximately 44 million cubic metres of wastewater were treated.

#### Figure 32 Plants of the Smart Infrastructures BU for integrated water service

<table>
<thead>
<tr>
<th>Plant type</th>
<th>Extension</th>
<th>Aqueduct network</th>
<th>Sewer network</th>
<th>Purifiers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annone</td>
<td>4,061 km</td>
<td>2,065 km</td>
<td>51</td>
<td>658,000</td>
</tr>
</tbody>
</table>

1 Hosting Capacity is defined as the ability to host and integrate ‘Distributed Generation’. To learn more: https://www.a2a.it/innovazione-regioni.lombardia.it/area/news/newsview.php?6577

2 Network consisting of a double pipe for the distribution of heat, in the form of hot or superheated water, located capillarily in the urban area
In 2022, through A2A Calore & Servizi, A2A acquired SEA Energia, the company wholly owned by SEA that supplies electricity and heat to the two airports of Milan Linate and Milan Malpensa. The transaction resulted in the acquisition and management by A2A of the Linate cogeneration plant and the Malpensa tri-generation plant, and is a long-term partnership aimed at fostering the decarbonization process of the two Milan airports. The aforementioned agreement will allow SEA to achieve plant operating efficiencies, exploiting the technological expertise in the management of the A2A Group's power plants, as well as the full utilization of the available thermal and electrical capacity. Finally, A2A's know-how will facilitate the achievement of the goal of carbon neutrality for the two Milan airports. Thanks to this transaction, A2A can also consolidate a source of supply for the district heating network in East Milan, which is considered strategically important, by dedicating the two new plants - which today have an installed thermal power of 100 MW - to the supply of new users.

A2A Calore e Servizi and Sogemi have signed a project financing agreement for the installation of the energy infrastructure of the new fruit and vegetable logistics platforms of the City of Milan's Agripark Food and the implementation of the related condensation cooling, photovoltaic and consumption metering services, with measures to reduce and minimize carbon emissions. In particular, the contract provides for the design, installation and management of a cooling plant which will exploit groundwater and use eight dedicated extraction wells to integrate the cooling systems of the new halls, as well as the construction of three photovoltaic systems covering the buildings of the New Fruit and Vegetable Market. It is estimated that the above will contribute to the production of 2400 MWh of renewable energy per year, equivalent to a reduction of more than one thousand tonnes of CO₂ emissions into the atmosphere annually.

Sustainable Mobility

Created in July 2021, A2A E-Mobility carries out in particular the role of Charging Point Operator (CPO): in the field of electric mobility, it develops, manages and maintains charging infrastructures ("charging columns") with public access. In 2022, more than 320,000 charges were carried out in the more than 400 charging columns managed by A2A (of which more than 200 installed in 2022), which corresponds to approximately 4.5 million kWh of electricity delivered. This has resulted in almost 30 million km travelled with zero emissions and the avoidance of over 3,000 tonnes of CO₂ emissions.

In 2022, A2A E-Mobility and Enel signed a charging network interoperability agreement: the collaboration between the two companies will allow customers to charge their vehicles at around 15,000 charging points across the country.

In addition, A2A has signed an agreement with Hubject, the first global operator of roaming services in the electric mobility sector (active on three continents, in 28 countries and with more than 200,000 charging points), made up of a consortium of car manufacturers and companies active in the sustainable mobility sector - with the aim of simplifying the interoperability of electric vehicle charging stations and guaranteeing immediate access to the A2A network for Italian and European citizens. In fact, the different charging apps of any eMSP participating in the Hubject system allow to view the map of A2A’s charging stations, charging rates and power output and book the charging point. The operation significantly expands the number of supported apps and makes the charging experience even simpler, making the A2A network accessible to a much larger number of users in Italy and Europe. The agreement with Hubject is part of A2A’s 2030 Business Plan to promote decarbonization by investing in the electric mobility segment.

A2A E-Mobility has also played a leading role in the A2A Group’s ambitious fleet renewal project, reaching a quota of 700 electric vehicles by 2022, the highest in Italy among large companies. Vehicle charging will be ensured by a network of 1,200 charging points installed in 90 A2A Group locations or plants, 310 of which in the Brescia Lamarmora HUB alone.

Public Lighting

A2A operates public, artistic and traffic light installations in several Italian municipalities. Through A2A Illuminazione Publica, the Group deals directly with the design, construction and maintenance of public lighting systems, guaranteeing a reduction in energy consumption, limited light pollution and respect for the environment through the use of the latest technologies. Through its subsidiaries, the company is present in eight regions - Padova, Lombardy, Veneto, Emilia-Romagna, Puglia, Campania, Calabria and Sicily. In 2022, A2A Illuminazione Publica took on the management of public lighting in the municipalities of Trezzano su Naviglio, Sedrano, Abbiategrasso, San Gregorio Magno, Villarobbia and Isola d’Arte, for a total of around 12,600 light points. The efficiency works will be completed in 2023, which include the replacement of the lighting fixtures that do not comply with the Regional Law for limiting light pollution and energy saving with high-efficiency street, furnishing and decorative products equipped with LED sources. The project will save more than 5 million MJ and avoid the emission of more than 1,300 tonnes of CO₂ into the atmosphere.

Smart City

A2A Smart City is the Group company that provides innovative solutions to make the supply of primary goods such as water, gas and electricity smarter.

A2A Smart City’s water management strategy is based on the key points of remote meter reading, leak detection and distribution. The most important projects in this regard include:

- remote water meter reading in Turin and province: A2A Smart City was awarded the tender called by Società Metropolitana Acque Torino (SMAT) for the implementation of a remote reading network for water meters using LoRaWAN technology for all the water meters in the Turin area. The supply of an acquisition system for the water consumption of the 350,000 utilities managed by the SMAT group covers about 300 municipalities, with a total estimated value of about 4 million euro;
- remote water meter reading in the city of Naples: A2A Smart City won the tender organized by ABC Napoli for the design of the LoRaWAN network for the city of Naples as well. The project includes the configuration of a remote reading system to manage the 30,000 smart water meters installed in the city. A2A will take care of all the activities for commissioning the network, from its executive design and the supply of servers, to the support and training of ABC Napoli staff.

A2A Smart City also aims to promote the digitalization of cities, for example through the installation of digital islands. These stations integrate various services ranging from the possibility of charging smart devices and e-bikes (in some cases using renewable energy) to the availability of defibrillators to support emergency management in the area. The defibrillators, in particular, are remotely controlled to ensure that they are always operational and available when needed.

Other projects developed by A2A Smart City in 2022 of particular relevance are those aimed at the implementation of advanced video analysis tools, the particularity of which lies in the multiplicity of possible uses. For example, in the biomass valorization plant in Sant’Antagata di Puglia, the need emerged to develop algorithms capable of detecting aggregates and then data to be used for the systems in the plant. The implemented solution has as its objective the reduction of plant downtime due to the presence of undetected aggregates during acceptance, which cause accelerated deterioration of plant components, and the increase of biomass yield productivity in energy terms.
6.4 Cybersecurity

The A2A Group has an organizational unit that provides continuous oversight of cybersecurity management.

In particular, within the Group Security & Cyber Defence Department, the Cyber Defence structure is the function dedicated to Cybersecurity and which guarantees the control and governance of security on A2A’s infrastructures, applications and services in compliance with current regulations and the main industry standards and best practices, adopting an integrated approach within the digital sphere and industrial plants.

In line with the Internal Control and Risk Management System (ICRMS) of A2A S.p.A., of which it is a constituent element, and the guidelines defined within the Group Compliance structure, the activities carried out by Cyber Defence are therefore aimed at defining and implementing compliance and governance models, in particular of cyber risk in order to ensure the efficiency and effectiveness of operations, adequate risk control, prudent business conduct, reliability of information, and compliance with laws, regulations and internal procedures.

To this end, Cyber Defence has set up a monitoring and management model integrated with the ICRMS which defines the Information Security Management System (hereinafter also “ISMS”), according to the international standard ISO 27001 and through which it has set up controls, organizational processes and cyber security technological safeguards for the detection, mitigation and treatment of cyber risks, both in the digital IT and industrial OT spheres.

Further completing the above, it is important to point out that this model envisages, among other things, executive reporting carried out both on a periodic basis and on an as-needed basis [e.g., on the occasion of particularly serious incidents] to the executive bodies and to the structures constituting the company’s internal control system.

As regards cyber risk, on an annual basis and in an integrated manner with the Enterprise Risk Management Department, cyber risk analysis and monitoring is carried out, which in 2022 involved the Digital Department and 11 industrial sites, for a total of about 100 meetings in which more than 4,000 cyber (IoT) checks were carried out.

As regards business continuity, 2022 was characterized by the implementation of a Business Continuity Management System and the promotion of training activities aimed at disseminating the main concepts of business continuity to all employees, strengthening and expanding training activities through the provision of ad hoc training sessions for Business Continuity Representatives (BCRs) and their operational teams.

A2A is also working on awareness pathways on cyber issues. An innovative programme was launched in 2022 that integrates and enriches Sicurezza, the corporate platform that encompasses awareness campaigns, training courses and exercises, procedures and standards, and thematic in-depth studies on A2A Security.

In particular, the Cybersecurity Awareness & Training Programme 2022-23 was launched, focusing on the increasingly topical issues of e-mail security and phishing.

Training also included a cyber incident management OT exercise at the company Unareti and the Valetellina core and specialized cyber OT training courses in the industrial area involving a total of more than 100 employees, as well as the training course on the principles of cybersecurity which is compulsory for all new hires and company employees.

In addition, the Master’s degree in “Security Management” offered by the Tor Vergata University of Rome in cooperation with A2A Group Security & Cyber Defence Departments represented a fundamental training path for about 60 employees, eight of whom graduated with specific technical requirements to then obtain UNI 10459:2017 certification as “Security Professionals”.

It is also worth noting that 2022 saw the completion of important international certification processes by our Group, aimed at certifying that our cybersecurity and business continuity management systems are aligned with international best practices in terms of secure information management capabilities, business continuity processes and security of industrial architectures in the face of possible destabilising events. In particular, A2A is:

- one of the first Italian multi-utilities to obtain ISO/IEC 27001 Certification of the Group’s Information Security Incident Monitoring and Management Services Portfolio, with the prospect of expanding the certified scope year after year;
- the first multi-utility in Italy to obtain ISO 22301 Certification, which this year focused on the specific scope of critical business processes such as Customer Services, Supplier Services, Energy Management and Finance. The Group plans to continue on this path and certify further high-impact business processes/companies in the next three years (2023-2025);
- the first multi-utility in Italy, and one of the first in Europe, to obtain the certificate of conformity for industrial cybersecurity practices according to ISO/IEC 62443, which in 2022 focused on module 3.2 related to the security of architectures and remote control systems. The prospect is to extend the certification scope to the remaining modules of the standard, so as to achieve full certification of the industrial production systems of Unareti and then Generazione Idroelettrica;
- the A2A Cyber Defence Center, which is responsible for monitoring and managing cybersecurity incidents, is aligned with best standards by obtaining CERT qualification and is affiliated with national and international cyber intelligence bodies (CERT and CSIRT), obtaining Trusted Introducer and FIRST certifications.

Some statistics concerning the cyber incidents handled in 2022 by the Cyber Defence Centre deserve mention:

- about 3,800 reports of anomalous cyber events analyzed and concerning ICT digital services and industrial OT;
- approximately 1,000 incidents managed, contained and mitigated in 2022.

Of these, 21 are of high and critical severity (the 45 compared to 2021) and none such as to jeopardize the company’s business or generate data breaches. Of these, 21 are of high and critical severity (the 45 compared to 2021) and none such as to jeopardize the company’s business or generate data breaches.1

1 A data breach is a security breach that results - accidentally or unlawfully - in the destruction, loss, modification, unauthorized disclosure of or access to personal data transmitted, stored or otherwise processed. A personal data breach can compromise the confidentiality, integrity or availability of personal data.

To learn more: https://www.gdpr.gov.it/legislazione/mondatabreach

FURTHER COMPLETING THE ABOVE, IT IS IMPORTANT TO POINT OUT THAT THIS MODEL ENVISAGES, AMONG OTHER THINGS, EXECUTIVE REPORTING CARRIED OUT BOTH ON A PERIODIC BASIS AND ON AN AS-NEEDED BASIS [E.G., ON THE OCCASION OF PARTICULARLY SERIOUS INCIDENTS] TO THE EXECUTIVE BODIES AND TO THE STRUCTURES CONSTITUTING THE COMPANY’S INTERNAL CONTROL SYSTEM.

A2A SpA is certified according to ISO/IEC 27001:2020 (part # B4522) in November 2022.
Natural Capital
The 2022 World Energy Outlook compiled by the International Energy Agency (IEA) shows that the effects of the difficult economic and geopolitical scenario caused by the war in Ukraine is causing serious repercussions in global energy markets, these include rising raw material costs and a reorientation of energy policies and priorities that push fuel choice and hinder progress towards universal energy access.

This unstable energy situation has also led to a significant increase in CO₂ emissions due almost entirely to the ETS sectors. The European target to reduce emissions by 55% by 2030 now requires an average annual reduction of more than 6% over the next eight years, a reduction that has never been approached in years of positive economic growth. An increase in emissions of around 15% in Italy has been estimated on a trend basis for the next eight years, a reduction that has never been approached in years of positive economic growth. An increase in emissions of around 15% in Italy has been estimated on a trend basis for the first nine months of 2022. This increase is due to the increased consumption of coal in thermoelectric generation and the first nine months of 2022. This increase is due to the increased consumption of coal in thermoelectric generation and the significant decrease in hydroelectric production (-38% in the nine months), which brought the carbon intensity of the electricity produced to about 280 grCO₂/kWh (+20% compared to the 2020 minimum). The drop in hydropower production was mainly caused by the water crisis in Italy in the summer of 2022, where reduced rainfall created the weather conditions for severe and prolonged drought, aggravating the energy situation already strained by Russia’s drastic reduction in gas supplies.

The scarcity of water resources has also put the issue of water management at the centre of both national and international debate, as while there is an increasing demand for water, there is also a decrease in its availability due to climate change and emerging pollutants. In this context, however, it must be emphasised that innovative responses to the climate crisis are emerging such as "Nature Based Solutions" (NBS), which multiple environmental, social and economic benefits, linking disaster risk reduction, mitigation and adaptation to climate change, with the restoration and protection of biodiversity and ecosystems¹. In Q1 2022, the first draft framework of the Taskforce on Nature-related Financial Disclosures (TNFD) was published to incorporate the analysis of nature-related risks and opportunities at the heart of corporate and financial decision-making.

The ISPRED energy transition index (Decarbonisation Price Security Index) in Q3 compared to 2021².

The 2022 Integrated Report

A2A's Natural Capital

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Natural Capital

Background information

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5. Natural Capital

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Natural Capital
**Circular Economy**

The Group promotes a production and consumption model aimed at extending the life cycle of products and services, with the objective of minimizing the use of non-renewable resources (virgin raw materials), minimizing waste and other environmental impacts related to the non-recycling and re-use of materials. To this end, A2A promotes separate waste collection activities and encourages the energy utilization of waste. Furthermore, the Group also takes environmental, social and governance aspects into account in its strategic business development choices related to the circular economy pillar of the Business Plan.

- **Opportunity factors**
  - Regulatory framework favourable to circular economy development.
  - Changing consumer behaviour when buying goods and services.
- **Risk factors**
  - Possible failure to reach target of: * separate waste collection.
  - Possible delay in the evolution of the national regulatory framework supporting the development of the circular economy sector (e.g., End of Waste legislation).
  - Possible difficulties in obtaining permits needed for the construction of plants for the recovery of energy and materials from waste.
  - Possible unfavourable price trends for recovered materials.

**Pollution Prevention**

The Group adopts a system of preventive measures and controls aimed at limiting or eliminating all forms of pollution (environmental, noise and light), minimizing any negative impact on human health and the environment. In addition, thanks to constant monitoring of the environmental performance of infrastructures, plants and vehicles of all Group companies, A2A guarantees full compliance with current environmental legislation and EU regulations, thereby reducing the risk of accidents that could worsen the quality of air, water and soil.

- **Opportunity factors**
  - Potential or suspected non-compliance with environmental legislation and/or any environmental damage arising from the Group’s processes or activities.
  - Any abnormal discharges into the public sewers that reach the Group’s treatment plants with potential criticality on treatment efficiency.
  - Possible non-compliance with community regulations on sewage treatment.
  - Any critical issues with the landfill leachate collection and treatment system.
  - Possible enactment of more restrictive and difficult to enforce environmental regulations.
- **Risk factors**
  - Installation and operation of charging systems for electric vehicles.
### Responsible Management of Water Resources

The Group adopts practices aimed at improving the management of water resources in its plants and business units, as well as optimizing user consumption, in order to minimize waste due to water losses along the network and thus increase the availability of water resources. A2A also promotes water recycling by encouraging water treatment and purification practices, especially in water-stressed areas. Finally, A2A is actively committed to improving the efficiency and safety of existing structures in the territories where it operates, constantly monitoring activities in order to ensure compliance with current regulations.

#### Possible factors
- **Possible failure to reach the goals of the Sustainability Plan**
- **Possible interruptions of the integrated water service, e.g., in case of prolonged periods of drought (TCFD page 56-60).**
- **Possible insufficient attention to water consumption optimization.**
- **Possible use restrictions in hydroelectric, due to competition for other uses by other stakeholders (TCFD page 56-60).**
- **Possible restrictions on plant operations due to drought or temperature increases in water bodies (TCFD page 56-60).**
- **Possible and accidental non-respect of the quality levels of water distributed and discharged, established by law.**
- **Possible enactment of stricter regulations on the quality of water for human consumption.**

#### Risk factors

- **Opportunity factors**
  - **Energy valorization of water released for irrigation purposes from hydroelectric basins.**
  - **Enhancement of investments in saving and optimizing the use of the water resource for drinking purposes.**
  - **Use of innovative technologies to survey geologic and hydrogeological data for aquifer research purposes.**
  - **Collaborations with universities for the experimentation of innovative processes to remove pollutants from water discharged for drinking purposes.**

#### Mitigations
- **Management method (DMA)**
  - Technological innovation for network leak detection.
  - Development of initiatives aimed at optimizing procurement and efficient management of the water resource.
  - Awareness raising initiatives on responsible water consumption.
  - Insight into risks from climate-related hazards, including in accordance with the EU taxonomy.
  - Investments to optimize the hydroelectric use of water released, in order to make it available for other uses.
  - Continuous monitoring of the quality of water withdrawn, distributed, treated and discharged.
  - Use of state-of-the-art water treatment technologies.
  - Oversight of regulatory update.
  - Listening to stakeholder needs.

### 2022 Actions

- **Seeds**
  - Analyzed and constantly monitored water-stressed areas.
  - Developed systems to promote the recovery and reuse of water in production cycles (20% of the water withdrawn by the Generation BU is reused).
  - Elaboration of the Safety Plan for the Brescia-Botticino-Bovazzola-Collaferrato water systems and in parallel for the Ospitaletto water system continued.
  - Drinking water quality monitoring is being implemented in the districts of the city of Brescia.

- **Plants**
  - What we have done
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- **2022 Actions**

### What we are doing

- **Sustainability Plan Actions**
  - **Water**
    - **2022 Actions**
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      - Developed systems to promote the recovery and reuse of water in production cycles (20% of the water withdrawn by the Generation BU is reused).
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Climate Change

The Group encourages the development of sustainable technologies and the use of renewable energy, contributing to the energy transition of territories and simultaneously to the fight against climate change. In addition, A2A promotes energy efficiency activities aimed at reducing greenhouse gas emissions in both the Group’s plants and with its customers, thus contributing to the achievement of international targets for reducing climate-changing emissions (e.g., the Paris Agreement).

Risk factors
- Possible tightening of “Ecological Outflows” regulations.
- Possible shortcomings in the controls on the environmental impacts of the plants, activities or services offered by the Group.
- Possible tightening of “Ecological Outflows” regulations.

Opportunity factors
- Launching an internal working group focused on achieving Net Zero by 2040 for A2A.
- Renewal of the company car fleet with the acquisition of about 700 electric cars and the installation of more than 1,200 charging points in 90 Group locations.

Biodiversity

The Group promotes the protection of the landscape heritage and the flora and fauna of the territories in which its plants or operating sites are located. A2A is actively committed to protecting biodiversity and not interfering with the protected area system through its operations. In addition, in order to minimize the impact on biodiversity and ecosystems in new intervention areas, the Group carries out constant analyses, monitoring and dialogue with local communities and other stakeholders, aimed at incorporating any critical issues and considerations on the Group’s operations in the territories of reference.

Risk factors
- Changes in physical climate parameters with potential adverse impacts on production and/or sales volumes of energy products and services and/or quality of grid services (TCFD page 56-60).
- Possible intensification of extreme natural phenomena that may cause impacts on production activities or services (TCFD page 56-60).
- Possible loss of competitiveness in case of insufficient awareness of contextual changes (regulatory, legal, market, opinion, etc.) related to the energy transition.

Opportunity factors
- Experimentation with technologies to capture CO₂ from combustion gases.
- Renewal of the company car fleet with the acquisition of about 700 electric cars and the installation of more than 1,200 charging points in 90 Group locations.
- Launching an internal working group focused on identifying strategic and technological solutions to achieve Net Zero by 2040 for A2A.

What we have done
- • Launched the ‘Retipiù Meno CO₂’ project, a major digitalization activity to identify and eliminate methane leaks in the network.
- • Unareti awarded ‘Gold Standard’
- • Launched the ‘Retipiù Meno CO₂’ project, a major digitalization activity to identify and eliminate methane leaks in the network.
- • Renewal of the company car fleet with the acquisition of about 700 electric cars and the installation of more than 1,200 charging points in 90 Group locations.
- • Launching an internal working group focused on identifying strategic and technological solutions to achieve Net Zero by 2040 for A2A.
Circular Economy

The circular economy is one of the two pillars on which A2A’s Business Plan is based. The Group has traditionally been a leader in the collection, treatment and recovery of municipal waste and continues its commitment to the construction of new plants that enhance the value of separate waste collection as a no longer secondary, but now ordinary, source of raw materials. In this regard, we should highlight the recent commissioning (October 2022) of a new composting plant using anaerobic digestion of the organic fraction of municipal waste in the Cavaglia (BI) Hub and a similar plant in Giussago Lissocchia.

Alliance for the Circular Economy

The Alliance for the Circular Economy is the joint initiative of 12 Italian companies to promote circularity in business strategies. The Alliance was founded in 2017 with the intention of driving an overall evolution of the production context in a circular perspective that enhances the peculiarities of Made in Italy, focusing on innovation, encouraging the sharing of experiences and best practices and promoting constant discussion with the entire ecosystem of stakeholders. The companies participating in the Alliance are interpreters of a transformative economy, of innovative rethinking of the entire production cycle, the use of resources, business models. The following are members of the Alliance, in addition to A2A: Aquilani, Cassa Depositi e Prestiti, CIRFOOD, Costa Crociere, Enel, Gruppo Hera, Intesa Sanpaolo, Gruppo Ferrovie dello Stato, Gruppo Mapei.

The international situation, which did not favour industrial activity due to the well-known increases in the costs of energy sources and raw materials, had a limited effect on the production of secondary End of Waste raw materials from urban collection, which suffered only a slight decrease.

Plastics sorted by the Cavaglia and Muggiano plants in 2022 amounted to 37,000 tonnes (of which 16,030 tonnes of PET), slightly down from the previous year (-3%). In addition to these fractions, which are ready for extraction plants, 47,350 tonnes of plastics (mixed small-sized plastics) were sent to specialized plants for further material recovery.

On the other hand, the Asti plant recorded an appreciable increase in the production of furnace-ready glass scrap in 2022 (+5.3% compared to 2021), thanks to the revamping of the plant. Tecnomet, Salvatore Ferragamo, Touring Club. During 2022, the Alliance produced two guidance documents on circular declarations and communications and on circular procurement. The first document developed Guidelines for the implementation of communication policies that adhere to the principles shared by the companies of the Alliance. The document includes a common definition of circular economy and a set of core principles that companies should consider when making circular statements and communications. The second document includes a set of criteria and tools for including circularity criteria in procurement processes, a theoretical and organizational framework for the implementation of circular procurement processes and a common questionnaire for supplier involvement.

There were decreases in the percentage of separate collection in several capitals served in 2022 due to changes in legislation or specific situations, described below. In general, the possibility for commercial or manufacturing companies to manage the fractions of separate waste collection (especially paper, wood, plastic and glass) through private recovery channels has removed quantities of recoverable materials from the public service provider’s circuit. In the case of Brescia (separate collection equal to 86.6%, -0.5 percentage points compared to 2021), the drop was influenced by almost three percentage points due to the classification of the green fraction ‘produced’ by gardeners as special waste, and therefore out of the urban waste circuit, as well as the elimination of a significant number of Green Boxes, containers for vegetable waste (such as mowed grass, branches and leaves) and the transition to door-to-door collection with a reduction in the phenomenon of waste conferred by users outside the municipality. In Como (separate collection 67.9%, -2.2 percentage points compared to 2021), and in Liguaria (separate collection 64.0%, -4.6 percentage points compared to 2021), the recovery of tourist flows to pre-COVID levels led to an increase in unclassified waste from tourist waste bins and a decrease in the sorting capacity of tourist-users. Milan remained substantially stable (separate collection 62.0%, -0.4 percentage points compared to 2021), although with a slight decrease, and the other capitals did well, among which Cremona stands out, increasing its collection efficiency to 779% (+31 percentage points compared to 2021).

In 2022, the total amount of urban waste collected also decreased (-1.4%) to 1,877,478 tonnes, and was mainly destined for material recovery (69.7%) or energy recovery (30.3%). A minority share of the urban waste collected was destined for disposal in landfill (0.5%), in relation to contingent territorial situations (temporary unavailability of Mechanical Biological Treatment plants and lack of direct waste-to-energy capacity in Liguria).

Figure 34 Separate waste collection by the Group*

<table>
<thead>
<tr>
<th></th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quantity collected (t)</td>
<td>Quantity collected (t)</td>
<td>Quantity collected (t)</td>
<td></td>
</tr>
<tr>
<td>Index %</td>
<td>Index %</td>
<td>Index %</td>
<td></td>
</tr>
<tr>
<td>Milan</td>
<td>397,015</td>
<td>397,015</td>
<td>397,015</td>
</tr>
<tr>
<td>Bergamo</td>
<td>42,583</td>
<td>42,583</td>
<td>42,583</td>
</tr>
<tr>
<td>Brescia</td>
<td>80,017</td>
<td>80,017</td>
<td>80,017</td>
</tr>
<tr>
<td>Como</td>
<td>25,896</td>
<td>25,896</td>
<td>25,896</td>
</tr>
<tr>
<td>Cremona</td>
<td>25,049</td>
<td>25,049</td>
<td>25,049</td>
</tr>
<tr>
<td>Lodi</td>
<td>14,308</td>
<td>14,308</td>
<td>14,308</td>
</tr>
<tr>
<td>Waste collection Lombardy provinces (Bg, Bi, Co, Di, Lo, Na, Mn, Mo, Va*)</td>
<td>95,207</td>
<td>95,207</td>
<td>95,207</td>
</tr>
<tr>
<td>Waste collection Liguaria</td>
<td>19,403</td>
<td>19,403</td>
<td>19,403</td>
</tr>
<tr>
<td>Total/average</td>
<td>981,921</td>
<td>981,921</td>
<td>981,921</td>
</tr>
<tr>
<td>Total/average excluding Milan</td>
<td>303,563</td>
<td>303,563</td>
<td>303,563</td>
</tr>
</tbody>
</table>

* For 2022, the contribution of the province of Venezia was added to the Lombardy provinces.

A2A’s activities mainly generate special waste. The increased production at the Montalcino Power Plant led to a higher production of non-hazardous waste, which was offset by a lower production of waste from maintenance and demolition in 2022 compared to the previous year; therefore, overall the Generation BU had a decrease in both non-hazardous waste, amounting to 25,886 tonnes (-3.8% compared to 2021), almost entirely sent for material recovery (98%), and hazardous waste, amounting to 5,068 tonnes (-2.8% compared to 2021).

There was a slight increase in the production of non-hazardous waste within the Smart Infrastructures BU, with a total of 28,360 tonnes in 2022 (+2.4% compared to 2021), which was affected by the increased production of sewage sludge and the massive meter replacement campaign. The BU also produced a higher quantity of hazardous waste, amounting to 657 tonnes (+49.7% compared to 2021), mainly due to the disposal of residual lime no longer used at the Lamarmora Power Plant, following the definitive discontinuation of the use of coal.

The decrease in leachate produced in landfills, largely due to the drought, led to a sharp drop in non-hazardous waste produced by the Waste BU in 2022, amounting to 433,145 tonnes (-16.2% compared to 2021), while hazardous waste decreased slightly to 11,270 tonnes (-3.5%). On the other hand, the amount of non-hazardous waste produced in the Corporate and Market area returned to physiological levels, i.e., 308 tonnes compared to more than 11,500 tonnes generated by the extraordinary demolition and reclamations activities carried out in 2021.
7.2 Energy Transition

In 2022, the Ministry of Ecological Transition initiated the ‘Plan for maximizing electricity production from fuels other than natural gas’, with the intention of reducing the risks associated with a potential total disruption of gas flows from Russia and to meet European demands in terms of reducing consumption for the period 2022-2023. Therefore, the Italian electricity market, like the European one, was characterized by the ‘hegemony’ of coal and oil-fired power plants. The S. Filippo del Mela and Montfallcone Power Plants were included in the maximization programme - and therefore in continuous operation since September 2022 - for which an authorization process for reconversion had already been started, with the aim of decommissioning the coal used for power generation. Overall, the thermoelectric production of the A2A Group’s power plants increased in 2022, and as a result, the composition of the energy mix changed compared to 2021. In particular, the contribution of coal increased from 1% in 2021 to 3% in 2022, that of heavy fuel oil from 8% to 11%, while the share of natural gas, which stood at 58% in previous years, increased by 3 points. The percentage of production from renewable sources (hydro, solar, wind, biogas, biomass and the renewable fraction of waste) decreased to 21%, despite the acquisition of wind and solar power plants (>200 GWh produced from these sources compared to 2021), due to the lower hydroelectric production, which was almost halved (>500 GWh compared to 2021) due to the low water availability conditions. The production attributable to the non-renewable fraction of waste instead remained constant.

Overall, the production of thermal energy through waste and biomass utilization decreased due to the lower demand for heat from district heating users. Electricity production (which also includes the contribution of biogas engines) instead remained virtually unchanged.

The overall reporting of CO₂ emissions, both direct and indirect, is presented in the table below and shows substantial growth in all items. See the following paragraphs for the details of the analysis.

---

**Figure 36 Energy produced by waste, biomass and biogas valorization on total energy produced**

<table>
<thead>
<tr>
<th>Year</th>
<th>Thermal energy from waste-to-energy and biogas process</th>
<th>Electricity from waste-to-energy and biogas process</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020</td>
<td>59%</td>
<td>8%</td>
</tr>
<tr>
<td>2021</td>
<td>58%</td>
<td>8%</td>
</tr>
<tr>
<td>2022</td>
<td>50%</td>
<td>8%</td>
</tr>
</tbody>
</table>

---

**Figure 37 Declaration of greenhouse gas emissions (t CO₂ eq)**

<table>
<thead>
<tr>
<th>Year</th>
<th>Direct greenhouse gas emissions - Scope 1</th>
<th>Indirect greenhouse gas emissions - Scope 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020</td>
<td>5,855,402</td>
<td>107,439</td>
</tr>
<tr>
<td>2021</td>
<td>7,127,422</td>
<td>108,098</td>
</tr>
<tr>
<td>2022</td>
<td>8,631,749</td>
<td>109,502</td>
</tr>
</tbody>
</table>

---

**Figure 35 Percentage of electricity produced by type of source (percentage of the total)**

- Renewable sources (hydro, renewable fraction of waste, biogas, solar, wind, biomass)
- Coal
- Natural gas
- Oil products
- Non-renewable fraction of waste*

* The share of electricity from biodegradable waste is calculated for each waste-to-energy plant and derives from both an analytical procedure and a lump-sum estimate with reference to Italian Ministerial Decree of July 6, 2012.

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**Figure 38 Energy transition**

- The percentage of production from renewable sources (hydro, solar, wind, biogas, biomass and the renewable fraction of waste) decreased to 21%, despite the acquisition of wind and solar power plants (>200 GWh produced from these sources compared to 2021), due to the lower hydroelectric production, which was almost halved (>500 GWh compared to 2021) due to the low water availability conditions. The production attributable to the non-renewable fraction of waste instead remained constant.

---

**Figure 39 Overall reporting of CO₂ emissions, both direct and indirect**

- The overall reporting of CO₂ emissions, both direct and indirect, is presented in the table below and shows substantial growth in all items. See the following paragraphs for the details of the analysis.

---

**Figure 40 The overall reporting of CO₂ emissions, both direct and indirect**

- The overall reporting of CO₂ emissions, both direct and indirect, is presented in the table below and shows substantial growth in all items. See the following paragraphs for the details of the analysis.

---

**Figure 41 Overall reporting of CO₂ emissions, both direct and indirect**

- The overall reporting of CO₂ emissions, both direct and indirect, is presented in the table below and shows substantial growth in all items. See the following paragraphs for the details of the analysis.

---

**Figure 42 Overall reporting of CO₂ emissions, both direct and indirect**

- The overall reporting of CO₂ emissions, both direct and indirect, is presented in the table below and shows substantial growth in all items. See the following paragraphs for the details of the analysis.

---

**Figure 43 Overall reporting of CO₂ emissions, both direct and indirect**

- The overall reporting of CO₂ emissions, both direct and indirect, is presented in the table below and shows substantial growth in all items. See the following paragraphs for the details of the analysis.

---

**Figure 44 Overall reporting of CO₂ emissions, both direct and indirect**

- The overall reporting of CO₂ emissions, both direct and indirect, is presented in the table below and shows substantial growth in all items. See the following paragraphs for the details of the analysis.

---

**Figure 45 Overall reporting of CO₂ emissions, both direct and indirect**

- The overall reporting of CO₂ emissions, both direct and indirect, is presented in the table below and shows substantial growth in all items. See the following paragraphs for the details of the analysis.
Direct Emissions Scope 1

Direct greenhouse gas emissions (Scope 1) are mainly related to combustion processes associated with the Group’s businesses. These emissions have increased in line with the increase in energy production; in particular, the Generation BU has increased absolute emissions by 24%, although the specific emission factor, i.e., related to energy production, has increased by only 17% thanks to the contribution of the renewable fraction. The Smart Infrastructures BU increased its emissions, due to the entry of A2A Airport, while the Waste BU’s combustion emissions remained virtually unchanged. The Group’s CO₂ emission factor related solely to direct Scope 1 emissions stood at 378 kg/MWh, an increase of 15% over the previous year.

In the Emission Trading System (ETS), the free allowances allocated to the Group’s plants for 2022 amount to 53,491.

Figure 38 CO₂ emissions from combustion processes (t)

<table>
<thead>
<tr>
<th></th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>Generation and Trading BU</td>
<td>4,260,767</td>
<td>4,518,088</td>
<td>6,884,577</td>
</tr>
<tr>
<td>Smart Infrastructures BU</td>
<td>329,704</td>
<td>307,840</td>
<td>356,036</td>
</tr>
<tr>
<td>Waste BU</td>
<td>1,141,439</td>
<td>1,158,388</td>
<td>1,160,312</td>
</tr>
<tr>
<td>Total</td>
<td>6,112,907</td>
<td>7,026,256</td>
<td>11,400,925</td>
</tr>
</tbody>
</table>

Figure 39 Emission factor (kg/MWh)

<table>
<thead>
<tr>
<th></th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>Generation and Trading BU</td>
<td>299</td>
<td>336</td>
<td>391</td>
</tr>
<tr>
<td>Smart Infrastructures BU</td>
<td>272</td>
<td>268</td>
<td>240</td>
</tr>
<tr>
<td>Waste BU</td>
<td>384</td>
<td>352</td>
<td>371</td>
</tr>
</tbody>
</table>

The Scope 1 emissions, in addition to emissions linked to the combustion processes of fuels and the non-renewable part of waste, also include:
- biogas escaping in landfills, which in 2022 decreased by about 34% also due to decreasing degradation processes in landfills in post-operational management;
- natural gas dispersed by networks, the value of which has tripled since 2021 due to the expansion of the calculation scope (dispersion from plants and not only from networks is also included). Several projects are underway to reduce this type of emission, described in the following sections;
- emissions from the vehicle fleet remained substantially unchanged (-1%); emissions from accidental leaks of fluorinated greenhouse gases from air conditioning equipment and electrical switches, the value of which is insignificant and has a variable trend.

Retipiù Meno CO₂

The AEB Group company Retipiù carried out the ‘Retipiù Meno CO₂’ project, an important digitalization activity for the identification and elimination of dispersions in the distribution network. In addition to improving the safety of the network, the project aims to achieve a reduction in CO₂ emissions into the atmosphere by eliminating so-called fugitive methane emissions. During 2022, 1,300 km of the network were inspected, and more than 800 gas leakage points were identified. In 2022, Retipiù carried out the revamping of the pre-heating systems of six Ra.Mi stations: the heating systems were redesigned, adopting more efficient solutions and at the same time the insulation of the tube bundles was carried out. The efficiency measures generated a considerable improvement in performance, reducing consumption and emissions into the atmosphere. Lastly, a fuel-cell powered micro cogeneration plant was activated. Electricity is fed into the distribution grid, while thermal energy is used by a lithium bromide absorber system to supplement the existing air-conditioning system serving Retipiù’s company changing rooms.

In 2021, Unareti joined the initiative Oil & Gas Methane Partnership (OGMP2.0), the new framework for reporting methane emissions introduced by the United Nations Environment Programme (UNEP) in 2020, and part of the broader International Methane Emission Observatory (IMEO) initiative. As part of this initiative, Unareti was awarded the “Gold Standard” recognition as highlighted in the IMEO report ‘An Eye on Methane’, confirmed again for 2022. In addition to ambitious methane emission reduction targets (40% by 2025 vs 2018), the award also recognizes the robustness of existing reporting processes and the plan to further improve them by 2024.

In 2022, the A2A Group’s car fleet was renewed as a result of tenders for the renewal of owned and hired vehicles, with a strong push for electric cars. Instrumental vehicles (cars and vans), which represent the main share of the vehicles used by the Group, were renewed, excluding special vehicles for environmental hygiene. The renewal of the fleet involved the acquisition of about 700 electric cars and the installation of more than 1,200 charging points at 90 Group locations. With this project, A2A has set itself the goal of encouraging the adoption of sustainable mobility thanks to a higher percentage of electric cars than all Italian companies with comparable-sized operating fleets and a charging infrastructure powered by certified 100% renewable energy. The initiative will also allow to reduce CO₂ emissions by more than 25% compared to the previous company car fleet, equal to around 1,000 tonnes per year.

Indirect Emissions Scope 2

With regard to indirect Scope 2 emissions from electricity purchases, intra-Group green energy supply was confirmed for almost all sites. Also in the Scope 2 category, the calculation of emissions related to electrical distribution losses was implemented.

Indirect Emissions Scope 3

With a view to improving the analysis of its impacts on the climate, the A2A Group has begun an in-depth analysis of the various types of indirect emissions associated with its activities, with reference to the GHG Protocol’s Scope 3 categories.

Therefore, indirect CO₂ emissions from the following activities were calculated for 2022:
- upstream value chain, for example extraction and refining of fuels and electricity used in the Group’s operations;
- treatment of waste produced by the Group at third-party plants;
- business trips;
- management of third-party assets.

Figure 40 Total indirect greenhouse gas emissions (Scope 3)

<table>
<thead>
<tr>
<th></th>
<th>2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total indirect greenhouse gas emissions (Scope 3)</td>
<td>2,583,461</td>
</tr>
<tr>
<td>of which:</td>
<td></td>
</tr>
<tr>
<td>Fuel and energy activities not included in Scope 1 or 2</td>
<td>1,843,777</td>
</tr>
<tr>
<td>Waste generated</td>
<td>772,430</td>
</tr>
<tr>
<td>Business trips</td>
<td>797</td>
</tr>
<tr>
<td>Leased assets (upstream)</td>
<td>831,644</td>
</tr>
</tbody>
</table>
In this path, the dynamics triggered by international tensions and national and EU measures to mitigate their effects have led to an increase in the Group’s emission factor compared to 2021.

In this sense, A2A also reaffirmed its commitment to the ecological transition in the latest Strategic Plan update, declaring its intention to reach net zero Scope 1 and Scope 2 emissions by 2040. To make this commitment a reality, an internal working group was launched in 2022 that is focused on identifying strategic and technological solutions for achieving this goal. Coordinated by the Sustainability Development Department, the working group comprises the Strategy, R&D, Environmental Governance, Finance and Supply Chain Departments. Numerous meetings were held with internal contacts and Business Units during 2022. The group shares its progress with the CEO and some first reports on a quarterly basis. Three phases of action have been identified: an initial transition phase with investments in renewable sources and the launch of Carbon Capture Utilization & Storage (CCUS) pilot projects to be applied to the Group’s waste-to-energy plants; a second phase focused on the phase-down of certain carbon-intensive plants, the introduction of new technologies in thermoelectric production (blending hydrogen + gas), the application of the first full-scale CCUS plants on A2A’s main waste-to-energy plants and continued growth in RES, and a third phase of the extension of CCUS plants, growth in RES and possible offsetting of residual emissions.

Consistent with a net-zero strategy that encompases all of the Group’s emission sources, A2A has also published a commitment document to reduce emissions throughout its value chain (Scope 3), focusing on four areas:
1. Accelerating the energy transition with its own technologies;
2. Investing responsibly;
3. Promoting positive impact engagement with the entire value chain;
4. Implementing sustainable corporate practices.

The atmospheric emissions of macro-pollutants, always contained at the lowest possible levels thanks to combustion technologies and abatement systems, show different trends. The nitrogen oxides present in the flue gases of all types of combustion plants and emitted in concentrations that are always below the legal limits, rose by 14% due to the inclusion of the TecnoA and A2A Airport in the reporting perimeter and increased thermoelectric production. Sulphur oxides increased by 94% due to the increased use of heavy fuel oil and coal. The amount of total dust emitted also continued to grow, with the performance already achieved in previous years in terms of efficiency in the abatement of emitted pollutants.

### Figure 42 Total Group emissions (t)

<table>
<thead>
<tr>
<th>Year</th>
<th>NOx (t)</th>
<th>SOx (t)</th>
<th>Dust (t)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020</td>
<td>2,928</td>
<td>3,308</td>
<td>53</td>
</tr>
<tr>
<td>2021</td>
<td>2,928</td>
<td>3,308</td>
<td>53</td>
</tr>
<tr>
<td>2022</td>
<td>2,928</td>
<td>3,308</td>
<td>53</td>
</tr>
</tbody>
</table>

### Figure 43 Science Based Target emission factor

#### Table 3 Science Based Target emission factor

<table>
<thead>
<tr>
<th>Year</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>CO2e/Wh</td>
<td>310</td>
<td>332</td>
<td>386</td>
</tr>
<tr>
<td>2025 Objective</td>
<td>296</td>
<td>2026 Objective</td>
<td>226</td>
</tr>
<tr>
<td>2030 Objective</td>
<td>230</td>
<td>2030 SBT/ Objective</td>
<td>565</td>
</tr>
</tbody>
</table>

#### Figure 43 Consumption of water resources by type (thousands of m³)

Sustainability in the management of water resources also means maintaining a greater level of control over water withdrawals in water-stressed areas, impacted by the following factors: scarcity of fresh water available and a possible complexity in pumping water and distribution to users. Taking as reference the indications of the “Aqueduct” tool of the World Research Institute, the cities in Sicily, Calabria, Abruzzo and, for the integrated water services, the network in the Lombardy Mountain Municipalities, located in Valsabbia (BS), were identified as “critical”. It should be noted that the classification of water stress area conferred to the Region of Sicily depends on the scarce availability of fresh water; therefore, the salt water withdrawals made by the San Filippo del Mela plant do not negatively impact the availability of the resource. Finally, the classification of Valsabbia municipalities as water stress areas is justified by the fact that water resource withdrawals come from springs, for which a constant availability of water is not guaranteed.

Due to an increase in production compared to the previous year, there was a 78% increase in consumption from wells and a 105% increase in consumption of salinia water from surface water bodies in these areas. On the other hand, the reduced operation of the Glia Power Plant, which receives water from the consortium purification plant, led to a 43.3% reduction in fresh water withdrawals from third parties. The amounts of salinia water derived from surface water bodies, which are subsequently returned to the withdrawal body, increased by 5% compared to 2021, proportional to the production trends of the San Filippo del Mela Power Plant. On the other hand, there was a decrease of 19% in water derived for hydroelectric purposes from surface water bodies, due to
The water shortage that marked the reporting year. This water is subsequently returned with the same quality characteristics.

Withdrawals
Due to the scarcity of water resources in 2022, there was a 43% reduction in the amount of water derived from surface water bodies for hydropower production, totaling 17 million m³ of water. The total volume of water released for Minimum Vital Flow is in line with that of last year, for a total of almost 445 million m³.

Water consumption by the Generation and Trading BU amounted to 3.3 million m³ and was used for process purposes. This quantity increased by 11.2% compared to the previous year, as a result of increased production at the San Filippo del Mela and Montalcone Power Plants. Over the years, systems have been developed to focus the recovery and reuse of water in production processes in order to reduce the withdrawal of this resource as much as possible; thanks to these efforts, in 2022 about 678,000 m³ of water was recovered in the Generation BU production cycles.

In addition to this aspect and to protect the most “valuable” water, especially in the case of surface water stress, where possible, water from less noble sources - such as rainwater or from purification processes - is used for some production processes at the Group’s plants: this is the case at the Gissi Power Plant, where purified water from the consortium on site is taken for the production of demineralised water.

Salt and sea water derived from surface water bodies (CIS) and returned for cooling uses increased by 16.8% over 2021, commensurate with the increased production recorded at the Montalcone and San Filippo del Mela Power Plants. Fresh water withdrawn from CIS for cooling and returned also increased by 11.7% in 2022, due to the increased production of the other plants of the BU.

The consumption of water resources is also a relevant aspect for the cooling of combustion ashes at the waste-to-energy plants, in the other plants of the Waste BU and in the activities for street cleaning, washing of sweeping grounds and vehicles used for services to citizens. In 2022, there was a 77% increase in the amount of water procured by the Waste BU, standing at a total of 3.6 million cubic metres. Of this consumption, 84.6% is made up of water withdrawn from wells and only 15.1% is made up of water from aqueducts, in order to minimize the consumption of “precious” water.

To this end, in the Brescia Waste-to-Energy Treatment Plant, rainwater is used for process purposes and for extinguishing bottom ash at the boiler bottom, instead of more noble water.

In the Smart Infrastructures BU, water is used for cooling the stations serving the electricity distribution grid in 2022 the withdrawals were in line with 2021. At the heat production plants, process water consumption stood at 1.4 million m³, a slight increase compared to 2021 due to the inclusion of new plants in the reporting scope. Finally, the quantities of water derived and returned to groundwater by the BU in 2022 for the operation of heat pumps remained in line with those of previous years.

For the reporting year, attention was also paid to the water consumption used per unit of energy produced at the Group’s energy production plants. The figure for thermoelectric and waste-to-energy plants did not significantly change, while the figure for cogeneration decreased by 7% compared to 2021.

The total process water consumption of the power generation plants was 0.36 m³/MWh.

Effluents
With regard to the discharge of wastewater that cannot be reused in the production cycles and cannot be recovered, the Group guarantees careful monitoring of the volumes discharged and of the relative polluting loads, in compliance with regulatory and authorization requirements. The Waste BU industrial wastewater discharges decreased by 4% compared to 2021.

The decrease in discharges from the Crema chemical-physical treatment plant contributed to this variation, correlated to the lack of atmospheric precipitation. The Smart Infrastructures BU’s industrial discharges, including those related to the provision of the integrated water service, amounted to 589,000 m³, a decrease of 30% compared to 2021. This reduction is to a large extent attributable to the decreases in discharges from the North Power Plant, which include the contributions generated by the production of caustic water for the replenishment of the district heating network. The amount of water discharged is affected by variations in the amount of reintegrated into the network as a function of network losses.

The organic load contributed to the environment remained very modest and amounted to about 0.3 t of BOD, while the total COD value was 1.5 t. Industrial discharges from the Generation BU increased by 4%, due to higher production at the Placentia, Montalcone and San Filippo del Mela Power Plants.

The Group manages the integrated water service in Brescia and its province. In order to ensure high performance levels in service management, the priority objective is to maximize water distribution, limiting losses and guaranteeing the quality levels of water for human consumption. Water withdrawal for water distribution, which is done exclusively from wells and springs, was 89 million m³ in 2022, a slight decrease compared to 2021. The amount of water delivered was 48 million m³. Network leaks, including unmetered water, still represent a significant volume, amounting to almost 3.4 million m³.

The Group’s commitment to achieving European objectives for protecting the water resource is also reflected in the operation of wastewater treatment processes. Pollutant loads entering the treatment plants increased slightly in 2022 compared to previous years. Specifically, the BOD entering the plants increased by 0.3% over 2021 (7 tonnes), and the COD by 1.7% (15.5 tonnes).

The purification performance remained in line with that of previous years, as can be seen from the table below, showing a slight improvement due to the less diluted effluent to be treated at the Vetorano purification plant and an increase in efficiency in purification process management.

### Figure 44 Purification Yields

<table>
<thead>
<tr>
<th>COD</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>BOD</td>
<td>90.2%</td>
<td>91.4%</td>
<td>93.3%</td>
</tr>
<tr>
<td>Nitrogen</td>
<td>68.9%</td>
<td>71.0%</td>
<td>74.8%</td>
</tr>
<tr>
<td>Phosphorus</td>
<td>74.1%</td>
<td>76.1%</td>
<td>77.0%</td>
</tr>
</tbody>
</table>

### Development of water safety plans

With the introduction of the European Drinking Water Directive 2020/284, the implementation of Water Safety Plans (WSPs) for water systems has become mandatory. WSPs introduce a preventive approach consisting of an analysis of the water system in order to reduce the risks, both in terms of quality and quantity, associated with the distribution of drinking water. This analysis is carried out for each stage of the drinking water supply chain, from the hydro-geological basin to capture, treatment, storage and distribution, including the water delivery point. WSPs introduce continuous, online monitoring in order to anticipate the onset of any criticality, assessing the aqueduct’s ability to withstand a crisis and preparing a strategy to deal with any eventuality with maximum efficiency. They also address the issue of emerging contaminants and take into account the specificities of territory, studying the context and the anthropogenic pressures present.

During 2022, the elaboration of the Safety Plan continued for the Brescia-Butticchio-Bovezzo-Collalto water systems and in parallel for that of Ospitaleto. Both WSPs are expected to be completed during 2023.

In addition to monitoring related to the reduction of water losses, the implementation of drinking water quality monitoring is underway in the districts of the city of Brescia. In 2021, research was initiated to identify the optimal sensors for the implementation of a widespread monitoring network for the quality of distributed water as well as to further the operation of the network (evaluation of mixing effects of different supply sources). A monitoring point was installed in 2022 at the entrance to the San Rocchino district, equipped with sensors for pH, turbidity, chloride, conductivity, nitrate, absorbance at 254 nm, temperature, TOC and the UV-Vis spectrum. Following the challenge launched on the online platform Innocentive (an open innovation marketplace where organizations can launch open competitions to find solutions), a collaboration area for the development of sensors whose prototypes are currently being tested at the A2A Water Cycle laboratory.
Protection of Biodiversity

Analyses of potential interference of the A2A Group’s activities with the protected areas system continued in 2022, to include plants consolidated into the Group more recently. The system of protected areas considered concerns the sites belonging to the Natura 2000 Network, IBA (Important Bird and Biodiversity Area) areas, and areas considered important habitats for the conservation of populations of wild birds, nature reserves, natural monuments (individual elements or areas characterized by a particular natural or scientific value that makes them the subject of protection).

From the mapping phase - which is increasingly extended - it emerged that out of a total of 347 Group sites and networks analysed, 133 have potential interference with the system of protected areas, which not only takes into account criteria of adjacency or overlap, but also wider areas of possible influence. Of these 133 sites, 12 are located within protected areas (one is in the planning stage) and ten are networks that have stretches in protected areas (underground sections are also included).

The following is a summary of information about these sites and networks.

Figure 46 Group sites and activities with interference on protected areas

<table>
<thead>
<tr>
<th>Number of directly interfering sites/networks</th>
<th>Activities performed</th>
<th>Interfering area surface/interfering network stretch length</th>
<th>Type of protected areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>waste management</td>
<td>0.01 km²</td>
<td>Natura 2000 Network IBA National network (EUAP)</td>
</tr>
<tr>
<td>5</td>
<td>renewable energy production</td>
<td>0.07 km²</td>
<td>Natura 2000 Network IBA National network (EUAP)</td>
</tr>
<tr>
<td>6</td>
<td>hydroelectric production</td>
<td>1.44 km²</td>
<td>Natura 2000 Network IBA National network (EUAP)</td>
</tr>
<tr>
<td>10</td>
<td>distribution of gas and electricity</td>
<td>643** km² of which 492 underground</td>
<td>Natura 2000 Network IBA National network (EUAP)</td>
</tr>
</tbody>
</table>

* The interfering area of the hydroelectric plants refers to the area of the catchment area underlying the Group’s plants and dams, which falls within a protected area.
** The interfered surface, intended as the projection on the ground of the overhead lines including the buffer zone and added to the surface of the electrical substations, is equal to 1.5 km².

The protected areas directly affected have more than 40 species on the Italian Red Lists of the International Union for Conservation of Nature (IUCN); a detailed survey of each species has been undertaken in order to systematize information on the species themselves and their degree of threat relative to the risk of extinction.

Following the mapping of the plants and networks, a "relevance index" was developed to measure the degree of potential interference that the activities could have on the ecosystems, due to the proximity and peculiarities of the habitats present in the protected areas. The most sensitive areas were thereby highlighted. Starting with these results, but moving in the direction of a broader issue of protection, studies have been launched to identify possible actions to protect biodiversity, which are in addition to those already implemented at the production sites.

Protection of birdlife in the Alto Garda Bresciano area

In 2022, studies began to identify the potential interference of overhead power lines on birdlife in the Alto Garda Bresciano area.

The project was planned in the first few weeks after the start of the activities, defining its purpose and the target species to be monitored, as they are useful for identifying the most critical bird species related to the power lines. The five designated target species are: Eagle Owl (Bubo bubo); Golden Eagle (Aquila chrysaetos), Peregrine Falcon (Falco peregrinus), Black Kite (Milvus migrans) and Short-toed Snake Eagle (Circus gallicus), all of which are particularly prone to mortality through electrocution and/or collision. Field monitoring and research of past occurrence data of the target species and known mortality cases were then carried out. A study area was defined to investigate the territory within the borders of the Alto Garda Bresciano Regional Park for a period of three breeding seasons (from May 2022 to the end of 2024). In view of the vast motility of migratory and dispersive individuals covering particularly extensive territories that are not necessarily included in the regional protected area alone, the area of the valley that extends between the municipalities of Bagolino to the north, Casto to the west and Rezzato to the south will also be surveyed.

The studies will make it possible to quantify the benefits in terms of protecting biodiversity deriving from the interventions already carried out and planned by Unareti, concerning the replacement and decommissioning of overhead lines, as well as to identify any further interventions to make certain sections of line at high risk safe.

Migrandata - Cervati

The project for monitoring birdlife on Mount Cervati launched by the ARDEA Association in 2021, which A2A has decided to support, continues. Approved by Ispra and authorized by the Campania Region for the three-year period 2021-2023, the project is aimed at studying ‘outward migration’, i.e., which occurs from the end of August to the end of autumn and which sees the migratory birds fly to Africa. Unlike the ‘return migration’, i.e., the journey from Africa to Europe to nest, information on the outward migration is incomplete and fragmentary, especially when dealing with territories in inland areas. The project therefore aims to fill this information gap by locating the ringing station on Mount Cervati, 1830 m above sea level in the heart of the Cilento National Park, the first station in the southern Apennines.

The aim is to collect useful information on the resident and migratory bird community on Mount Cervati for at least three consecutive years, in the time window between late August and early September. This project seeks to fill a lack of information on bird migration in Italy, which is still fragmented and incomplete, particularly for the identification of migratory species and their specific characteristics.

Lastly, potential impacts on biodiversity may occur as a result of spills of hazardous substances and pollutants into the environment. For all the sites within the Group’s perimeter, no significant spills occurred in 2022.
The World Social Report 2023 produced by the United Nations highlights population ageing as a global trend in recent decades. According to the Report, a child born in 2021 could enjoy a life expectancy almost 25 years longer than a baby born in 1950. However, not everyone benefits equally from improvements in health and education; developing countries in particular suffer more from inequalities in gender, salary, ethnicity and in health and education; developing countries in particular suffer more from inequalities in gender, salary, ethnicity and consequently difficulties in accessing basic services. In order to address current demographic trends, governments must take proactive measures to support birth rates and equalise of funds under the Just Transition Mechanism to help the poorest regions of the EU move towards a zero-emission economy that leaves no one behind.

The year 2022 has also highlighted the accentuation of a new phenomenon known as the Great Resignation, which sees thousands of employees voluntarily resigning en masse from their jobs due to lack of motivation and a mismatch of values with their reference organisations. From the companies’ point of view, this translates into an increase in the incidence of turnover, which is particularly damaging in a period of radical digital transformation and economic instability. According to the School of Management of the Milan Polytechnic Institute, 96% of companies have difficulty attracting the new resources needed to update their know-how to meet sector needs. More precisely, in OECD countries at least one in three workers is over- or under-qualified and the mismatch between supply and demand (skill mismatch) annually affects the global GDP.

Organisations will therefore have to make greater efforts to meet employee needs by stimulating their engagement, with results that can directly influence economic and financial performance.

Lastly, there is an increased focus on human rights and inclusion, as evidenced by the growth in the Diversity Brand Index in 2022, which reports a higher maturity and awareness in the market on these issues. In fact, consumers are increasingly inclined to choose inclusive companies with significant effects of revenue growth (+23%).

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In this year full of inflation and high energy prices, in addition to the obvious benefits for balancing personal and work life, hybrid working has taken on a new dimension of utility, cutting energy consumption for public administrations and companies.

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**Occupational Health and Safety**

The Group is actively committed to ensuring a healthy working environment for all workers, whether employees, contractors or collaborators. In order to ensure full compliance with current regulations and prevent accidents throughout the supply chain, A2A adopts working practices and management systems that establish procedures, monitoring actions and training activities in the field of occupational health and safety that allow for the controlled management of the Group’s activities both in its offices and plants/operating sites. At the same time, the Group promotes a culture of respect for the individual and their human rights and adopts specific measures (such as the Human Rights Policy or the Whistleblowing reporting system) aimed at countering the occurrence of sexual harassment or physical and psychological harassment in the workplace.

### Risk factors
- Possible non-achievement of the goals set in the Sustainability Plan.
- Health and safety risks for employees, suppliers, collaborators and third-party workers.
- Complaints for occupational illnesses of Group employees.
- Potential actual or alleged failures to comply with health and safety regulations.

### Opportunity factors
- Experimenting with innovative technologies to perform operational activities more safely and efficiently.
- LiHS (Leadership in Health and Safety) training and awareness programmes that adopt forms of communication that leverage emotional aspects.

### Management Approach (MA)
- Continuous monitoring by corporate and company/site HSE Structures.
- ISO 45001 health and safety certifications.
- ISO 39001 road safety certification for higher risk companies.
- Specific Health & Safety training.
- Ad hoc programmes and procedures, in line with current regulations.
- Controls on contractors’ sites.
- Integration of the MoO system with health and safety indicators.
- Specific procedures for risk management related to Covid-19.

### What we have done
- LiHS Programme - Leaders in Health and Safety
- Webinar “WebiLaw HSE”
- Installation of two “Capsule” Health Pods
- “HSE from Procurement” project to oversee the entire outsourcing process to external contractors from an HSE perspective
- Launched a specific safety course for managers
- Promoted new safety courses for contractors

### What we are doing
- Sustainability Plan Actions
  - Health and Safety
    - Seize
    - Mitigate

#### 2022 actions
- LiHS Programme - Leaders in Health and Safety
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Development of Human Capital

The Group is actively committed to creating a positive corporate climate and to maintaining high levels of employee satisfaction, recognising that employees play a fundamental and highly valuable role in running its business. To this end, A2A adopts a structured employee listening system that includes systematic dialogue and collaboration initiatives aimed at intercepting workers’ needs and expectations. The Group also promotes the development and enhancement of its human capital, offering defined and structured career paths, training plans aimed at enhancing technical, managerial and organisational skills, and upskilling and reskilling programmes through internal job rotation. Lastly, the Group adopts a welfare system that promotes the personal, family and work-well being of employees and offers solutions to achieve work-life balance (e.g. flexible working, remote work).

#Training #Development #Talent acquisition #Retention
#Welfare #Trade union agreements #Work-life balance

Management Approach (MA)

- Employee surveys and listening campaigns, including survey on alignment with company values and follow-up on remote work implementation
- Mapping of roles and profiles, identifying the resources of greatest value and definition of retention plans
- Employer branding projects
- Job rotation, training and initiation plans of resources with skills lacking in the company
- Compensations systems in line with the market
- Digital training programmes
- Continuous monitoring of changes in employment law
- Assessment and remuneration of employees related to sustainability performance
- SA8000 certification for the companies Aprica and A2A Calore e Servizi
- Job rotation programmes and study of ergonomic solutions for waste collection.

What we have done

What we are doing

Mitigates

What we are doing

Mitigates

2022 actions

- Communication campaign for talent attraction, "Your Boss is calling"
- "Manager as a Coach" Training Programmes
- Launched the Technical Academy, which complements theoretical training with practical training in schools
- New Life&Me skills model defined
- First Engagement Survey
- Launched a salary benchmark for the entire non-management population

Sustainability Plan Actions

MBO

Performance management

Internal Engagement

2022 actions

- New DE&I visual and claim published
- Milan Pride Partnership
- Inclusive Language Manifesto launched
- First DE&I survey administered to employees
- Nuove Energie Project
- Participation in 4 Week 4 Inclusion
- Cross-functional working group on the gender pay gap launched

Diversity and Inclusion

The Group promotes an inclusive working environment and operates according to criteria of impartiality, not allowing any form of discrimination in relation to gender identity and sexual orientation, age, disability, state of health, ethnic origin, nationality, political opinions, social category and religious faith.

A2A disseminates a culture of diversity and equal opportunities at all corporate levels, including through awareness-raising initiatives, and is committed to ensuring that all employees are treated with respect and fairness, including in terms of equal pay for men and women, in all corporate processes.

#Equal opportunities #Disability enhancement #Gender gap

Management Approach (MA)

- Inclusion Team and definition of an Action Plan on Diversity and Inclusion (D&I)
- Survey on D&I issues
- Constant monitoring of the Gender Equality Index
- Role Model Project, meetings with high school and middle school students to inspire and orient young people, overcoming gender stereotypes.
- D&I KPIs in top management MBGs
- Programmes to favour conciliation of private and work life and well-being.

What we have done

What we are doing

Mitigates

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Sustainability Plan Actions

Welfare

Diversity and Equal Opportunity

#Welfare #Trade union agreements #Work-life balance

Oppportunity factors

- Promotion and application of individual remote work agreements for business activities of companies compatible with this new way of working.

Risk factors

- Possible lack of attention to employee expectations.
- Potential increase in key figure resignations due to:
  - competitiveness of the job offer for key skills;
  - generational handover.
- Possible actual or alleged non-compliance with employment laws.
- Lack of integration between human resources management systems and sustainability (e.g., performance assessment).
- Ageing of workers performing operational activities, particularly in the waste collection sector.

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People and their Value

A2A people are those who live the Life Company on a daily basis, directing their daily choices towards the achievement of sustainability goals. Taking care of people’s quality of life is a great responsibility. That is why the Group puts dialogue, care and attention first in managing its people: towards them, towards citizens, and above all, towards the environment. Because people are the value that creates a Life Company.

As at December 31, 2022, there were 12,858 people employed by the A2A Group (+4% compared to 2021), of whom 10% were women. Job stability remains a prerogative of the Group: 97% of employees have a permanent contract. Remote work was massively introduced on an emergency basis, involving 5,817 people during the year.

**Figure 47 Staff by category and type of contract**

<table>
<thead>
<tr>
<th>Age (years)</th>
<th>Full-time</th>
<th>Part-time</th>
<th>Permanent</th>
<th>Fixed-term</th>
</tr>
</thead>
<tbody>
<tr>
<td>Over 50</td>
<td>5,051</td>
<td>2,900</td>
<td>1,527</td>
<td>387</td>
</tr>
<tr>
<td>41 to 50</td>
<td>3,380</td>
<td>2,446</td>
<td>1,527</td>
<td>387</td>
</tr>
<tr>
<td>From 31 to 40</td>
<td>1,527</td>
<td>1,246</td>
<td>1,246</td>
<td>387</td>
</tr>
<tr>
<td>Up to 30</td>
<td>1,527</td>
<td>1,246</td>
<td>1,246</td>
<td>387</td>
</tr>
</tbody>
</table>

**Recruitment**

The component that most contributes to giving a company a competitive advantage is the ability to acquire and retain talent. An important factor in retaining talent is ensuring that the Group’s identity is translated into a positive life experience for employees.

A2A’s Talent Attraction Strategy is set up based on the profiles sought for the different roles and Business Units. Using annual planning based on business growth and estimated turnover, search activities are set up for the best available profiles on a national basis, with continuous recruiting activities on frequently filled positions and targeted activities for specific searches.

The following channels are used for blue collar profiles (around 60% of annual hirings): company database, advertisements on the A2A careers site, recruiting campaigns on the most suitable social networks, employment agencies and selection search companies, collaboration with high schools, technical and scientific secondary schools, training bodies (for specific certifications and licences).

For white collar profiles (the remaining 40%, divided between clerks, middle managers and executives) different channels are chosen depending on the specificity and difficulty of filling the roles: A2A database and careers site for all profiles, targeted campaigns on the Group’s social network pages, participation in university events throughout the country to search for candidates with no experience or junior candidates (20% of the total of white collars), head hunters and search companies for more specialised profiles.

With reference to the graduates employed, 58% are profiles with an engineering background, therefore, A2A participates in the main Employer Branding and Recruiting STEM events at national level, many of which have an explicit focus on Diversity & Inclusion issues (“STEM Girls”, Inclusion Days, etc.).

The levers of attraction for candidates focus on the aspects which are most distinctive and appreciated by A2A employees, identified through important work that includes interviews and focus groups, carried out on the occasion of the revision of our EVP (Employee Value Proposition). These include: a leading group in the energy transition and circular economy that creates a measurable impact in improving people’s lives, a high level of professional industry expertise, solid but innovation-driven businesses, and a friendly, educational and collaborative environment.

On the basis of this evidence, the communication campaign “our Boss is calling” was launched with the aim of engaging people who can support the path towards the ecological transition and the ambitious goal of reaching Net-Zero by 2040. Every single employee is called upon to become a real recruiter to recount our initiatives and convey our values outside the Group.

Those who join A2A are offered a package which includes comprehensive welfare, meritocratic and fair remuneration policies and an environment that upholds the values of diversity and inclusion.

A2A has created specific guidelines for its selection interviews, with the aim of making the process increasingly transparent and inclusive and also being an important Employer Branding vehicle.

8.2 Responsible Management of Human Capital
Thanks to partnerships with universities, schools and research institutes, 81 extracurricular internships and 84 curricular internships were set up during the year, and 38 of these resources have since joined the company on a permanent basis.

In addition, through the IL@b programme active since 2020, the Group has launched a real talent incubator: through an iL@b programme active since 2020, resources have since joined the company on a permanent basis.

Almost 300,000 hours of training were provided in 2022, with an average per capita value of 24 hours. Approximately 93% of both full-time and part-time employees received training during the year, an increase of 11% compared to the previous period. Through the various upskilling and reskilling activities, the Group encourages the updating of the skills of its people, involving its workers to develop their skills and manage their professional growth.

Several initiatives saw people at the centre of the training courses:
- Digital Academy Evolution and Digital Angel are the natural evolutions of the Digital Academy launched in 2019. These projects are dedicated to raising awareness on topics that are extremely strategic for the Group, namely digital transformation and the propensity for innovation, with experimentation and training activities. To date, the path has allowed more than 1,600 people to be trained for a total of more than 13,500 hours delivered of thematic content and 7,250 participations in training activities. To date, the path has allowed more than 1,600 people to be trained for a total of more than 13,500 hours delivered of thematic content and 7,250 participations in training activities.
- A series of projects was dedicated to raising awareness on digital skills, in particular the Digital Role Play project, an experiment dedicated to the sales area to foster the development of key soft skills for sales conversations through a platform with simulated conversations with pre recorded real actors, which immerse the user in a realistic situation, where the experience is enriched by artificial intelligence.
- Specialised course on the topics of Cyber Security OIT/ITIoT IIToT with collaboration with the “Start 4.0” Training Centre of Excellence of the University of Genoa. The course involved 50 people in the Group, with the aim of reinforcing awareness of the risks connected with possible cyber threats, as well as addressing the identification of vulnerabilities in a more effective and timely manner. In addition, the entire company population was offered the opportunity to learn more about the main topics connected with cyber security and discover good practices, with the inclusion of the new course on cyber security in the A2A Academy.
- The “Manager as a Coach” course involved around 125 managers of colleagues involved in specific development programmes, with the aim of developing a mindset that inspires and guides managerial action and enables people to fully express their potential.
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- “P-Learning” technical training for 120 engineers in the Group, allowing them to obtain up to 20 training credits (CFPs) necessary to maintain their registration. The e-learning platform has more than 60 courses in its catalogue divided by subject areas, such as energy, building structures and environment, graphics, ICT and management, occupational safety, and POLIMI Graduate School of Management modules.
- Project Management Academy Program continues its activity through the courses developed and delivered by the PMO Specialists of A2A II PMO Pooling. Two courses were constructed that were tailored to the specific needs of the Group; one was a general introduction to Project Management and another on specific in-depth modules on the topics of Agile Project Management, Project Planning and Project Risk.

The “Manager as a Coach” course involved around 125 managers of colleagues involved in specific development programmes, with the aim of developing a mindset that inspires and guides managerial action and enables people to fully express their potential.

Following the success of the previous year, the e-learning course “The 2030 Agenda and Sustainable Development Goals” carried out by Asvis Alianza Italiana per lo Sviluppo Sostenibile, was also offered to all employees in 2022, in order to broaden employees’ knowledge of the global framework for sustainable development defined by the United Nations in 2015, which is also the basis for the 2021-2030 Strategic Plan.

As part of the Operational Excellence programme, the coaching course inspired by Lean and Agile philosophies, “PerformA2A”, was completed. The ExcellenceA2A Community was also created as a space for the dissemination of the culture of continuous improvement, the development of Operational Excellence issues and the creation and sharing of standards and tools.

**Induction of new hires**

Induction A2A is the Group’s on-boarding programme dedicated to newly-hired employees. The course includes a kick-off aimed at learning more about the Group and the People Strategy, with a focus on sustainability and inclusion issues. A total of four interactive workshops are planned with the directors of the Business Units with the aim of learning about A2A’s main businesses, followed by a workshop dedicated to the Group’s key soft skills and an Online Certification section to further these skills.

Training days are also planned for younger colleagues to enable them to better prepare themselves for their new work experience (some examples of contents include Problem Solving, Resourcefulness, Effective Communication).

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Training days are also planned for younger colleagues to enable them to better prepare themselves for their new work experience (some examples of contents include Problem Solving, Resourcefulness, Effective Communication).

Finally, the sixth edition of Lean Six Sigma Green Belt, the training and certification programme on Lean philosophy and methods, was completed to support the evolution of Operational Excellence programmes within the Group, involving a “widespread system”, creating “benchmarks for continuous improvement”.

**Intellectual capital**

Intellectual capital is a key component in a company’s success. It encompasses the knowledge, skills, and expertise of the workforce, as well as the organizational processes and systems that support innovation and learning. A strong intellectual capital base enables companies to innovate, adapt to changing market conditions, and create value for their stakeholders.

In the context of the A2A Group, intellectual capital is vital for driving the company’s strategic initiatives and achieving its long-term growth objectives. This includes:

- **Innovation** - Fostering a culture of innovation through continuous learning and development programmes.
- **Knowledge Management** - Implementing systems to capture, share, and leverage knowledge across the organization.
- **Skill Development** - Investing in training and development to enhance employee capabilities and align them with the company’s strategic goals.
- **Cultural Intelligence** - Cultivating a diverse and inclusive work environment that values and leverages cultural diversity.

By nurturing and effectively managing intellectual capital, A2A aims to strengthen its competitive advantage, drive sustainable growth, and create value for all stakeholders.
A2A also established a partnership with the Milan Polytechnic Institute, which enabled the organisation of nine workshops involving over 220 people from the Group’s various Business Units and Companies for a total of 36 hours. The main topics covered were renewable generation; energy efficiency, collective self-consumption and energy communities and electrification of transport; market innovation, SEA and Customer Centricity; infrastructure and systems planning; infrastructure operation; integrated water cycle; Life Cycle Assessment and Waste to Chemical; Waste to Energy and Hydrogen.

These events were mainly brainstorming sessions led by academics and aimed at identifying the key skills of tomorrow, linked to new emerging trends, and the related strategic training needs.

Lastly, in October 2022 a framework research agreement was signed with the University of Brescia, which includes the possibility of activating training courses for employees.

Development

Great attention is paid to people development at A2A. A People Strategy has been defined in support of the Group’s Strategic Plan. One of its main elements is precisely the theme of development, with the importance of the manager’s role, who are increasingly called upon to take pay attention to listening to and growing the people in their teams, but also spreading the culture of self-development, where people are increasingly called upon to take care of their own growth, in a context where the company defines the models, processes and tools that make this possible, in line with business needs.

The Leadership for Life enfolded in the first quarter of 2022, including dedicated training for all about 100 Group managers. It counted nine online meetings dedicated to leadership and its evolution in a rapidly changing context. The course explored key issues for A2A’s People Strategy and more generally for the Strategic Plan, such as sustainability, circular economy, energy transition. In a broad sense, it enabled managers to reinterpret their leadership style from a multidimensional perspective, consistent with the increasingly hybrid management of teams. There were 7,700 participations in total. There were numerous opportunities for interaction and the collection of contributions from all of Management during the course, with over 800 suggestions that contributed to the creation of the next phase of the programme. “Insight Labs: workshops dedicated to a small group of managers to define best practices to be pooled in order to redefine the new managerial models emerging from increasingly hybrid work contexts.

As a continuation of the course, a group of 100 managers had the opportunity to experiment and further their leadership skills through a training programme aimed at enhancing soft skills using conversations focused on team management situations in a highly realistic simulated environment. This initiative allowed to reflect on the impact of one’s behaviour through augmented reality and artificial intelligence. The situational self-empowerment course included 30-minute a week simulation programmes designed with a neuroscientific approach and involving real actors.

Ten team-building sessions were organised in 2022 for a total of about 600 colleagues. They arose mainly from the need to meet to build relationships and strengthen leadership and a sense of belonging to the team. The team-building sessions addressed employees’ needs and requirements through different training modes and off-site experiential activities. This enabled the people involved to put their skills to use in non-work contexts to network.

After its launch in 2021, the mentoring project continued in 2022 with a significant extension to a group of managers (ensuring gender balance) involved in development programmes following a specific dedicated assessment process. 55 people were involved in 2022, who had the opportunity during the year to work on their own development thanks to the support of one of the Executives trained in the role of company mentor. The course lasted approximately eight months and included a final evaluation, as an opportunity to further relaunch the development actions of each person involved.
Performance Management

A2A has a Performance Management process that involves the entire population of Middle Managers and White Collars in the Group, altogether more than 5,000 people.

The process involves an assessment of individual goals and behaviours evaluated against the key skills of the A2A skills model. In the evaluation phase, all participants work on a self-assessment step aimed at stimulating awareness and discussions with the manager, as well as the possibility of involving one or more additional assessors beyond the manager in order to gather additional points of view and enrich the feedback in the manager-collaborator relationship. The final evaluation is carried out by the direct manager and at the end of the process, after a calibration phase at Business Unit/Directorate level, there is a moment for feedback. The result of the performance appraisal is an important and enabling element for the talent management model and the remuneration policy process.

In addition, the communication and training campaign to encourage and nurture a feedback culture within the Group continues through the use of the “Anytime Feedback” platform, which allows for the exchange of continuous feedback between managers and employees, and between colleagues.

Youth Development Centre

The new “Development Centre” initiative launched in 2021 continued throughout 2022, aiming to accompany the participants - young professional graduates - in building their own personalised development plan based on their characteristics and aptitudes.

The path is individual, with group stages, and with the guidance of one’s direct manager in an ongoing coaching logic. More specifically, six “Group Coaching” sessions on individual development issues were organised with the support of expert coaches, and at the end a follow-up was carried out with the aim of addressing some reflections and expectations regarding the skills acquired and the future development path of the participants.

A new wave was launched in the second half of 2022 involving around 80 Young Professionals in an initial online light assessment phase, which was followed by a one-to-one interview with an experienced coach. As in the previous year, the group coaching course was also launched with an initial start-up workshop, and will continue during 2023. Training measures were also planned in 2022 to begin in 2023 dedicated to certain key management skills to enable the professional development of the colleagues involved.

Internal Engagement

During 2022, several pathways were initiated for engaging Group colleagues, starting with updates on the directions of evolution of our businesses.

In particular, a digital event was held in January to share the progress of the 2021-2030 Strategic Plan, and an in-person convention was held in November, mainly involving Group managers, with over 1,400 attendees. Guided by the “Light Up Life” concept, the day was an important opportunity to share and discuss the main developments of our Strategic Plan with top management. Following the event, a cascading phase of the main messages was initiated, making video recordings of the day available, including thematic workshops held by colleagues.

Another important engagement event in 2022 was the Call for Sustainability initiative to promote the generation of ideas on sustainability issues. There was strong support for the course, with over 3,000 active colleagues on the dedicated portal, and a total of 342 ideas suggested. The promoters of the most popular idea were able to attend the Climate Innovations Festival in October in Tel Aviv, an event that brings together the world’s leaders in the field and promotes the generation of solutions in the Climate Tech field to stimulate and motivate the brightest minds around the world to stem the climate crisis (see also page 162).

First employee engagement survey for the A2A Group

Thanks to the collaboration with the Polytechnic Institute of Milan, the first Group Engagement Survey was carried out between December 2021 and January 2022, aimed at measuring the level of well-being and engagement of A2A employees. Around 4,000 people gave their input, answering questions on four key dimensions of engagement: individual, relational, organisational and values. All four of the dimensions taken into consideration - which make up A2A’s ecosystem - showed positive perception by employees, who declared a great sense of belonging and a strong bond with the company: specifically, there was over 80% correspondence between personal values and those of the Group. The aim is to administer this survey every 18 months to assess the development of employee satisfaction and engagement within the Group.

Finally, the A2A Life App and the A2A Life Portal were launched in March 2022 and in July 2022, respectively, as part of the digitalisation of the company-employee touchpoints. These tools allow people in the A2A Group to take advantage of more than 60 services and functions previously digitised only partially or not at all, from a multi-channel perspective.

Welfare

The Group is committed to promoting the well-being of its people and organization, both at work and in the family, developing a culture of well-being and improve the reconciliation between private and professional life. The main welfare activities in each area in 2022 were as follows:

- **Services redesign**
  As part of the initiatives aimed at harmonising and developing recreational and cultural activities in the Energy area, elections were held in July for the creation of the new CRAL UNICO AZIENDALE “CRAZ2A”. The new club was created through the merger of CRASM BRESCIA and CRAL ASM BERGAMO into CRAEM MILANO. The votes in favour of the merger exceeded 91%, an important result towards a goal pursued in strong synergy between A2A and the trade unions.

- **Family sphere**
  Among the various measures aimed at supporting families, two important initiatives dedicated to new parents were launched in 2022: a pathway dedicated to mothers-to-be, as a space for listening and discussion to support colleagues in this delicate moment of personal and professional life, and a team coaching pathway for new parents and their managers in order to support the qualities that characterise the parental role, strengthening positive managerial cultural models and increasingly value the needs of "new parents".

Moreover, A2A again organized a cycle of webinars in 2022 for people seeking more information and to discuss aspects linked to parenting and education. The nursery and care at the Brescia headquarters continues to be available for the children of Group employees and other affiliated companies, accommodating 31 children of Group employees.

- **Well-being**
  The collaboration with LILT Milano Monza e Brianza was further consolidated in 2022, with which the Group organised two initiatives: a webinar path to combat misinformation, with the aim of raising people’s awareness of the importance of primary prevention as a useful tool to fight the onset of oncological diseases and promote healthy lifestyles, and an awareness campaign on alcohol consumption, helping participants learn the immediate and future benefits of adopting more conscious behaviour towards the consumption of alcoholic beverages.

- **Health**
  The Healthcare Support system is again available and operational in 2022. It was first created through a shared path between the company and trade unions, and then guided by the Bilateral Agreement for A2A Supplementary Healthcare. The coverage has been designed to provide an immediate and concrete response to Group employees and their families, offering supplementary benefits beyond the National Healthcare Service. In its third year now, the initiative has involved some 6,000 member employees and their families.

In 2022, a campaign dedicated to dermatological prevention was launched, to which more than 1,700 people signed up.
Multiple trade union agreements were again stipulated in 2022, divided into those of a transversal nature to Group companies and other specific ones of some realities. The main ones are as follows:

- agreement on initiatives to counter the energy shock: agreements have been signed for both the energy and the waste area to help counter the energy shock, activating agile work on Fridays for the duration of the heating season, allowing the shutdown of heating systems for three days a week in offices and on Fridays, the activity occurring on Fridays is not fully operational. A measure has been activated in parallel to help the company population that envisages the application of a discount. Please see the dedicated page for further information.

Trade union agreements

Relations of all A2A Group employees are regulated by National Collective Bargaining Agreements (“CCNL”).

for the Energy Area and one for the Waste Area) relating to the corporate transactions for the transfer of the counterparts pertaining to the business companies of the former LOH perimeter to A2A; simultaneous definition of the harmonisation rules that are preliminary to favouring the transfer of the branches to the receiving companies of the Energy and Waste areas;

- agreement for the introduction of "Smart PPE" in the company: Union negotiations concluded for the introduction of an innovative system in the company perimeter to increase the safety of operators by facilitating the detection of the presence of PPE through the use of active Bluetooth tags.

Remuneration

A2A sets its remuneration policy with full respect for internal fairness and external competitiveness. In the definition of interventions, it acutely complements with Italian law and the relevant collective national agreements, excluding any kind of discrimination. The remuneration policies and processes focus on acknowledging and optimising the commitment, constant achievement of results, skills and behaviours of employees in line with the Group’s Managerial Model and with external benchmarks.

To this end, starting in 2021, A2A has continuously monitored:

- the evolution of women’s and men’s wages and the relative gender pay gap;
- the remuneration structure of employees with respect to the relative gender pay gap;
- the remuneration structure of employees with respect to the entire non-executive population, in relation to the activity carried out.

In particular:

- in relation to the gender pay gap, a cross-functional working group has been set up to monitor the gender pay gap according to the external benchmark, taking into account factors such as age, seniority, education, performance evaluation, with the aim of closing the gap in 2026;
- in the area of employee compensation, compared with the external market, a remuneration benchmark was launched on the entire non-executive population aimed at comparing the A2A Group’s remuneration with the external market and with specific references to the markets for different professional families or roles that have become increasingly “巧妙” in the labour market. The objective of this benchmark has been to identify, for any specific family and/or role, targeted remuneration practices to be adopted in the processes of compensation, recruiting and talent management as well as building ad hoc retention packages for the most exposed roles in the market.

For all employees, remuneration is structured into fixed and variable monetary components and provides for a package of benefits in support of income or similar additions (medical and social security insurance, projects and initiatives for employees and their families, promotions and benefits of various types). The variable monetary component is based on systems of a direct connection between company performance and individual performance (“MBO”) or on disciplinary reasons for the recognition of working performance and conduct in terms of “fine-off” bonuses.

The variable remuneration system is also supplemented by a collective incentive tool (a “results bonus”), which is based on Group profitability and profitability goals, aimed at guaranteeing the involvement of all staff in company performance, including those not assigned MBOs. In line with current legislation and following an agreement with the workers’ representatives, also in 2022, all employees were given the opportunity to convert part of the performance bonus into services through a special welfare platform. The results achieved were positive, in line with those of the sector. The ratio of the annual total remuneration of the highest paid individual in the organization to the median of the annual total compensation of all employees is 25% (annual total remuneration ratio 1).

The MBO process has confirmed the importance of formalized incentive processes in increasing the closeness of employees to the Group’s objectives and incentivizing each worker towards the achievement of corporate results. In line with A2A’s People Strategy and in continuity with what has been done in previous years, the extension of the perimeter will concern a significant percentage of middle managers in 2023.

In 2023, a new “bonus pool” incentive system will be implemented which will integrate and relate the Group’s financial performance to individual performance. The aim is to simplify and make the evaluation systems complementary, to finalize the MBO as an incentive tool for managerial figures with potential enlargement of the target population, to correlate the incentive system with valuable results for the business, to make managers responsible for the management and accounting of the incentive system.

Consistent with the challenging objectives of the A2A Strategic Plan, alongside the standard incentive plans, extraordinary incentive plans have continued which are increasingly focused on the sale of energy efficiency and e-mobility services and which will be further focused in 2023 on the sale of “green” energy.

Lastly, to strengthen the commitment to sustainability, the significant weight of sustainability goals across the entire non-executive population has been confirmed in 2023. Also assigning common, cross-cutting KPIs geared toward the reduction of accidents and improvement of DEI indicators (in terms of: increasing the % of female managers, increased presence of women on the Boards of Directors of subsidiaries and affiliates; increases in the % of women hired), three relevant and measurable sustainability objectives consistent with the Strategic Plan have been identified:

- Reduction of injuries: As in 2022, the frequency index will be measured - for performance purposes - and there will be an annual gap to the target based on the severity index (first prognosis only).
- Reducing emissions: focus on investments aimed at sustainable development (of renewable generation plants and bioenergy).
- DEI KPI improvement: articulated as follows: 5 Increase in % of female managers vs 2022; 2 Increase in BoD compliance with the Golfo/Mosca Law (excluding BoDs with sole director); 3 Increase in the percentage of women hired (versus 2022 – non-workers)

The table below illustrates the differences in average gross annual female/male pay within the different job categories. The analysis of punctual deviations did not reveal any discriminatory phenomena but dynamics linked to turnover, acquisitions of new companies in the Group or differences linked to the representativeness of the female sample in the reference cluster.

Figure 49 Average gross annual pay men/women by role

<table>
<thead>
<tr>
<th>Category</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>Managers</td>
<td>97.0%</td>
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<td>94.4%</td>
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<td>93.35%</td>
</tr>
<tr>
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<td>90.50%</td>
<td>90.30%</td>
<td>91.20%</td>
</tr>
<tr>
<td>Blue-collar workers</td>
<td>95.20%</td>
<td>95.30%</td>
<td>95.59%</td>
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* For the purposes of calculating the KPI:
  - employee with highest total remuneration: fixed remuneration + nominal value of variable remuneration year 2022.
  - median value of the total remuneration of all other employees including the disbursed value of variable remuneration for the year 2022.

For all employees, the remuneration structure is included in a collective agreement (a “results bonus”), which is based on Group profitability and profitability goals, aimed at guaranteeing the involvement of all staff in company performance, including those not assigned MBOs. In line with current legislation and following an agreement with the workers’ representatives, also in 2022, all employees were given the opportunity to convert part of the performance bonus into services through a special welfare platform. The results achieved were positive, in line with those of the sector. The ratio of the annual total remuneration of the highest paid individual in the organization to the median of the annual total compensation of all employees is 25% (annual total remuneration ratio 1).

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8.3 Diversity and Inclusion

The Group’s approach to diversity and inclusion is based on the principles of integrity and protection of the individual within the work environment, ensured through the Code of Ethics, the Human Rights Policy and from 2021, the DE&I Declaration of Commitment. Through these documents, A2A undertakes to guarantee its employees a climate of mutual respect for the dignity, honour and reputation of each individual, preventing insulting, discriminatory or defamatory attitudes and openly condemning any mobbing, harassment of any kind or unjustified attempts to hinder the professional prospects of others. Within the Group, anyone who believes to have been subjected to harassment and/or discrimination can make a report, which is promptly taken into consideration and assessed.

As evidence of the Group’s commitment to promoting an increasingly inclusive working environment free from stereotypes, A2A has continued for the second consecutive year in inclusion Team activities, carried out by a working group dedicated to DE&I issues with the aim of defining the strategy, objectives and actions in the areas of Culture, Gender, Generations, Disability, Sexual Orientation and Gender Identity. The Inclusion Team, which includes more than 70 Group colleagues representing different Business Units, backgrounds, seniority, generations, gender, skills and corporate roles, works on each topic by an HR Guide and a Sponsor identified in the Steering Committee. After participating in a training course of dedicated seminars and workshops, the Inclusion Team conducted a series of initiatives. During the course of the year, six awareness-raising videos/webinars were produced and celebrated on the occasion of International Days on Diversity and Inclusion, where possible providing an update on the development of the action plan through the narrative of each Inclusion Team working group (March 8 - International Women’s Day; April 2 - World Autism Awareness Day; May 17 - International Day against Homophobia, Transphobia and Biphobia; May 21 - World Day for Cultural Diversity, Dialogue and Development).

In May 2022, the Group participated in European Diversity Month, a month promoted by the EU Platform of Diversity Charters to celebrate diversity within companies that are signatories to the Charter of Equal Opportunities and Equality at Work, and on the occasion published:
- the "new DE&I visual and claim: “We are united by the same values: respect and inclusion” to remind us how each identity is an expression of a unique personality, a wealth of viewpoints and opportunities for comparison. In short, it generates life;
- the “Inclusive Language Manifesto”, a priority action of the Inclusion Team action plan. The manifesto recounts five principles to improve communication and is intended to be a commitment to shared responsibility for fostering respectful language and behaviour;
- launched the survey on DE&I issues to make A2A more and more inclusive and to involve the contribution of all people. The objective of the completely anonymous questionnaire was to detect the level of knowledge on Diversity and Inclusion issues; to understand the needs of the corporate population with respect to specific issues and to have a snapshot of the current situation for each area, which is essential to be able to direct the next actions.

Initial evidence from the Diversity and Inclusion Survey revealed perception of the use of language that is not very inclusive. For this reason, in the following months the Inclusion Team worked on the theme of inclusive language by creating:
- good practices on inclusive language, a practical and user-friendly tool with concrete suggestions on how to use inclusive and diversity-friendly language;
- six DE&I Podcasts, a new mode of communication consisting of quick audio snippets with news and interviews on the topics of Diversity and Inclusion and a focus on inclusive language;
- "I was only joking" webinar dedicated to inclusive language on the occasion of the "4 Weeks 4 Inclusion" inter-company marathon dedicated to the topics of diversity and inclusion.

Sexual Orientation and Gender Identity

On July 2, 2022, A2A marched alongside the association Parla Libere e Uguali as a partner in Milan Pride. This is an important gesture for the Group, which thus confirms its active commitment to designing, developing and promoting initiatives aimed at removing any barriers that might make a person feel uncomfortable in their workplace because of their sexual orientation or gender identity.

Gender Diversity

With the objective of promoting equal treatment and opportunities between genders within the entire corporate organization, A2A has for years implemented structured initiatives to encourage inclusion on this issue such as signing the “Women Empowerment Principles’, a declaration of a programmatic commitment in seven principles defined by the UN Global Compact and UN Women to promote female employment and gender equality as a factor of innovation and growth for companies. The CEO’s adhesion to the Inclusion and Diversity and a focus on inclusive language

Figure 50 Women in the company

<table>
<thead>
<tr>
<th>Gender</th>
<th>2021</th>
<th>2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>Women in ICT functions</td>
<td>27.70%</td>
<td>26.80%</td>
</tr>
<tr>
<td>Women in Engineering</td>
<td>20.20%</td>
<td>20.70%</td>
</tr>
<tr>
<td>Women in entry-level positions (out of total entry-level positions)</td>
<td>46.50%</td>
<td>45.30%</td>
</tr>
<tr>
<td>Women in managerial positions (out of total managerial positions)</td>
<td>23.10%</td>
<td>25.00%</td>
</tr>
<tr>
<td>Women in junior management positions (out of total junior management positions)</td>
<td>24.40%</td>
<td>25.80%</td>
</tr>
<tr>
<td>Women in top management</td>
<td>25.30%</td>
<td>22.80%</td>
</tr>
<tr>
<td>Women in managerial positions with cash-generating functions</td>
<td>36.00%</td>
<td>39.40%</td>
</tr>
</tbody>
</table>

To raise awareness and prevent violence against women, A2A has dedicated the month of November to several initiatives, including: a webinar “Forse anche io...: Le piccole grandi violenze quotidiane contro le donne... e non solo!”, a show promoted by Fondazione ASM ‘Senza Paura’ which offered reflections for talking about violence against women, leaving room for hope and positivity. A further initiative was the Casina Ri-Racconta project by EVS Donna Aita Donna Onlus with Banco dell’energia, which involved the renovation of a large farmhouse in the Milan municipality to ensure a safe place for female victims of violence.

Disability

During 2022, the A2A Group continued to develop the “Nuove Energie” Project launched in 2021 by involving a new company perimeter in the initiative. The objective of the project is to define, starting from the mapping of the “needs” of the most “fragile” workers, an organizational model of disability management aimed at facilitating the involvement of people with disabilities in business processes. During 2022, special survey questionnaires were administered to both managers and workers with disabilities, followed by individual interviews by external consultants, from the analysis and synthesis of which a number of intervention areas emerged with the consequent definition of an action plan, targeted on the person, which will be implemented during 2023. At the same time, with a view to constructing the above-mentioned “disability management” model, A2A began an in-depth analysis of the HR company processes impacted by disability-related issues in order to verify any areas for improvement in terms of the inclusiveness of the most fragile people.

Culture

During 2022, A2A collaborated with the Human Age Institute Foundation for the inclusion of five people benefitting from international protection with the aim of bearing witness to its adherence to a model of an inclusive society, making a concrete commitment to help build it.

Generations

In 2022, the A2A Group conducted market research and investigated the corporate context in order to identify project initiatives aimed at encouraging a culture that values the full expression of people’s individual characteristics in the intergenerational corporate context, to be launched in 2023.

No incidents of discrimination occurred in 2022.
8.4 Occupational Health and Safety

Health and Safety Management Systems covers 99% of the company population, all activities and all workplaces of the Group. These systems are subject to audits by certification bodies and recognized and certified as compliant with the relevant standards.

All Group companies use the application AREAL (Application for Environmental and Labour Risks) to consult and manage aspects relating to occupational health and safety. This application makes it possible to:
- perform the risk assessment and create RADs (Risk Assessment Documents) with the possibility of highlighting the initial and residual risk level following the application of specific prevention and protection measures, with a clear and traceable approval process;
- define the prescription and delivery of PPE (Personal Protective Equipment).

The tool is also used to record and classify accidental events (reports, accidents, near misses and injuries to employees and third-party workers), made according to a level of severity based on the potential and/or actual effects of the event.

Safety at Work

The downward trend in accident indices continues in 2022 with a 6% reduction in the frequency index compared to 2021, in line with the corporate objectives.

One of the initiatives put in place in 2022 to raise employees’ safety awareness is the LiHS - Leader in Health and Safety - programme, which promotes cultural change on health and safety issues. It is based on a cascading approach and is structured in three phases: workshop manager and top manager, cascading with all employees and training “safety leaders.”

To assist employees in reading and interpreting regulations, a series of “WebiLaw HSE” webinars have been made available, covering significant and/or topical regulatory provisions and highlighting risks and opportunities for the Group’s businesses.

Safety Mondays continued in 2022, an initiative that aims to promote a true culture of safety by tackling specific issues that may affect work activities in an agile manner, using unconventional communication systems and languages that also affect the emotional sphere, a fundamental element for modifying unsafe behaviour.

The “HSE from Procurement” project activities also continue in 2022, based on the need to establish a series of specific and necessary elements throughout the procurement management process in order to properly oversee, from the HSE point of view, the entire process of entrusting to contractors. As part of the procurement process, the project resulted in the definition of 50 HSE checkpoints, including the inclusion of the HSE technical visa in relation to purchase requests for specific product classes, the revision of the special terms and conditions of contracts with the inclusion of additional contractual clauses, the revision of the safety documentation to be requested for the verification of contractors’ technical and professional suitability, and the definition of an information flow to the Purchasing Department on supplier incidents.

Another important element in the Group's supervision of safety in its activities is the manager safety course, designed with the aim of raising awareness among managers to take charge of and support the cultural change on health and safety, renewing their commitment and that of their line, sharing the actions and good practices established in recent years, reflecting on the factors emerging from the latest analyses and adhering to the development scenarios of the future. Managers are called upon to consider technical and behavioural safety as an important ally well integrated into the organisational culture, in order to create managerial action that is synergistic with the HSE model, compliant with legislative safety and consistent with human capital development.

The “one year injury-free” initiative continues in 2022 as part of the “Leadership in Health and Safety” programme and involving more than 2,000 colleagues of the Smart Infrastructures Business Unit who are committed every day to adopting virtuous behaviour and carrying out their activities in compliance with the provisions of the company rules and regulations. The goal of the initiative is to achieve 365 injury-free days. The Unareti “Pronto intervento Area Milano” team achieved 475 accident-free days, exceeding the initiative’s target.

Through the collaboration between several departments, an integrated system with WFMC (Work Force Management System) was created for Unareti to verify the use of PPE in an aggregated manner. The purpose of this tool is to preserve operator safety by facilitating the detection of the presence of PPE itself, prescribed for the professional activities performed, through the use of active Bluetooth tags.

During the year, the Group’s main contractors and suppliers were involved in new campaigns to raise awareness of sustainability issues. In this context, a safety awareness meeting was organised in the
Brindisi power plant involving 12 colleagues and 39 contractors belonging to 12 external companies working in the plant. After the projection of a video retracing an accident that took place in one of the Group’s plants, the participants had the opportunity to discuss and share useful hints for a correct approach to safety involving all the people who work in our company premises.

With the amendments introduced to Italian Legislative Decree 81/08 by Law 215/2021, the role of the person in charge has taken on even greater importance, who now finds himself or herself playing an important role in the enforcement of specific company regulations on HSE by intervening to change any non-compliant behaviour of workers and providing the necessary safety instructions. The skills required are therefore multidisciplinary. For this reason, A2A joined the experimental training project carried out by AIFO, with the coordination, support and patronage of Elettricità Futura and UNEM, aimed primarily at the supervisors of the contracting companies of Elettricità Futura and UNEM member companies who intend to increase both their technical and psychosocial skills in the role, hosting the first pilot session of the 32-hour course with the participation of 18 supervisors of various contracting companies in November 2022 at Casa dell’Energia. In total, 7,755 hours of health and safety training were provided to employees of third-party companies in 2022.

The safety pact between A2A Ciclo Idrico and contractors

A pact was signed by A2A Ciclo Idrico and contractors with the aim of bringing the customer and the contracting and executing companies together to strengthen awareness of safety issues in all staff, both technical and operational. The pact called for an induction project at A2A work sites that was structured in two phases: the first phase in the classroom was aimed at raising the awareness of the contractors’ operational staff, reinforcing good operational practices and improving those that were lacking; the second phase consisted of “on-the-job” awareness-raising.

In addition, there were two unfortunate deaths of citizens in accidents involving the Group’s municipal hygiene collection vehicles.

It should be noted that 381 FTEs not directly employed by the Group were working in A2A Ambiente in 2022 for activities related to waste collection, sweeping and waste treatment.

Health at Work

The Group constantly monitors the health of workers in relation to the specific risk for the various tasks present at the workplace, through health monitoring.

A2A provides the company doctors with a computerised health record as well as a system for scheduling activities according to health protocols, i.e., the set of instrumental and laboratory tests and examinations whose frequency and content is established by the Group’s company doctors themselves in coordination with the Healthcare structure and according to quality standards shared with university structures. The health surveillance service is offered mainly in the 66 medical units distributed throughout national territory. In 2022, around 9,000 medical examinations for job fitness and more than 10,000 checks were carried out in accordance with health protocols. The appointed physicians also carried out more than 150 site inspections at the workplaces.

At December 31, 2022, 13 cases of occupational illnesses had been recorded by the Group, the main types of which included diseases of the osteomuscular system and asbestos-related illnesses.

The flu vaccination campaign was repeated, ensuring that all workers who requested it were able to get vaccinated. A total of 1,575 vaccinations were administered in 2022. Following the popularity of the 2021 pilot, two additional Health Pod “Capsules” were installed in 2022 to give an increasing number of colleagues the opportunity to increase their awareness of their own level of well-being through a number of measurements that the device allows them to take: overall physical fitness, degree of resilience to stress, level of cellular ageing and dietary style. In 2022, the capsules were accessed more than 4,000 times.

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9

Intellectual Capital
Research and innovation play a central role, also thanks to government interventions such as the “Transition 4.0” package, aimed at increasing the competitiveness of Italian industry in Europe and worldwide. In this context, EU directives also aim to consolidate the position in science, ensuring that technological breakthroughs are converted into viable products with real commercial potential through the creation of partnerships between industry and governments.

At a time of great technological transformation, activities such as digitalization, the search for solutions to reduce environmental impacts, cybersecurity and the management of increasingly resilient networks have become extremely important for companies.

Cybersecurity is rapidly assuming a major role in dealing with the growing number of cyber attacks in the industry. Around 90% of the utilities have stated that investments in this area will increase in the future.

On the energy innovation front, starting with the local production of hydrogen from renewable sources, the aim is to spread the use of the green molecule in industry, SMEs and public transport. With respect to the integrated water service, smart infrastructure is the main strategic driver for reducing losses and inefficiencies.

In the context of current market dynamics, the digitalization of the production system as a whole is also driven by innovation in customer services and brand reputation. Indeed, the indicators of the Edelman Trust Barometer 2023 show that companies hold a clear advantage over institutions in public perceptions of competence and ethics. Companies were also considered the most reliable interlocutors globally in 2022.

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Innovation and Digital Transformation

The Group promotes and invests in research and development activities aimed at enhancing and consolidating the digital knowledge of its internal resources, thereby ensuring that the Group’s services and infrastructures are periodically updated and computerized. A2A also implements innovative services and encourages the development of smart solutions for neighbourhoods and cities, with the aim of making them smarter, connected, and at the same time sustainable, contributing to the creation of the smart cities of the future.

Governance

The Group has created a true virtuous process of innovation and sustainability in order to create shared value for more sustainable development.

The Open Innovation paradigm therefore involves opening up innovation processes beyond one’s own borders in order to intercept flows of knowledge, ideas and new perspectives that can increase internal innovation potential.

For A2A, the first concrete step in this direction was the creation of a shared platform to connect Group colleagues, start-ups, companies and the world of research in order to contribute to the creation of value in the territories where it operates. The platform allows end-to-end management of project development, but also innovation initiatives such as “Call for Ideas,” idea generation activities, hackathons and challenges.

The Group has created a true virtuous process of innovation generation and management that has allowed building strong relationships with important entities such as incubators/accelerators, innovation hubs, universities, research centres and venture capitalists.

Corporate Venture Capital

The Corporate Venture Capital (CVC) programme of the A2A Group was created in 2019 to promote the Group’s innovation through investments in start-ups operating in strategic businesses such as energy transition and circular economy, in line with the Group’s Business Plan.

The CVC programme’s budget to date amounts to approximately 40 million euro divided into funds from different managers (including 360 Capital, Eurek! Venture SOG, CDP Venture Capital – Fondo Nazionale Innovazioni). With 360 Capital, a dedicated fund named “A+360” was set up (with A2A as sole investor – limited partner) with which eight investments in start-ups have been made.

Energy Dome, an Italian start-up, has patented a new battery based on the thermodynamic cycle and the use of carbon dioxide (CO2) is highly efficient and durable solution that can optimize the storage and use of energy from renewable sources.

In fact, the technology allows to store large amounts of energy in the order of hundreds of MWh, and aims to complement wind and photovoltaic plants or systems for the production of green hydrogen.

Unlike a thermochemical system such as lithium batteries, it uses machines capable of compressing CO2 to 65 atmospheres in order to transform it into a liquid state and ensure that the energy expended is efficiently stored.

Lastly, the CO2 is regasified, re-expanded in a turbine to return the current absorbed by the network to the atmosphere in order to transform it into a liquid state and ensure that the energy expended is efficiently stored.

Moreover, the start-up has signed a Memorandum of Understanding with A2A for the initial implementation of the first CO2 batteries in Italy.

The British start-up Greyparrot has developed a computer vision-based solution that integrates artificial intelligence and data analytics. The software automatically identifies different types of waste, providing precise information on its composition and nature. The software is currently being tested at the A2A plastics sorting and treatment plant in Muggiano (Mi). Greyparrot was chosen because it will be able to contribute to the digitization and automation of waste cycle processes, further improving the efficiency of the collection and separation process.

Enaped is an Austrian start-up that has developed a digital energy trading as a service (Taas) platform equipped with advanced artificial intelligence algorithms, which aims to promote energy transition and make electricity grids more flexible. The company operates in the short-term energy trading market, helping to balance energy supply and demand on the grid, optimizing the management of production and storage plants.

The company is currently working with A2A to bring its solution already present in Germany, Austria, the UK, France and the Netherlands to the Italian market.
Pallon, on the other hand, is a start-up linked to ETH University in Zurich. The company took the lead in the development of a computer vision-based solution for the inspection of wastewater networks. Using an artificial intelligence model, it is able to identify and locate leaks, breaks and cracks along the network, enabling predictive maintenance and savings of up to 40% on repairs and upgrades. Contracts with major European municipalities and utilities are already in place for the start-up. A2A is currently working on a partnership to facilitate the start-up’s entry into the Italian market. In addition to a significant reduction in costs, the project will make the sewerage system even safer, further limiting the emission of pollutants into the surrounding area.

The French start-up Beem Energy offers a plug-and-play photovoltaic panel kit for the self-generation of electricity in residential settings. The panels can be installed quickly and easily directly by the customer, without the need for specialised technicians. The start-up aims to encourage the self-generation of energy from renewable sources and contribute to decarbonization. After a successful first pilot project during the summer of 2022, A2A is working to include the product in its catalogue and encourage the self-generation of energy among its customers in Italy.

Still based in France, Sitelflow has developed software for the digitalization of maintenance processes in large production facilities. The solution allows to improve shared operating standards for managing scheduled maintenance, producing audit documentation and promoting collaboration between various tasks. In June 2021, Unariet chose Sitelflow to enhance its maintenance operations in the Milan power grid. To date, the start-up’s customers include some of the leading players in the nuclear, oil & gas and construction sectors.

A2A also wants to encourage the emergence of innovative technological solutions in Italy. In this respect, collaborations with two Italian start-ups deserve mention: Circular Materials and Sinergy Flow. The first is based in Milan and has patented a technology for the removal of heavy and precious metals from industrial wastewater with a view to the circular economy. The plant developed by the start-up effectively recovers metals such as arsenic, cadmium, nickel, zinc, copper, mercury, gold and silver so that they are not dispersed into the environment and can once again generate value. The technology adopted also allows a drastic reduction in treatment costs compared to current technologies.

Sinergy Flow has instead developed a low-cost ($30-150/AW) and highly efficient (70%+) sustainable flow cell battery for large-scale stationary energy storage applications through the utilization of petrochemical industry by-products (e.g., sulphur) from different industrial processes. The extremely low cost allows the system to be compatible with long-term storage, enabling the penetration of up to 90% renewable energy sources.

A2A - SIBF Memorandum of Understanding
On October 27, 2022, A2A and the Israeli technology investment fund SIBF VC signed a memorandum of understanding to establish a joint innovation hub based in Tel Aviv.

SIBF - Southern Israel Bridging Fund - is a leading Israeli venture capital fund dedicated to frontier technologies, investing in innovative hi-tech start-ups and technology companies in Israel and abroad. SIBF works closely with its portfolio companies to support their growth thanks to a network of partners and geographical proximity, which allows it to better monitor processes with a practical approach that benefits both companies and investors. The fund now has 50 start-ups in its portfolio and 450 million dollars in invested capital.

Thanks to this agreement, A2A is SIBF’s only Italian partner, broadening its innovation horizon by expanding the scope of its activities in Israel, one of the world’s most advanced industry ecosystems.

Federated Innovation @MIND
With a view to strengthening and further developing the Group’s ability to intercept valuable solutions in the field of sustainability, and increasing its own ecosystem of innovation, A2A also participated in “Federated Innovation @MIND” in 2022, a public-private collaborative model created within MIND - the new innovation district that is growing in the former Milan EXPO area.

Federated Innovation is a unique model that currently brings together a network of leading companies in their respective sectors at national and international level, aimed at generating research and innovation initiatives, encouraging technology transfer and the contamination of ideas on a platform open to the collaboration of all companies, universities, start-ups, investors and talents.

Within the Federated Innovation, A2A is part of the GreenTech and Circular economy thematic area where it is working to develop projects to support the objectives of energy transition and circular economy.

MIND represents a laboratory on an urban scale where innovations in the City of the Future can be tested.

Among the projects implemented in 2022, a virtuous example is the experimentation of “Trombia Free”, the electric, self-driving sweeper that promises to revolutionize urban hygiene, as it reduces consumption and emissions. Tested with the collaboration of AMSA, the project is an example of sustainable innovation aimed at improving the lives of citizens, a key aspect of a Life Company. The prototype designed by Trombia Technologies, a Finnish company, has demonstrated prerogatives that could prove invaluable in meeting the challenges of the coming decades. In fact, the vehicle is capable of cleaning more than three times the surface area normally covered in an hour by sweepers on the market today, and is particularly effective in removing both fine dust and significantly larger debris. All this while using only 15% of the energy required by a traditional vehicle, and respecting the urban environment as much as possible: it is very quiet and safe, detects obstacles and pedestrians thanks to advanced vision systems and image analysis algorithms based on artificial intelligence. In addition, the sweeper can also be operated in semi-automated mode, thus giving an operator the possibility, at any time, to access control of the vehicle remotely, even controlling several sweepers at the same time.

Intrapreneurship and Corporate Venture Capital
The Corporate Intrapreneurship initiative Call For Ideas, which started in 2020 with over 3,000 participants, 540 ideas and eight finalist teams, continued in 2022.

In particular, the six finalist projects were developed, some of which already materialized during the year:

• “Beyond Borders”: an initiative consisting of the implementation of an employee engagement platform for creating social responsibility projects in developing countries. In the first project in collaboration with the NGO WeWorl, participating colleagues will provide their expertise in the energy and circular economy sector to the people of Burundi;
• “EV Smart Parking”, a project for the creation of “Quick Charge” electric charging stations, followed a development path through an initial crowd-design phase and a subsequent creation phase. The first columns will be installed in the Brescia area in 2023;
• “Teleciclalamentos Zero”, aimed at carrying out a technical-economic feasibility study of a fifth-generation district heating network at natural temperature and based on the recovery of waste energy, see the construction of a prototype plant inside the Brescia North power station.

Lastly, some of the ideas collected from the Call for Ideas 2021 are currently being evaluated for the launch of dedicated development paths, with the aim of assessing their potential to become new businesses for the Group.

Its success led to the Group launching its second Corporate Intrapreneurship initiative in 2022, aimed at all Group employees: the “Call For Sustainability”.

It was entirely dedicated to the challenges of the “Climate Tech” world, with the aim of stimulating the generation of valuable ideas by colleagues on topics related to the energy transition and the circular economy while supporting the corporate entrepreneurship process. In parallel, the same challenge was addressed to the Group’s external start-up ecosystem with the aim of finding possible providers in line with the internally generated use cases. Once again, participation was very broad with over 3,000 participants, 342 competing ideas and ten finalist teams.

Among the finalist ideas, the following reached the podium:

• “Urban Micro Wind”, which consists of evaluating the performance of innovative small vertical wind turbines equipped with an adaptive control system through experimentation in order to assess their distributed and integrated application to industrial or urban structures;
• “CO2 Chain”, an initiative to create a marketplace to certify carbon credits via blockchain technology;
• “CO2 capture with fly ash”, which was the winning idea of the initiative. Its objective is to carry out a technical-economic feasibility study of a plant for the sequestration of CO2 from ash coming from waste-to-energy plants through the process of accelerated mineral carbonation, a chemical process whose resulting product could be used as aggregate material and reused for a second purpose.

The first place team in the Call for Sustainability won the prize consisting of the chance to participate in a real “Tech Mission” in Israel, in order to discover the Israeli innovation ecosystem and interact with local start-ups and incubators in one of the most dynamic nations in terms of entrepreneurship and technology development.
9.2 Research and Development

The complexity and constant evolution of the energy context make it necessary for the Group to ambitiously promote research activities and projects.

The in-house Research and Development team actively participates in the pursuit of the Group’s plan objectives, paying particular attention to the energy transition and circular economy through project initiatives in the fields of decarbonization, material recovery and bioenergy.

With this in mind, the focus on developing the skills of the future takes the form of a commitment to promote highly qualified training in cooperation with universities and research centres. Agreements have been finalised for 14 PhDs, who will work on specific topics of interest to the Group. In line with this vision, A2A is also a founding member of the National Centre for Sustainability Mobility (MUSA), and of the Ecosystem of Innovation and Research MultiLayered Urban Sustainability Action (MUSAC).

Hydrogen

Hydrogen has always been considered a top priority by industry as well as the regulator, as its unique characteristics make its availability an essential precondition for the development of many technologies: emission reduction in the hard-to-abate, mobility, carbon utilisation and storage sectors. However, the high production costs and investment required to upgrade the technologies for its use have not yet allowed its development on an industrial scale. Technological research and institutional support therefore play an essential role for the future of this energy vector.

The Group’s role as Italy’s second largest electricity producer in terms of installed capacity and its established experience in the circular economy allow it to offer various solutions for the production of renewable hydrogen. For this reason, in 2022 A2A continued to be committed to developing the potential of this resource by launching several wide-ranging projects aimed at contributing effectively to the decarbonization of the heavy mobility sector and more generally of the hard-to-abate sectors.

During 2022, the feasibility of converting thermoelectric power plants from natural gas to hydrogen, or natural gas/hydrogen blends was confirmed, and the study of gas distribution infrastructures in order to make them “hydrogen-ready” was launched.

A2A is also a partner in the “Hydrogen Joint Research Platform” promoted by the Milan Polytechnic Institute in order to investigate, with the economic and operational support of numerous industrial partners, technologies aimed at the production, storage, transport and use of hydrogen, as well as to promote projects proposed by the academic world to identify all possible applications.

Lastly, the collaboration with FNM, A2A and Snam – as per the memorandum of understanding of 2020 - also continued throughout 2022 to give further impetus to the development of green mobility in Lombardy, pursuing the design of the first renewable hydrogen production plant. The goal of developing Italy’s first “Hydrogen Valley” in Va Camonica has been confirmed, which will also allow the replacement of the current diesel trains on the Brescia-Iseo-Edolo line with new hydrogen-powered trains. The energy used will be renewable electricity from the Brescia waste-to-energy plant, thanks to the installation of a 6 MW electrolyser, potentially scalable up to 20 MW.

Moreover, the project is configured as one of the first initiatives in the hydrogen field in Italy and has recently been awarded with a European grant of 4.6 million euros from the Innovation Fund Small Scales.

Multilayered Urban Sustainability Action

The “Multilayered Urban Sustainability Action” (MUSA) led by the University of Milan Bicocca and of which A2A is a founder was set up in 2022 within the framework of NRP/R with the aim of contributing to the improvement of the urban environment in terms of sustainability thanks to the collaboration of university and research institutes with the business sector and private individuals.

MUSA aims to increase the understanding and awareness of the main critical issues to be addressed in the process of digital and sustainable urban and territorial transition, proposing innovative actions and solutions.

In particular, A2A will work alongside universities and other industrial partners in research and development activities relating to Deep Tech, Entrepreneurship and Technology Transfer, with the aim of strengthening the process of developing technological innovation by encouraging entrepreneurship.

The foundational capacity of energy networks is an essential precondition for the energy transition and the development of RES. For this reason, A2A is engaged in research activities on energy storage systems in order to better support the development of networks with alternative solutions to the already established battery technologies. In particular, the Group expresses its interest in participating in the creation of a Research Infrastructure, promoted by the Milan Polytechnic Institute and financed by the NRPP, aimed at studying energy storage technologies (chemical, electrochemical, thermal, thermodynamic). The infrastructure will be built at the historical building of the now decommissioned “Emlia” thermoelectric power plant in Piacenza by 2025.

The cornerstone of sustainable development from a circular economy perspective is material recovery. The Group is engaged in the study of all possible technologies aimed mainly at the recovery of plastic materials and poor biomass, in order to develop solutions that effectively integrate energy recovery. The “Plastic to Plastic” and “Biomass to Biofuel” projects should be mentioned in this respect.

The first aims to investigate technologies that can be used in the conversion of polyolefin mixtures into chemical precursors for use in the production of new plastics or other chemical compounds other than fuels.

The second instead aims to evaluate the use of residual biomasses to produce pyrolysate oil for use in biofuel refining processes, for hard-to-abate sectors, and biochar, which can be used in agriculture for soil enrichment and CO2 sequestration.

In 2022, in response to the challenging goal declared by A2A in its Business Plan of zeroing its emissions by 2040, the Group launched a series of research projects focused on the identification and development of technologies for the capture, storage and utilization of the carbon dioxide emitted by its plants, in order to achieve the challenging goals of reducing climate-changing emissions. The various projects currently underway include:

- definition of the technology “road map” in order to identify, select and develop all major emerging technologies in the field of Carbon Capture, Utilization and Sequestration (CCUS);
- “Hercules - Calcium Looping” project: financed by the European Union under the Horizon fund to build an experimental carbon dioxide capture plant based on Calcium Looping technology at the Milan waste-to-energy plant;
- “Potassium Carbonate” project: in collaboration with industrial and university partners, the activity involves a test campaign for the use of potassium carbonate adsorption technology in the CO2 capture process from waste-to-energy furnaces;
- development of a test plant for CO2 absorbent solutions: in collaboration with Acínque and the Milan Polytechnic Institute, the project aims to set up an experimental plant to test different absorbent solutions and identify substances to capture carbon dioxide from combustion flues, ensuring high capture efficiency and low energy consumption. The activities will be conducted at the waste-to-energy plant in Como.
9.3 Digitalization

The 2020-2030 Business Plan includes the Digital Transformation Plan and the Digital Sustainability Plan. The Digital Transformation Plan is the key enabler for achieving the Strategic Plan and represents a transformative element not only in technology but also in processes, culture and skills.

Digital sustainability for the A2A Group takes the form of behaviours and actions aimed at minimizing the negative environmental impact associated with the use of digital tools, renewing existing corporate assets and stimulating conscious and virtuous behaviour in the corporate population.

With a view to digital innovation, by exploiting the potential of Open Innovation, A2A will engage in the creation of an open, widespread and interconnected ecosystem of innovation on the themes of digital sustainability, which can be achieved by selecting and initiating collaborations with partners and specialized research institutes.

The main milestones of the Group’s digitalization process are translated into 12 measurable initiatives that have produced the following results:

- 30 tonnes of CO2 saved in 2022 (compared to 123 tonnes in 2021)
- 216 tonnes of paper saved
- 56,700 km saved
- 236 MWh of consumption saved

The relevance of the development and use of digital tools in environmental matters led to the decision to launch "On2Green", a programme created with the aim of improving the impact of digital technology on the environment and supporting sustainable development, even with small everyday gestures.

The On2Green programme focuses on three main areas of intervention:

- "Green IT": techniques for the design, implementation, use and disposal of computers, servers and related systems with reduced environmental impacts;
- "Digital Carbon Footprint": conscious use of electronic devices with the aim of reducing CO₂ emissions;
- "Work Automation Tool": digital tools for simplifying employees’ work activities.

Measurable sustainability KPIs have been identified for each of the programme’s initiatives, which will be used as indicators for verifying the achievement of environmental impact reduction targets.

Synergies with other corporate initiatives

From the synergy between On2Green and the "Good4All" project, the latter aimed at investigating new workflows and processes with a view to work-life balance, the guidelines for sustainable collaboration in a Life Company were developed. They consist of a set of best practices to promote the development of a corporate culture aimed at improving the use of digital tools in a sustainable manner.

One of the projects started during this period is Customer Lifetime Value (CLV), which has a dual purpose: on the one hand, it allows us to define a five-year prospective value metric for each customer who has had at least one contract with A2A, and on the other to understand the potential profitability of new customers or those currently in the customer base.

The use of Advanced Analytics systems has found application both within the Group’s Corporate Department and in the various Business Units. In the Corporate Department, these tools were aimed at creating a tool for detecting anomalies in payments. This procedure proved to be fundamental in allowing a large amount of data to be collected and processed, so as to automatically calculate control indicators on Group audits.

Group Data Office

A2A wants to be a data-driven Group, and works every day to achieve its goal by using data as a strategic resource for digital transformation.

With the launch of an ambitious Data Strategy programme within the group, the massive use of data for decision-making through Advanced Analytics algorithms and Data Governance programmes is becoming more widespread. During the year, numerous Advanced Analytics use cases were developed for different corporate businesses.

In particular, the activities were aimed, from a strategic perspective, at accompanying the user in the on-boarding phase through a series of dedicated Customer Journeys aimed at reducing the phenomenon of "early churn", which is the tendency of consumers to abandon the site in a short time.

A new "Digital Inclusion" initiative was also undertaken, with the aim of equipping all Group employees with a company smartphone to access company services.

Lastly, one of the most important projects is the Cloud Strategy, a study to define the plan for the implementation, adoption and migration to cloud computing solutions to achieve resilience, flexibility and energy efficiency goals.

The projects conducted in such a training context resulted in the following economic benefits:

- an improvement in EBITDA of 500 thousand euro and avoided costs of 600 thousand euro in 2022;
- an improvement in EBITDA of approximately 2.2 million euro and avoided costs of 4 million euro annually as of 2019.

PerformA2A is an upskilling and coaching programme aimed at optimizing the work performance of employees through the introduction of "lean" and "agile" principles. In particular, the initiative aims to foster a culture of operational excellence through involvement in the following training modules: "Vision & KPI", Visual Management, Performance meeting; Planning and Levelling; Problem Solving, Standard & Process Confirmation, Coaching and Routines; Celebrate Success.

As with the Lean Six Sigma programme, PerformA2A also supports the achievement of business plan targets, enabling employees to improve their business performance by monitoring them daily through specific KPIs and triggering problem solving actions in the event of failure to meet targets.

From a strictly quantitative point of view, the problem solving initiatives carried out during the initiatives allowed to reduce the costs incurred by around 300 thousand euro per year with the involvement of 260 employees.
9.5 Brand Reputation

In 2022 the Group continued to develop A2A brand awareness and recognizability through the "one brand" strategy, launched with the repositioning to Life Company, in which the A2A Life Company motherbrand guides the communication of all the A2A Group companies in the matrix and becomes an important endorsement in all the other companies.

The strategy is aimed at transferring the Group’s strength and enhancing its activities in its business areas (energy, water, environment), working synergistically on equity, awareness, trust, familiarity and reputation.

The work is divided into three main points:
- consistent and coordinated communication activities across all properties, online and offline;
- content strategy and tone of voice shared by the whole Group;
- unique and identity-based visual language through the definition of shared cross-channel and cross-target formats and guidelines.

The various communication projects carried out during the year, aimed at enhancing A2A’s commitment to sustainability and raising awareness of environmental issues, contributed to the development of Brand Awareness. The projects were developed in a synergistic manner, integrating various activities on several channels, including: advertising campaigns, organization and participation in trade fairs and events, media relations, regional affairs and stakeholder engagement activities.

Thanks to this strategy, brand awareness at national level was 52.5% in December 2022, up 6.4% compared to 2021 and an impressive 14.5 points compared to 2020.
Relational Capital
According to the International Energy Agency (IEA), the persistent energy instability throughout 2022 has led to rising fuel prices, contributing to inflationary pressures that significantly impact households and businesses. In order to cope with this complex economic situation, the European institutions have launched several measures to protect their consumers. As a last measure, the EU Council announced in December 2022 that a market correction mechanism would be established starting in February 2023 to protect both citizens and the economy from excessive prices. The regulation aims to limit episodes of excessive gas prices as much as possible in the European Union, as they do not reflect world market prices, thereby ensuring the security of energy supply and stability of financial markets.

Bearing this complex context in mind, in 2022 the A2A Group also sought to support its customers by offering not only different solutions according to the type of customer and the service rendered, but also by making an active effort to raise awareness of the founding themes of its Strategic Plan, the circular economy and energy transition. This was achieved through both awareness-raising campaigns aimed at reducing the economic and environmental impact of its consumption and through the provision of new products and services, also made available through strategic partnerships with major market players.
Responsibility and Quality in the Provision of Services

The Group constantly strives to provide quality, safe and reliable services, acting flexibly and promptly in responding to customers’ expectations and adopting fair, transparent and inclusive communication practices. Acknowledging the crucial role and value that customers have for its business, A2A pays close attention to meeting their needs and provides them with the opportunity to report through a special channel. Lastly, again with the aim of guaranteeing continuity of service to its customers, the Group implements actions and systems to manage risks (including those arising from cyber attacks that could jeopardise data protection) and possible emergencies.

Risk factors
Possible interruptions to public services.
Cyber risk or inadequacy of IT and OT (Operational Technology) systems and possible ineffectiveness of customer data protection systems.
Any injuries or accidents (e.g., road accidents) during the performance of services in the area [collection and urban hygiene, network maintenance, etc.].
Third-party security issues for plants and infrastructures (e.g., dams, plants subject to the Seveso Directive, unauthorized access, fire, etc.).
Possible reduction in customer satisfaction levels (individuals and Public Administration).
Possible inadvertent adoption of unfair business practices.
Any critical issues in online reviews concerning the Group, particularly for companies selling energy products and services.
Issues of adequacy, compliance and updating computer applications.
Business Continuity Topics.

Opportunity factors
Brand promotion.
High level of appreciation of the territory for services with high quality standards.
Development of products and services with high added value (e.g., post-meter and e-mobility services).
Relations with Customers of the Market BU

Consistent with its positioning as a Life Company, A2A is committed to ensuring the highest standards of quality in the sale of its products and services and in customer service, with which it aims to establish a relationship constantly based on transparency and reliability.

Within the Group, the Market Business Unit manages and develops sales and after-sales activities relating to the supply of electricity and gas, products and solutions for energy efficiency and e-mobility, with the aim of providing effective, innovative and sustainable solutions. The Market Business Unit operates throughout Italy and consists of the companies A2A Energia, A2A Energy Solutions and Yada Energia and their subsidiaries and investees. The following chapter also includes the performance of the Group’s retail companies Gelsia, Lumenergia and ASM Energia.

Electricity and Gas Sales Service

In 2022, the Group’s sales companies sold a total of 2,328 million cubic meters of gas and 20,292 GWh of electricity. The number of total deliveries increased 8% for electricity and 3% for gas. As of December 31, 2022, 1,214,884 electricity deliveries and 945,596 gas contracts were active in the deregulated market. There was a slight increase in the share of electricity sold outside Lombardy, to 41%, while the share of gas grew by 7 percentage points from 26% in 2021 to 33%.

Electricity

- Domestic: 73.6%
- SME: 13.7%
- Key accounts: 1.9%
- Public lighting: 2.4%
- Condominiums: 8.7%

Gas

- Domestic: 92.5%
- SME: 4.8%
- Key accounts: 0.8%
- Condominiums: 1.6%
- Other: 1.0%

Figure 54 Number of customers, analyzed by type

In line with the Group’s strategy aimed at a continuous path of development and growth at national level in the sale of electricity and gas, A2A Energia has achieved several important milestones, including the award, for the four-year period from April 1, 2023 to March 31, 2027, of four lots through the auction procedures for the Gradual Protection Service for the delivery of electricity to micro-businesses. The contract covers some 500,000 delivery points, with a total volume of almost 1 TWh/year. This result is in addition to the allocation, again by the Single Buyer, of four lots (corresponding to 11 regions) for the Safeguard Service for the years 2023 and 2024, for a total volume of more than 2 TWh/year. In addition, several lots related to CONSIP tenders have been definitively awarded to A2A Energia for electricity, four lots were awarded for a total volume of more than 2 TWh/year, while for natural gas, one lot was awarded for a total volume of about 40 million cubic metres.

The process of renewing and promoting digital channels continued in 2022; in fact, the A2A Energia website was renewed and the MyA2A App was launched, dedicated to all A2A Energia customers. It has been designed to improve and simplify the customer experience, increase customer satisfaction and increase brand appeal. The MyA2A App allows deregulated-market customers to quickly and easily pay their bills, check the progress of their expenses, view their payment history and status, review their consumption overview, keep track of all requests and their status, communicate self-readings, activate direct debits to their current account, or change their meter power.
Responsibility in Customer Service

Green Energy Offers and VAS for Customers

In line with the objectives of the Strategic Plan related to the energy transition, A2A values customers who are committed to reducing their impact on the planet by choosing an increasingly sustainable style of energy consumption. Therefore, the Group’s sales companies have activated numerous offers and services to promote the use of green energy and support the energy efficiency of end customers.

Customers who have signed a contract for the supply of electricity produced from renewable sources of certified origin with one of the Group’s commercial companies may request authorization to use the “100% GREEN A2A” brand.

Green Energy Offers and VAS for Customers

- Green energy to promote the use of green energy and support the energy transition, A2A values customers who are committed to reducing their impact on the planet by choosing an increasingly sustainable style of energy consumption.

- Customers can request authorization to use the “100% GREEN A2A” brand.

- The entire portfolio of offers for the residential segment has consisted of 100% certified green energy since 2018.

- In 2022, the companies of the Market Business Unit sold 6,899 GWh of green energy to their customers, an increase over 2021 of +40%.

- The total number of green energy delivery points in the mass market segment as of 2022, 83% are domestic customers and the remaining 17% business customers.

- In 2022, the sales companies have activated numerous offers and services to support the energy transition.

- The Group has financed two carbon offsetting projects. The first in the district of Nyagatare, Rwanda, for the rehabilitation of a number of drinking water wells, which not only reduces CO2 emissions but also concretely improves the lives of the inhabitants of the area. The second is a sustainable agriculture project in Ukraine, which completely eliminates polluting emissions and increases crop productivity without the use of chemical fertilizers.

With a view to increasing its customers’ awareness of reducing the economic and environmental impact of their consumption, A2A Energia has launched the “Consuming less energy is worthwhile” initiative aimed at encouraging customers to reduce their consumption on fixed-price electricity supplies. Starting from their own habits, for customers who reduced their consumption in the period from September to December 2022 compared to the same period of the previous year, the companies have made a supply bonus available that can be used from the first useful bill issued after June 2023.

Furthermore, in order to encourage its customers to participate in the energy transition process, the Solare a2a offer has been available to residential customers since June, which includes the installation of a photovoltaic system on the roofs of their homes, allowing them to produce clean energy independently, reducing costs and emissions. Customers - as with Clima2a, Caldaia2a and Wallbox A2A - can benefit from an “all-inclusive” service that supports them from the quotation, through installation to final connection, including the handling of all administrative paperwork. An innovation project in partnership with Beem Energy, a company specializing in “do-it-yourself” photovoltaics that can be installed independently on surfaces such as walls or floors, also began in July 2022.

Lastly, as a result of the energy crisis and the consequent rise in electricity and gas prices, in recent months A2A Energia has provided a discount on the MIA2A variable-price green offer reserved for Group employees, who can also benefit from a 10% discount on the list price of home energy efficiency solutions.

A2A Energia is committed to achieving the objectives of its Sustainability Plan, and has contributed to the reduction of paper materials to be printed, “saving” about 237 trees in 2022 thanks to the digitalization of processes. This result was also achieved through the implementation of automated customer journeys inviting customers to join the bollett@mail service.

Contact Channels and Customer Satisfaction

Sales and service channels are two key elements for guaranteeing quality service to customers. This must be done by effectively integrating physical-territorial channels with digital ones, aiming at the synergistic management of touchpoints and interaction channels between A2A Energia and its customers, with the objective of optimizing their contact experience.

A2A Energia offers a complete listening service through physical branches, Spazioa2a stores, call centers, social channels, WhatsApp and a call-back service available on the website. In 2022, the A2A Energia call center received more than 2 million calls, while the commercial desks welcomed and served nearly 178,350 visitors with an average wait time of about 12:30 minutes. In addition, the retail companies Delta and Lumenenergy served 49,308 and 5,955 customers, respectively, through their territorial branches.

Compensation offers for purchased gas

From 2021, both A2A Energia and Yada have made it possible for their customers to offset the emissions generated by the gas used in their supply. This has been made possible by “carbon offsetting” initiatives. In concrete terms, it means that carbon credits generated by energy efficiency projects that have a positive impact on the environment are purchased and compensated. Every time a “carbon offset” occurs, one tonne of CO2 is released into the atmosphere is compensated, i.e., an equivalent amount of emissions is saved somewhere in the world relative to the gas sold. To date, the Group has financed two carbon offsetting projects. The first in the district of Nyagatare, Rwanda, for the rehabilitation of a number of drinking water wells, which not only reduces CO2 emissions but also concretely improves the lives of the inhabitants of the area. The second is a sustainable agriculture project in Ukraine, which completely eliminates polluting emissions and increases crop productivity without the use of chemical fertilizers.

Thanks to these projects in 2022, the quantities offset by Yada amounted to 24 million cubic meters.
With the aim of informing consumers of the changes taking place in the energy markets and promoting the subscription of free market offers, the expansion of A2A Energia’s physical points throughout the country continued in 2022 with the activation of new touch points in the provinces of Taranto, Parma, Perugia and Termini. In addition, agreements have been signed with third-party partners to propose A2A Energia offers in their multi-brand sales outlets and through their staff, allowing a significant expansion of the shop-in-shop network throughout Italy (Lazio, Liguria, Friuli and Piedmont, as well as in Lombardy).

The agreement with UTF was also renewed in 2022, thanks to which it is possible to subscribe to A2A’s electricity and gas offers (domestic and business) at their 71 desks.

**Customer Satisfaction**

The A2A Group sales companies constantly monitor customer satisfaction in order to acquire awareness of the perception of the service provided and to identify intervention areas with a view to continuous improvement through the many channels of contact.

In particular, in 2022 A2A took part in the 14th edition of the Cerved survey “Monitor energia gas”, and carried out a satisfaction analysis of free market customers and users who used the call center.

In Cerved’s Customer Satisfaction Index survey, A2A Energia was on the podium for three out of four targets: domestic gas, business gas and business electricity. In particular, it maintained its first position on the target gas business.

In the satisfaction survey of free market customers, A2A Energia obtained an overall score of 76.6, growing further compared to the score of 2021 (+1.2).

In addition, satisfaction with the call center stands at 93%, higher than the national average. Finally, the “after call” survey confirms the excellent reputation of the call center represented below. Details of the satisfaction survey results can be found in the Supplement on page 62.

**Consumer Protection**

The Market Business Unit is always attentive to the less well-off and to social and humanitarian emergencies.

Following the outbreak of the conflict in Ukraine and the ensuing humanitarian emergency, the Group chose to make its contribution by supporting customers of Ukrainian nationality through an in-bill bonus. The bonus was aimed at supporting Ukrainian customers of A2A Energia residing in Italy who are hosting or were about to host compatriots fleeing war territories.

Thanks to this initiative, A2A received the special “Friend of the Consumer 2022” award from Codicoms, an acknowledgement that the association bestows every year on companies, entities and personalities who have distinguished themselves for their commitment to protecting rights and the community.

The retail companies of the Market Business Unit regularly apply the measures defined by ARERA (Regulatory Authority for Energy Networks and the Environment), the social bonus for economic hardship and the electricity bonus for physical discomfort. The first is a measure aimed at supporting consumers’ electricity and gas supply expenditures based on specific parameters such as ISEE or family size. In 2022, the sales companies of the A2A Group awarded the gas bonus to 153,078 customers and the electricity bonus to 12,404 customers.

The electricity bonus for physical discomfort is instead focused on supporting expenditure on the supply of electricity for households with a member in a condition of physical discomfort. For 2022, the bonus was awarded to 1,951 customers of A2A Energia and 34 customers of Lumenergia.

Lastly, A2A is committed to ensuring customers a service based on maximum transparency and fairness and over time, also thanks to the collaboration with the Consumer Associations, which have allowed it to define already in the last few years specific tools by which to simplify the information provided to customers and regulate conduct clearly: from service activation through to joint settlement, to the stipulation of the institute agreement of the Observatory on unfair commercial practices, to the activation of the anti-fraud toll-free phone number and the Self-regulation protocol. Sales and service staff in direct contact with customers are trained on an ongoing basis with respect to these measures.

Under the scope of consumer protection, the toll-free “anti-fraud” number received 4,346 calls. Of these, 1,652 are related to unfair business practices by other operators and 2,693 by “unidentified” companies.

Confirming its attention to consumer protection, A2A Energia keeps its customers’ consent constantly updated in 2022 around 56% gave consent for marketing activities for its own products and services, while 38% gave consent for profiling for marketing purposes.

**Energy Efficiency**

A2A Energy Solutions (AES) is the Group company that offers energy efficiency solutions for industrial customers, condominiums and service sector companies with the aim of developing a better environment, using innovative high-efficiency technologies and renewable sources; to meet customers’ needs and ensure their competitiveness and satisfaction at all times.

An important part of the activities is still represented by the incentive systems: the presence of a large number of Energy Management Experts (EGE), certified according to the UNI CEI 11539 standard, allows us to actively manage more than 300 applications for obtaining Energy Efficiency Certificates, which are funded by requests and negotiations for owned plants for Guarantees of Origin and interventions incentivized through Conto Termico. Last but not least is the management of tax credits deriving from the 110% Superbonus, where A2A Energy Solutions also plays the role of General Contractor.

Moreover, the same EGEs present in A2A Energy Solutions are responsible for coordinating and managing Energy Diagnoses pursuant to Italian Ministerial Decree 102/14, the obligation of which is due every four years, using the experience gained from years of work on both in-house companies and external customers.

With regard to apartment buildings, AES has signed 32 new contracts for integrated energy requalification during 2022, allowing a reduction of CO2 emissions into the atmosphere estimated at 2,200 tons. These interventions have mainly involved the installation of photovoltaic systems on apartment blocks and companies in the tertiary sector, as well as integrated building upgrades on apartment blocks of different sizes.

Great attention is being paid in the residential and tertiary sector to issues of electrification of consumption, adopting heat pump or hybrid technologies to replace traditional fossil fuel technologies.
In 2022, X3Energy and Hitachi Rail entered into an agreement to produce biomethane at a farm near Reggio Calabria, with a capacity of around 500,000 cubic meters per year. The project is scheduled to be completed in the first quarter of 2024 and will be located near the Hitachi Rail site in Reggio Calabria. The biomethane produced will be used to fuel Hitachi Rail’s locomotives, which will help to reduce the company’s carbon footprint and lower costs.

The project is expected to generate a significant reduction in CO2 emissions for the community, and it will also provide economic benefits for both the companies involved. The biomethane will be produced using a waste-to-energy process, which will help to reduce the amount of waste sent to landfills.

Hitachi Rail and A2A have previously worked together on several projects, including the construction of a new photovoltaic plant in Reggio Calabria, which has a capacity of 10 MW. The plant was commissioned in 2021 and is expected to generate around 12 million kWh of electricity per year, which will be used to power Hitachi Rail’s operations in the region.

In addition, A2A has announced plans to construct a new photovoltaic plant in Reggio Calabria, which will have a capacity of 20 MW. The plant is expected to be commissioned in 2024 and will generate around 35 million kWh of electricity per year, which will be used to power Hitachi Rail’s operations in the region.

Electric Mobility

In 2022, A2A Energia continued its focus on the electrification of mobility through a series of solutions proposed to its customers, including the new “all inclusive” WALLBOX A2A service, which includes the supply and installation of a charging device for the electric car at home, as well as the A2A Easy Charging offer which, with a single fixed monthly contribution, allows customers to have 100% green energy at the cost price for home supply and recharge their electric car up to 150 kWh per month, depending on the package chosen. Lastly, electric bikes and electric scooters, both ideal solutions for those who want to get around in a practical and sustainable way, are available on all channels.

In addition, a number of strategic partnerships have been signed to spread the service, such as that signed in September 2022 with Autostrada. The partnership envisages providing vehicle charging solutions, both at home and on the road, that use energy from renewable sources certified by a guarantee of origin.

An example of an action to support the circular economy was the inauguration in Via Angeretti in Milan of the first H24 self-service methane plant for motor vehicles covered by a guarantee to feed the same amount of biomethane into the grid. This was possible thanks to the agreement between X3Energy and A2A Energia.
The A2A Group - through the companies A2A Calore e Servizi and Linea Green - decided to freeze district heating prices, in line with previous years, the companies guaranteed the continuity of the service in 2022 as well, managing all the programmed and accidental interruptions within the timing envisaged by sector regulations and promptly arranging replacement services in all cases in which the interruption lasted more than 48 hours.

Quality of Services Provided and Attention to Customers

The A2A Group provides various communication channels and disseminates a variety of informative materials to citizens who use the integrated water service.

The emergency telephone service for reporting inefficiencies, irregularities or interruptions in supply is free of charge from fixed and mobile networks and active 24 hours a day, every day of the year. The service provides, if necessary, instructions on the conduct to be adopted immediately to protect their own and others’ safety, pending the arrival of the emergency team. In 2022, the A2A Ciclo Idrico call center processed 116,630 calls, maintaining excellent service quality levels with an average wait time of 163 seconds (168 in 2021).

Also for 2022, A2A Ciclo Idrico and ASVT users were able to benefit from the free Bollett@mail service. The percentage of bills sent digitally has reached around 24% of the total, also allowing a significant reduction in paper consumption. In terms of contracts, just under 60,000 users use the service out of a total of about 224,000.

In the course of 2022, feasibility and subsequent technical analysis activities were completed in order to continue the digitalization of the contract activation process [introduction of One Time Password (OTP) signatures] and activating the “virtual” desk service.

With the latter service, it will be possible to talk to users via videoconferencing while being able to exchange documents and sign them using OTP.

Both of these functionalities will be activated by February 2023, also allowing desk colleagues to work remotely.

Since November 2022, the new IVR (Interactive Voice Response) has also been active, aimed at greater use of the website and customer area. The main new features introduced include reduction of the average wait time through revised messaging; promotion of the Customer Area and other services available on digital channels; user recognition by entering the user code.

Lastly, a pilot project was launched on 3,500 A2A Ciclo Idrico domestic users in December 2022 called “A2A Ricorda”, through which an SMS or e-mail is sent to users to remind them of a bill that is due (two days before expiry) or has expired (four days later).

Quality of Services Provided and Attention to Customers

The Group companies that manage the district heating service operate in accordance with the standards indicated by the Regulatory Authority for Energy, Networks and Environment (ARERA) in Resolution 661/2018 on the regulation of commercial quality.

The A2A Group - through the companies A2A Calore e Servizi and Linea Green - decided to freeze district heating prices, keeping them "frozen" until September 30, 2022 in the face of the conflict in Ukraina, which triggered vertiginous rises in energy prices. This allowed customers connected to district heating networks to keep their prices indexed on January 1, 2022, thus avoiding further price increases.

The initiatives that envisaged installment plans with maximum flexibility for bills were also confirmed, according to the specific needs of customers, without interest and with the suspension of all supply disconnection actions.

Also in 2022, work was carried out to strengthen digital channels & self-care operations through the introduction of the on-time password (OTP) signature for A2A Calore e Servizi customers, who can now activate their contract in a few clicks from mobile and without any paper consumption. This paperless process of activating the new supply contract leads to a reduction in CO2 consumption of 122kg/year.

In addition, the bollett@mail and direct debit services were promoted through dedicated campaigns with the support of Customer Care and thanks to the cooperation of all customer contact touch points. This promotional activity has allowed sending nearly 88,000 bills in digital format, about 30% of all bills issued in the year, resulting in improved service for customers and a positive environmental impact from reduced paper consumption for printing bills.
Initiatives for Promoting Separate Waste Collection
During 2022, AMSA renewed the agreements with partners in the large-scale retail sector for the collection of used vegetable oil from households and small WEEE (Waste Electrical and Electronic Equipment).

APRICA introduced the new service in 2022 for the collection of used vegetable oils, promoted together with the Municipality of Bergamo and in collaboration with some private companies of the large-scale retail trade, with the aim of improving the quality of separate waste collection while approaching user needs.

Both companies have promoted proper waste collection at multi-ethnic restaurants with the Un Sacco Etnico project, engaging around 200 businesses in Milan, nine in Bergamo and 12 in Brescia. During the meetings, information was provided on proper waste separation and on the innovations introduced by the European Single Use Plastics Directive.

Finally, AMSA renewed its support for the “NoPlà” and “NoPlà Agian, reuse is win-win” projects, initiatives whose main aim is to reduce plastic, with a particular focus on combating the use of single-use plastic and on reuse as a virtuous practice.

Quality of Services Provided and Attention to Customers
In order to implement the new ARERA regulation, in synergy with the served municipalities, AMSA and Aprica drew up the Quality Charter. The Charter complies with the provisions of the Consolidated Act for the Regulation of the Quality of Waste Management Services (TQR), describes the tasks and responsibilities of the manager of collection and transport services and street sweeping and washing, and those of the TARI manager. AMSA has drawn up 18 Quality Charters, while APRICA has produced 100 Quality Charters, 40 of which have been published on the website. In July 2022, a meeting was organised with consumer associations to explain the changes introduced by ARERA, which involved all companies in the collection chain.

On the other hand, the work of updating the PULIamo website and app remained constant, while new municipalities and services have been added and a great deal of attention has been paid to an analysis of the current digital communication strategy, structuring various editorial plans for social media through the publication of informative posts. The main objective is to reach and raise awareness of new targets active on social media.

In order to better focus the engagement activity towards young people, AMSA organized a focus group with representatives of Generation Z, which then continued with an activity to involve the main universities in Milan.

As part of continuous digitalization, AMSA and APRICA have carried out a number of initiatives, including the partnership with Junker, thanks to which the innovative method of scanning the barcode of packaging has been implemented in this App, aimed at identifying the most appropriate separate waste collection method. In addition, APRICA provides the citizens of Bergamo and Brescia with an online appointment booking service to access the desks and a Bolltettimap service. This feature allows receiving the TARI payment notice and bill online directly via email, at the customer’s convenience, thus reducing paper waste and ensuring delivery, also avoiding unpleasant surprises and unexpected payments.

In line with previous years, a customer satisfaction survey was carried out by the companies to analyse the satisfaction level of the users served.

AMSA carried out specific surveys with 500 business users in Milan, with reference to the customized services provided, and with 2,236 citizens of the neighboring municipalities served, except Milan. The survey was conducted using CATI methodology. The results of the Reasoned Global Satisfaction that emerged are:

- Commercial operators - AMSA customers: 81% and Municipalities served by AMSA: 79%.

APRICA carried out customer satisfaction for the city of Bergamo. The survey was sent to both households and commercial users. The surveys were carried out using CATI methodology and involved a sample of 1,000 households and 300 commercial users.

As far as households are concerned, the results of the analysis show that the citizens of the municipality of Bergamo are satisfied with the service provided by Aprica, the overall CSI Index being 78.3 (on a scale from 1 to 100). For commercial users, the overall CSI index is 73.1.

With regard to the customer center service, despite the high number of contacts (over 580,000 considering the AMSA and APRICA perimeter), performance levels remained very high.

Unareti developed the virtual assistant “Uno”, accessible from the website and via SMS, Telegram or WhatsApp.

Uno is available to customers 24 hours a day, seven days a week to help them find a wide range of information on electricity and natural gas distribution services:

- access to supplies
- costs and estimates for new connections and other work
- management of readings and self-readings
- status of the electricity grid and information on planned outages and faults.

In 2022, the waste disposal service carried out by the companies A2A Ambiente and A2A Recycling, served 1,420 municipalities and 8,790 thousand companies, for a total of over 3,899 thousand tonnes of waste disposed of.

Figure 62. Total number of users of the municipal sanitation services (thousands)
In addition, with the aim of increasingly improving customer relations, AMSA and APRICA have promoted the use of digital channels, such as the Puliamo App and the websites, which include a structured form for sending information requests and reports.

**Figure 63 Quality indicators of the call center**

<table>
<thead>
<tr>
<th>Amsa</th>
<th>Aprica</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service accessibility (free lines with respect to operator presence time)</td>
<td>100%</td>
</tr>
<tr>
<td>Average response speed (seconds)</td>
<td>22</td>
</tr>
<tr>
<td>Percentage of successful calls</td>
<td>99%</td>
</tr>
</tbody>
</table>

**Fairness and Transparency in Customer Relations**

In 2022, the Group companies did not receive any sanctions for situations of non-conformity with laws or regulations relating to the supply and related services, for marketing, sponsorship and communication activities.

In 2017 A2A Energia appealed to the Regional Administrative Court of Lazio against the fine imposed in October 2017 by the Antitrust Authority, for A2A Energia’s failure to promptly adjust the channel for paying bills online by credit card in accordance with the Consumer Code of June 2014.

During 2017 a company within the AEB perimeter appealed to the Regional Administrative Court of Lazio against a penalty imposed on it by the Antitrust Authority for alleged unfair commercial practice. The Court dismissed the appeal at the end of 2022. The company had already paid the penalty in 2017.
2022 has accentuated the sense of distrust citizens and communities have towards classical social institutions. In a year when the world was hoping to emerge from the pandemic crisis, the energy and economic crises have reopened the chasm of distrust and anxiety about the near future of the planet.

As revealed in the latest Edelman Trust Barometer report, business is the only institution considered competent and ethical; therefore, today, even more so, businesses are called upon to play an active role within the communities in which they operate. More specifically, companies are asked to provide solutions to climate change, invest in fair pay, training and local communities to address the class divide and polarisation cycle that will characterise 2023. In general, there are three issues that Italians expect CEOs to work on in order to revive optimism in the market: fairer salaries (77%), investment in employee training (73%), and ensuring well-being and security for the community (70%). For six out of ten Italians (61%), companies must also use the iconic power of brands to create a shared identity, emphasising aspects that unite and strengthen the social fabric.

In order to achieve these objectives, relations with agencies and institutions, universities, research centres and think tanks have proven to be increasingly relevant both at national and European level, in order to initiate strategic collaborations for sharing expertise. Moreover, it should not be forgotten that the community also bears the fundamental responsibility for the training and education of its citizens, especially through the world of education, which contributes significantly to the conscious growth of future generations.

Furthermore, companies will increasingly have an essential role to play in the information ecosystem in order to be a source of reliable information. Due to the importance of relations with the community, the Group’s ESGT Committee has executive responsibility for managing these relations (for more information, please refer to the Governance section on page 24).

EARTHOVERSHOOTDAY1: One day earlier than last year, and a full five months earlier than December 30, 1970

Countries are recording record losses in the number of people who think their families will be better off in five years.

Of respondents ask CEOs to ensure that the community where they live is safe and prosperous

agreement reached on a fund to compensate for loss and damage caused by climate change in vulnerable countries

28 July

Cop27

24 out of 28

SDGs impacted

Material topic

Strategic Plan @2030

KPIs @2022

Impacts for A2A

Listening and Involvement of communities

- 7.8K Plant tours

- 78.7K People involved in environmental education

- 1.5 million euro In sponsorships disbursed

- 4.3 million euro Contributions to theatres and foundations

- 1 million euro In donations made

90% Sponsorships with initiatives to raise awareness of SDGs issues


Listening and Involvement of communities

The Group creates value in the territory, sharing the environmental and social benefits of its projects, thus redistributing the economic value created through its activities and investments to its stakeholders. In addition, A2A is constantly committed to listening to the needs and expectations of its stakeholders through an active and transparent dialogue with them, with the aim of ensuring cohesion with the reference communities and investigating any critical issues that could generate dissatisfaction, conflicts or opposition. To this end, A2A implements a series of actions/initiatives aimed at resolving any issues and mitigating the impacts that the Group generates (or could generate) on its stakeholders. Lastly, the Group is committed to raising the awareness of its communities on energy/environmental issues, promoting information and education initiatives for the younger generations.

#stakeholder engagement #environmental education #dialogue #Communities #Institutions

Environmental sensitivity of stakeholders against Group development projects ("Nimby" Syndrome)
Lack of consideration of social and environmental expectations of stakeholders
Any delays in the realisation of investments in community infrastructure (e.g., investments for the Integrated Water Service)

Risk factors

Opportunity factors

Brand promotion
Territory’s appreciation of companies that provide products and services with high quality standards
Initiatives to enhance the architectural and landscape heritage

Possible ineffectiveness of sustainability communication in alignment with positioning as a Life Company

Risk factors

Opportunity factors

Changing consumer behaviour when buying goods and services

Management Approach (MA)

Mitigate

- Comprehensive and transparent information on the impact of the business on the territory
- Territory specific communication and listening plans
- Stakeholder engagement initiatives
- Continuous dialogue with national and supranational institutions
- Collaboration in defining development scenarios for regulated sectors

Seize

What we have done

- Inauguration of Representation Offices in Brussels
- Advocacy actions on the territories
- Collaborations with universities and research centers
- Banco dell’Energia Onlus
- Dialogue with institutions and technical bodies in the sector

What we are doing

Sustainability Plan Actions

Transparency and stakeholder engagement

Vulnerable groups

2022 Actions

What we have done

- Plant tours
- Azzurra

What we are doing

Sustainability Plan Actions

Education

2022 Actions

What we are doing
Collaborations with Universities, Research Centers and Think-Tanks

For years, A2A has been committed to maintaining and developing collaborations with the academic world of universities and research centers, consolidating existing relationships and seeking out new entities with which to establish cooperative relations, as well as with think tanks, authoritative study centers and independent foundations. The main stakeholders in this category are: Aspen Institute Italia, Associazione Civita, Astrid, Centro Studi Americani, Fondazione Nuovi Millefili, Iesi (Institute for International Policy Studies), The European House - Ambrosetti and Bruegel. Collaborations with these players allow the development of initiatives to support the Group’s positioning vis-à-vis key opinion leaders and institutional interlocutors, providing expertise and opening new scenarios or supporting the organization in designing events dedicated to topics of interest. The purpose of the activity is to contribute to a better representation of the company’s objectives, results and positions, affirming A2A's thought leadership, especially on the issues of energy transition and the circular economy.

Among other initiatives, in 2022 A2A contributed with ISP to the discussion on ecological transition issues, participating in the Dossier “The Role of Energy Production Through the Waste-to-Energy Cycle” on the subject of energy transition and the circular economy in Europe, with a focus on the role of the WTE, as well as a geo-economics briefing session dedicated to companies “The Economic Drivers Behind Smart Mobility”, with a testimony by the Group CEO, on topics such as mobility, innovation and sustainability.

In addition, in-house sessions were organized in 2022 with experts, researchers and analysts from think-tanks on specific topics for the benefit of management, helping to improve knowledge of operating mechanisms, emerging trends and dynamics not only in the market, but also in the geopolitical sphere.

As part of its partnerships with universities and research institutions, A2A and the Milan Polytechnic Institute have signed a five-year agreement worth a total of 8 million euros for the development of research, innovation and training initiatives in the Energy & Utility sector. This partnership will allow the two entities to consolidate their collaboration and jointly develop innovative solutions to support the country’s ecological transition. In particular, through the establishment of a Joint Research Center, multidisciplinary experimentation projects will be implemented on specific topics such as sustainable mobility, the development of renewable energy and hydrogen, battery recycling, and the study of new technologies for waste treatment and material and energy recovery. In parallel, the partnership will create a Joint Research and Innovation Center within the innovation district project, which will be entirely dedicated to innovation in the thematic macro-areas: “Technologies for the Environment and Energy” and “Technologies for Sustainable Mobility”, also touching on the topics of energy transition and the circular economy.

Lastly, in 2022 A2A participated in 46 events focusing on the university population nationwide, meeting more than 2,300 male and female students. In addition, more than 20 testimonials and seminars were held at first- and second-level Master’s degree programmes of leading universities and training institutions, giving the opportunity to get to know each other through project work and company internships.

Collaboration with The European House - Ambrosetti

Within the current global economic and geopolitical context that has forced reflection on the issues of energy independence and the need to accelerate the path of decarbonization and transition, A2A has collaborated with The European House - Ambrosetti, in the drafting of two position papers. The first, entitled “Towards Italian energy autonomy: water, wind, sun, waste our raw materials. The fundamental contribution of the regions to the achievement of our goals” showed that by harnessing their own raw materials (water, wind, sun and waste) and acting on electrification of consumption and efficiency, Italy can achieve 58.4% energy autonomy, almost tripling current levels.

The second, with a focus on the Center-South of the country “Towards Italian energy autonomy: the role of the Center-South”, which shows that considerable growth in installed power can be achieved by harnessing renewable energy sources, with the Center-South accounting for 90% of additional wind power (105.1 GW total at Italian level); 95% of wind power development opportunities (211 GW total at national level); 23% of additional hydroelectric power (3.3 GW total at national level); 63% of the total opportunities in Italy for energy recovery from waste and 37% for biometabolic production.
The A2A Group operates in sectors in which regulation and control by independent administrative Authorities plays a fundamental role in promoting competition and protecting consumers and users, while respecting the economic-financial balance of companies.

The Group adopts a risk management and management policy which limits its industrial strategies to the opportunities and constraints of the national and Community framework on public services and competition. The monitoring and regular dialogue with institutions such as the Regulatory Authority for Energy, Networks and the Environment (ARERA), the Italian Communications Authority (AGCOM), the Transport Regulatory Authority (ART), the Antitrust Authority (AGCM) and technical bodies in the sector, as well as active participation in trade associations. The issues of euro-unitary derivation are also monitored through participation in the meetings of the relevant Community Associations (including Eunetel and Cedec).

The emphasis on these policy actions and the holistic approach of the Green Deal, also taking into account the new package of legislative proposals known as Fit for 55, have been fully shared by the Group, also through the organization of specific moments across the various Departments (Regulatory Breakfarts).

In particular, in the many occasions for dialogue with stakeholders, the most interesting issues have been addressed, including:

• management of the Italian and European emergency market measures for the energy crisis (e.g., tax on extra profits, solidarity contributions, market mechanisms for filling gas storages and measures to contain natural gas consumption, including maximizing the use of fuels other than natural gas for thermoelectric use) and the revision of the electricity market design for a more efficient integration of renewable production and to enable greater affordability for consumers;

• the regulatory impacts resulting from the adoption of Italian Legislative Decrees 199/2021 and 210/2021, respectively, the REDII and Electricity Market Directives on, among other things, the promotion of renewable sources and individual and extended self-consumption configurations;

• the evolution of regulation regarding the development of a mechanism to support the development of electrical storage capacity;

• evolution of the permitting of renewable sources in light of the innovations introduced by numerous decrees issued to cope with soaring energy costs, as well as the possible development of the regulations concerning the definition of eligible areas, contained in Italian Legislative Decree 199/2021;

• the resolution of the difficulties affecting the White Certificates mechanism and the implementation of the new mechanism for allocating incentives through auctions;

• the definition of the new incentive mechanism for biomethane production (coordinated with NRP Rr resource) and the extension of the previous incentive mechanism to the end of 2023;

• need for interventions that ensure greater awareness of end customers to accompany them in an informed transition to the free market;

• regulatory and tariff mechanisms to support investments in upgrading and the digitalization of distribution networks;

• impacts for the development of electric mobility, contributing to the consultation on the allocation of NRRP funds for fast and ultra-fast charging, the modification of the regulatory framework and the preparation of calls for tenders for the installation of charging stations in motorway rest areas;

• participation in NRP calls dedicated to the development of efficient district heating;

• monitoring how important NRRP resources are delivered and their relationship and interaction with the solutions put forward in the sector;

• participation in innovative projects (e.g., Terra's pilot project on plant modifications for the provision of voltage regulation for plants connected to the National Transmission Grid and not already obliged to provide this service);

• the changes introduced to the regulations to protect competition, aimed at profoundly impacting the sectors in which the Group operates.

On the “frontier” issues, A2A has been involved in the association’s technical working groups and in dialogues with the institutions on emerging issues such as the development of the national hydrogen supply chain, in particular with reference to the NRRP calls for tenders, tariff concessions for grid withdrawals with the obligation to connect third parties for electrolysers and the development of an incentive system for green hydrogen in application of the regulatory provisions of Italian Legislative Decree 199/2021.

In 2022, the Group began discussions with the Lombardy Region concerning the transparency obligations related to the transfer prices of the waste cycle closure plants, classified as “additional” pursuant to Council Regulation 377/2012 of December 21, 2021. As far as the municipal sanitation operating companies are concerned, the process of updating the Service Quality Charter was started, which involved - on the one hand - the municipalities as territorially competent bodies and - on the other - consumer associations. The Group’s commitment in this sector also took the form of the contributions offered, individually or within the association, to define the standard service contract outline between the entrusting body and the Manager placed for consultation by ARERA.

The same approach of attention to environmental aspects and opportunities for infrastructural adaptation has also permeated the engagement activities in the water service. In particular, the Group has opened to the possibility of interacting with Invitalia, the entity delegated to provide support to the Area Government Bodies and the Regions for the strategic management of the water service in those territories where the governance process is still being defined, in order to make its industrial capabilities available, as well as its long-term experience.

The Group undertook to help disseminate the regulatory culture internally and externally, as a driver for innovation and service transparency. Monitoring and control tools (such as the Regulatory Reporting prepared every six months to the Regulatory Agenda drawn up when the Budget and Business Plan are presented) have been implemented internally and are constantly updated in order to consider the potential impact of regulation on Group companies and to ensure constant dialogue with the Business Units.

A2A has also supported the same ARERA in its initiative seeking to introduce metrics in its 2022-2025 Strategic Framework for assessing the environmental sustainability of regulatory measures and their contribution to achieving the objectives of the SDGs 2030 Agenda set by the UN.

A2A and Relations with Environmental Associations, Territorial Committees and Consumer Associations

Each year, the Group develops and consolidates relations with environmental associations, consumer associations and citizens' movements and committees seeking to protect the environment, climate, biodiversity and natural heritage, at national and territorial level.

Considering the open dialogue with the environmental world, in 2022 A2A also extended the scope of the debates to include youth movements such as Fridays For Future and Youth4Planet, as well as strengthening its collaboration with historical Italian and international environmental associations such as Friends of the Earth, Legambiente and the Foundation for Sustainable Development.

Constant dialogue with citizens and civil society, organized in its Associations, Committees and Think Tanks, is a strategic element for the Group, as it enables it to identify and understand the main needs and expectations of its stakeholders, to direct investments in the best way possible, and to build consensus and alliances in the territories and with the communities of reference, in order to make an effective contribution to the country’s ecological transition.

Advocacy in the Territories

The Group’s advocacy activities in 2022 covered all the territories under development through structured discussions, engagement initiatives, events and meetings with associations and committees in order to contribute to building a solid reputation characterised by a relationship of trust with the main national associations and their local branches.

In particular, A2A has increasingly invested in relations with the territories of Lazio, Umbria, Piedmont and Calabria in order to initiate dialogue with local communities and promote the values of the Life Company even outside the company’s historical perimeter. In fact, the activities in these areas aim to reduce information asymmetries and promote a greater degree of citizen awareness in relation to the Group’s activities.

A2A’s commitment to Sicily’s ecological transition also continued in 2022 through its collaboration with the regional Legambiente. In this context, the Group participates in actions to raise awareness among Sicilian citizens on the issues of innovation in waste treatment and the need for investments in energy production from renewable sources. This year A2A was a partner in the Regional Energy Forum dedicated to the circular economy, and the Quale Energia Forum dedicated to the themes of energy efficiency and renewable energy communities.

In the historical territories of Lombardy, on the other hand, the Group has consolidated its relations with the main associations, setting up various initiatives for dialogue with local stakeholders aimed at sharing specific projects and launching three Advisory Boards on the subject of sustainable consumption in the cities of Milan, Brescia and Bergamo.

With reference to relations with consumer associations, during 2022 the Environmental Service Charts defined pursuant to TQRIF - ARERA DECISION 15/2/2021 - were shared before final approval by the Consumer Protection Entities.

For the benefit of these Associations, information and training meetings were also organized on specific topics relating to A2A Ciclo Idrico’s Investment Plan, electric mobility, and the initiatives of the Group’s sales companies towards electricity, gas and district heating consumers.

ADR - Out-of-Court Dispute Resolution

In 2022, the activity commenced with the establishment of the negotiation protocol signed between A2A and the Lombardy Region concerning the transparency obligations related to the transfer prices of the waste cycle closure plants, classified as “additional” pursuant to Council Regulation 377/2012 of December 21, 2021. As far as the municipal sanitation operating companies are concerned, the process of updating the Service Quality Charter was started, which involved - on the one hand - the municipalities as territorially competent bodies and - on the other - consumer associations. The Group’s commitment in this sector also took the form of the contributions offered, individually or within the association, to define the standard service contract outline between the entrusting body and the Manager placed for consultation by ARERA.

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During the year, the conciliation secretariat of the A2A – Consumers Association ADR Body received 43 requests on behalf of gas, electricity and water customers, of which 50 concerned A2A Energia, 10 A2A Ciclo Idrico, 1 Unareti, 1 A2A Calore e Servizi and 1 Azienda Servizi Valtrompia linked mainly to the metering of consumption and billing.

As in previous years, in compliance with the provisions contained in the Integrated Conciliation Act (TICO), training courses for conciliators in the energy, district heating and water sectors were organized through a platform managed by Consumers’ Forum.

As far as the ARERA Conciliation Service managed by the Single Buyer is concerned, 311 requests were received compared to 165 in 2021 concerning A2A Energia, 25 A2A Ciclo Idrico and 11 concerning Unareti.

In addition, the legislation also provides for the distributor to be called into conciliation when the discussion concerns technical data and if it is necessary and indispensable for the proper and effective handling of the dispute.

In these cases, the Authority has established that the convened distributor has an obligation to participate in the procedure. As the distribution service operator, Unareti received 116 mandatory communications as a technical aid.

### Responsible Investments in the Community

The Group is constantly striving to efficiently support the territories in which it operates through a variety of sponsorship activities and other forms of investments, such as contributions to foundations, which carried out various projects during the year.

The Foundations of the A2A Group act with a focus on the social dimension, promoting cultural initiatives for the overall growth of communities, supporting scientific research and sustainable development. Thus the preservation of historical memory and striving towards the future come together in a coherent and far-reaching project towards the Group’s territories. As of 2022, all the Foundations are registered in RUNTS - the Single National Registry of the Third Sector.

#### AEM Foundation

AEM Foundation has been preserving and enhancing AEM’s historical memory and corporate culture since 2007.

**Areas of activity:**
- Environmental education
- Protection and enhancement of AEM's historical heritage
- Research, specialized training and charitable giving, particularly in the areas of Milan and Valtellina.

**Initiative: AEMuseum**

2022 saw the opening of the AEMuseum, the corporate museum dedicated to the immense heritage of the AEM Foundation and conceived as an immersive space in which the past comes to life thanks to the use of photographic and film material, industrial artefacts and works from the painting collection with an intermingling of digital and analogue, in a journey of discovery of AEM’s History from the origins of public lighting to its transformation into a Life Company.

#### ASM Foundation

ASM Foundation is a philanthropic organization that has been supporting cultural and social projects in the Brescia and Bergamo areas since 1999.

**Initiative: Social cooperation and A2A**

In 2022 the ASM Foundation promoted research aimed at measuring and quantifying the value created through their work and in their specific relationship with A2A Spa and Group companies. The results of the research allowed for a fruitful discussion between the cooperative world and A2A.

#### LGH Foundation

LGH Foundation was established in 2021 to support development opportunities related to bioenergy, the circular economy, renewable energy and smart land technologies. The Foundation operates in southern Lombardy, with a focus on the research and development of innovative solutions applied to the agri-food chain.

**Initiative: research projects**

The Foundation works in line with the UN Sustainable Development Goals and has joined the Banco dell’Energia (Energy Bank). The first four scientific projects supported in 2022 were: biomass from unseeded, food agro- technology hub, dairy chain and the olive milling project.

Developments in relations with theatre foundations: culture and social solidarity

In 2022, A2A innovated its historical support to local theatre foundations (La Scala Theatre in Milan, Teatro Grande in Brescia, Donizetti Theatre in Bergamo and Centro Teatrale Bresciano) by stipulating new agreements on a multi-year basis to develop the relationship in a more strategic key, also open to the joint planning of initiatives based on common objectives and values and which envisage the devolution of part or all of the proceeds from ticket sales to the Banco dell’Energia Foundation. A2A also started a new partnership with the Ponchielli Theatre.

More specifically, four events in December 2022 put the new lines of action in partnership with the Theatre Foundations into practice: the charity evening concert on December 19 at the Donizetti Theatre, the two season-opening concerts in February and the Christmas concert at Teatro Grande in Brescia, charity evenings in favour of the Banco dell’Energia, and the Christmas lighting of the facade of the Ponchielli Theatre in Censora.

The strategic relationship with theatres also brings employees and citizens closer to culture through promotions (discounts, free events, etc.) and the digital sharing of special content.

In parity with the past, the contributions made for the communities are aimed at enhancing the territory through support for socio-institutional, sports, cultural and environmental activities, in line with A2A Life Company’s purpose. The Group’s total investments for the community amounted to approximately 7.0 million euro. More specifically, sponsorships in social and institutional, environmental, cultural and sports activities in 2022 amounted to more than 15.6 million euro. In addition, the Group disbursed more than 4 million euro to theatres and foundations and almost 1 million euro in the form of donations.

Below is a breakdown of the total amount of sponsorships granted in 2022 by type.

#### Figure 64 Sponsorships by area of activity

- **Cultural initiatives:** 21.1%
- **Spares initiatives:** 33.6%
- **Environmental initiatives:** 35%
- **Social and institutional initiatives:** 41.8%

One of the main socio-institutional activities of national interest that the A2A Group has decided to join is the partnership with Jova Beach Party and participation in the ANCI Annual Assembly. Both initiatives were aimed at engaging and raising awareness on the topics of sustainability, energy saving and ecological transition. In support of the younger generations, the two conferences of the National Association of Young Innovators were supported and the Feltrinelli Foundation’s “School of European Citizenship” project was concluded. At territorial level, in line...
with the Group’s focus on Diversity & Inclusion issues, “Milano Prid”, “Basket for kids” and “Camp Now Festival. From me to us” were all sponsored. Several other initiatives were also supported in the territories of Bergamo, Brescia, Cremona, Pavia, Calabria and Valtellina.

In the sports sphere, cooperation continued with Pallacanestro A2A in Brescia, where the LBA Super Coppa was also played, with New Basket Brindisi, Atletico Pallavolo Brescia, Stamiano, and mountaineer Marco Confortola, while the collaboration with Pallacanestro Olimpo Milano and Junior Rugby Brescia came to an end. The Group also supported other sports initiatives and various sports seasons organized in Biella-Vercelli, Pavia, Bergamo, Brescia, Cremona, Friuli-Montefeltro, Valtellina and the Milanese Hinterland.

In the cultural sphere, the following were supported: the theatre seasons at Teatro Grande, the “Milano Arte Musica” concert season, and the exhibition “Capolavoro per Milano – La predella della Pala Oddi di Raffaello”. Support for the Alagna per la Cultura project and the Brescia and Bergamo Piano Festival continued, and the collaboration with the Veneranda Fabbrica del Duomo’s “Adopt a Statue” project came to an end. Other cultural initiatives concerned the territories of Brescia, Cremona, Verona, Lodigiani-Mantua and Valtellina.

In the environmental field, various national initiatives were supported: “Ripristinaefficienza campaighn”, “Zero Waste Campaign”, “Water Festival”. Legambiente initiatives were sponsored in Lombardy and Sicily, with the focus on waste management.

A2A wanted to give Azzurra a stage to speak from, and had such an opportunity thanks to its participation in all the stages of the Jowa Beach Party 2022, Jovenniti’s musical party to spread the message that respecting energy, water and the environment #GIOVAATUTTI.

But that’s not all, a real travelling social hub was also set up to produce not only content and cartoons but also live videos of the events, direct interviews with young people and guests who wanted to share their views on environmental issues.

Azzurra and her advice are published on A2A’s social platforms and at www.giovavattuti.it

The High School of Ecological and Digital Transition (TRED) ELIS

This is an experimental school involving 24 institutes from all over Italy, and is promoted by the ELIS Consortium for higher vocational training, with the support of A2A and other Italian companies. TRED offers a study course with innovative didactics and content, combining the study of STEM disciplines (Science, Technology, Engineering and Mathematics) with a quality education in the humanities. A2A helped to define the study course, offering its willingness to develop the new programmes and the “field” verification of theoretical learning. Specifically, in the first four-month term of the first school year, it offered its educational contribution on the topic of WATER, exploring climate change, the integrated water cycle, water as a resource to be preserved and sustainable development as themes. There are 23 schools participating in the project, with a total of 915 students.

Thanks to the collaboration with the Feltrinelli Foundation, A2A has developed an online educational offer aimed at first and second-level secondary schools: a workshop dedicated to calculating digital ecological footprint, and two master-classes with the participation of its own experts on the topics of the circular economy and energy transition. For teachers throughout Italy, a training course of ten webinars with experts, researchers and lecturers from authoritative institutions and universities was created in cooperation with Deascuola.

The Group’s collaboration with Inter cultura also continued, allowing 26 scholarships to be awarded to deserving youth from secondary schools, giving them the opportunity to experience an educational summer trip to Ireland dedicated to STE(A)M subjects. A total of 125 students in the territories served by the Group’s companies registered for this school year’s call for applications.

Guided visits to the Group’s plants have always been a flagship of A2A’s educational proposal thanks to the added value that this type of experience brings to teaching environmental issues. After a pause due to the Covid-19 emergency, some 40 Group plants were reopened to schools with the start of the 2022-23 school year.

Thanks to the School Project, as many as 7701 students visited the Group’s facilities and 78,685 students were involved in environmental education activities in 2022.

Gaming activities and educational trials for school children continued in 2022 as well. Among them, Ecogame A2A is a challenge between classes from all over Italy that allows children to compare and challenge themselves by acquiring cross-cutting as well as technical skills, moving around a map structured in different environments: home, school, the park, a supermarket, a recycling area. Sustainability Olympiad is the A2A project dedicated to fourth-year secondary school students throughout Italy. It focuses on sustainability issues in order to stimulate reflection on the main points of the 2030 Agenda, in collaboration with ELIS. The enrolled classes had the opportunity to explore topics such as the circular economy, energy transition, diversity & inclusion, innovation and digital through digital tools close to the Gen Z target audience, such as podcasts and video clips. The classes that made the three best short videos on their idea of sustainability were awarded three days of Creatathon, a digital creative marathon on sustainable development.

In order to raise awareness among more and more Gen Z youth, the project was enhanced in cooperation with Scuola Zero with a campaign dedicated to the same issues through the formats most used by youth: podcasts, podcasts, TikTok and videos, via various channels (Spotify, Instagram, TikTok, Youtube).

Azzurra, the comic that gives a voice to Gen Z

The new generations are the promoters of a new environmental sensitivity, and A2A wanted to give them a voice through Azzurra, a lively girl eager to safeguard the planet with many ideas on how to adopt a sustainable lifestyle, and who wants to represent a generation that is attentive to environmental issues.

The brainchild of A2A was created by the Fonti Attendibili editorial team: Azzurra is the protagonist of a series of vignettes promoting virtuous and concrete behaviours that can be implemented by anyone in their daily lives to optimize consumption, providing advice on how to make better use of energy and water, benefiting the environment.

Education and Training

Sustainability, respect for the planet’s resources, proper waste management and environmental protection are essential prerequisites to ensure a sustainable present and future for new generations. For this reason 2022 A2A collaborated with the world of schools, developing constant dialogue with communities and territories through the A2A Per le Scuole portal, an open channel full of resources which is constantly being updated and which offers numerous initiatives free of charge in order to raise environmental awareness. The portal is for teachers and students of all levels and grades, from pre-school to university. The new value of things so that it can return to nature without damaging the environment; how after being used it is "cleaned" reaches the tap at home, and how after being used it is "cleaned" reaches the tap at home, and how after being used it is "cleaned" returns to nature without damaging the environment. "The new value of things" which is the theme of correct waste management is explored by investigating the different types of waste and making children aware of the importance of separate waste collection as a necessary gesture to activate materials recycling with a view to the circular economy, and lastly, “A world of energy” which provides knowledge of the world of energy in its different aspects: the different forms and sources of renewable and non-renewable energy, energy efficiency and energy saving, energy production from waste, district heating, all while focusing on the environment and sustainability.
External Communication

The year 2022 saw a major redesign of the Group’s digital ecosystem with the aim of adopting a customer-centric approach in order to simplify and clarify citizens’ and customers’ interactions with the Group’s digital properties. With this in mind, the Group’s new website (www.gruppoa2a.it) was designed according to international accessibility criteria. 2022 also saw the publication of two more sites with an ‘edutainment’ slant: virtualtour, which was created with the aim of narrating the Group’s infrastructures in a more popular logic and designed especially for the world of schools, and www.giovaatutti.it, which gave voice to “Azzurra”, the character who, through her advice on energy, water and the environment, was the protagonist of the Group’s communication activities representing the change required by the new generations. In particular, the site accompanied the story of the entire “Jova Beach Party” event sponsored by the A2A Group in the summer of 2022, thanks to a real editorial team and cartoonists who involved the public by accompanying the story of the entire “Jova Beach Party” event. The year 2022 also saw the publication of two more sites with an ‘edutainment’ slant: virtualtour, which was created with the aim of narrating the Group’s infrastructures in a more popular logic and designed especially for the world of schools, and www.giovaatutti.it, which gave voice to “Azzurra”, the character who, through her advice on energy, water and the environment, was the protagonist of the Group’s communication activities representing the change required by the new generations. In particular, the site accompanied the story of the entire “Jova Beach Party” event sponsored by the A2A Group in the summer of 2022, thanks to a real editorial team and cartoonists who involved the public by accompanying the story of the entire “Jova Beach Party” event.

During 2022, Press Office activities produced over 430 communications to the media, up about 8% on the previous year. The year also included more than 250 opportunities to meet with journalists, amongst interviews and one-to-one dialogues, press conferences and press visits.

In terms of reputational impact, ESG content produced by Press Office, Web and Social activities accounted for 72% of the total ESG reputational impact for the year 2022; in particular, content related to Environmental Sustainability is responsible for 96% of the total ESG reputational impact.

Banco dell’Energia

In 2022, following the reform of the third sector and the entry into force of RUNTS (Single National Registry of the Third Sector), Banco dell’Energia was transformed from a non-profit committee to a Foundation Philanthropic Body.

After the presentation of December 14, 2021, 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 2022 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.

The first pilot started in Milan Quarto Oggiaro in September 2021 and ended in autumn 2022 supported, through the logistics centres of Cartas Ambrosana and Società San Vincenzo del Paol, over 105 families who benefited from economic aid for the payment of their electricity and/or gas bills issued by any energy operator and from training meetings aimed at raising awareness on energy saving, optimizing consumption and reducing expenses related to electricity and gas utilities.

From the positive experience in Milan, Banco dell’Energia launched “Energy in the Suburbs - Rome Torpignattara”, a project financed by Acea that replicated what had already been carried out in Milan Quarto Oggiaro in the Roman neighbourhood. The project is helping around 40 families, intercepted by the Caa Famiglia Lodovico Pavoni and accompanied on an educational path with the support of Federconsumatori Lazio.

The third project, “Energy in the suburbs - Reggio Calabria”, was presented in November 2022. It was financed by Edison and implemented locally thanks to a partnership between Banco Alimentare, local associations and Adiconsum Calabria. The initiative is helping around 100 households with both direct financial support for utility payments and supporting them on a path to energy awareness.

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 “Condottiere Solidali” to support the Social Housing structures dedicated to the elderly and refugees in the Community of Sant’Egidio in Rome.

To date, the Banco dell’Energia Foundation has collected and donated more than 6.5 million euro and helped more than 11,000 families. Its development plan envisages increasing the economic resources deployed over the next three years, an ambitious and concrete goal to reduce energy poverty, in which everyone’s contribution will be crucial.
10.3 Relations with Suppliers

The new European legislation as an impetus towards a more sustainable supply chain.

Responsible procurement involves directing expenditure towards sustainable supplies in sustainable ways and from sustainable suppliers. This means a company must ask itself three questions to understand whether it is really integrating sustainability into its procurement process: what is being purchased? And thus consider the technical specifications and attributes of supplies throughout the life cycle (e.g., recyclability with minimal emissions impacts, proven health and safety qualities during production, use and disposal without negative impacts on communities); how is it being purchased? (Incorporating ESG issues into procurement processes and activities); who is it being purchased from? (By carrying out an analysis of suppliers’ performance and maturity on ESG criteria).

On February 23, 2022, the European Commission adopted a proposal for a directive on companies’ due diligence for sustainability, which aims to promote sustainable and responsible behaviour by companies throughout their value chain. Businesses play a key role in building sustainable economies and societies and will have to identify and, if necessary, avoid, stop or mitigate the negative effects of their activities on human rights (e.g., child labour and exploitation of workers) and the environment (e.g., pollution and loss of biodiversity). In detail, the Directive aims to:

- avoid fragmentation of due diligence obligations in the single market and create a legal basis on expected business conduct and responsibilities;
- integrate risk management and mitigation of impacts on human rights and the environment more closely into corporate strategies;
- increase corporate responsibility for the negative impacts created.

Today, 33% of the companies analysed by a study of the World Benchmarking Alliance manages the issue of human rights in the supply chain through tools such as codes of conduct and contractual agreements, but only 11% say they work together with their suppliers on these aspects and only 2% say they conduct assessments and disclosures on the number of people affected by the risk of human rights violations within the supply chain and report on progress.1


3 https://www.eticanews.it/human-rights-poca-attenzione-sul-campo/
Responsible Supply Chain Management

The Group promotes responsible management throughout the supply chain, encouraging sustainable practices among suppliers and ensuring that they respect the principles of fairness, legality and transparency.

To this end, A2A adopts policies for qualifying and selecting suppliers, collaborators and business partners that envisage the integration of social and environmental sustainability criteria, stimulating the improvement of reliability and safety in the provision of services supplied and contributing to improving the Group’s environmental and social performance throughout the supply chain.

#Sustainable procurement #Human rights #Supply chain awareness

Risk factors

Possible image impacts of unethical conduct in the supply chain.
Contractors’ possible non-compliance with environmental legislation.
Possible insufficient availability of contractors/materials for certain services/products.
Risks to the health and safety of workers of third-party companies.

Opportunity factors

Supplier qualification and selection process that integrates social and environmental responsibility aspects.

Management Approach (MA)

Supplier qualification process using reputation analysis tools.
Progressive adoption of an ESG rating for suppliers.
Presence of an organizational structure Procurement excellence and governance, which has the task, among other activities, of overseeing compliance with regulations on Privacy, Italian Law 262 and HSE.
Monitoring of tender process management through specific KPIs.
Optimization of supply batches and inventory management activities in order to avoid risks of unavailability.
Procedures for environmental and safety management in contracted activities.
Programmes to improve the multi-annual procurement planning process.

What we have done

2022 Actions

- Analysis of suppliers’ ESG performance
- Green Procurement training course
- New clauses in RDOs
- Inspection visits to sites

What we are doing

Sustainability Plan Actions

Responsible procurement

2022 Actions

- Analysis of suppliers’ ESG performance
- Green Procurement training course
- New clauses in RDOs
- Inspection visits to sites
Introduction

11,830 orders were issued in 2022 for supplies, services and works by Group companies, with a total value of 2,916,882,435 euro. Approximately 97.8% of order value came from transactions with Italian suppliers and 61% of orders was awarded by tenders.

Figure 65 Order value by Business Unit

Figure 66 Geographic breakdown of orders (percentage of the total)

<table>
<thead>
<tr>
<th>Region</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lombardy</td>
<td>30.7%</td>
<td>34.0%</td>
<td>27.3%</td>
</tr>
<tr>
<td>Other Italian Regions</td>
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<td>3.6%</td>
<td>1.6%</td>
</tr>
<tr>
<td>EU</td>
<td>61.3%</td>
<td>61.3%</td>
<td>61.3%</td>
</tr>
<tr>
<td>Non EU</td>
<td>6.8%</td>
<td>2.1%</td>
<td>0.6%</td>
</tr>
</tbody>
</table>

* The % refers exclusively to orders of the A2A Group net of extra-perimeter companies

Responsible Supply Chain Management

In line with the Group’s Strategic Plan, A2A has decided to aim for increasingly sustainable management of the supply chain, which translates into the adoption of policies for the selection of suppliers, collaborators and business partners, the use of fair and transparent processes that include the integration of sustainability criteria, and the promotion of social and environmental responsibility practices among suppliers, which stimulate the improvement of ESG performance throughout the supply chain.

In fact, the Strategic Plan updated in November 2022 confirms the commitment to achieve an incidence of sustainability criteria in the vendor rating process of more than 30% by 2030, with 90% awarded to suppliers with ESG scoring.

In 2021 A2A started a project with "EcoVadis" - a leading company in corporate sustainability assessments - to assess the ESG performance of its suppliers and promote their improvement.

The first step of the project verified the level of sustainability in A2A’s procurement processes through a self-assessment, called the “sustainable procurement maturity matrix”. Thanks to the development of such a matrix, qualitative data were collected and analyzed on the elements most useful for building a sustainable procurement programme.

Next, the companies collaborating with the Group were analyzed. The assessment methodology is based on four pillars: environment, labour practices and human rights, ethics and responsible purchasing. For each parameter, EcoVadis gives a score that contributes to the final evaluation.

In 2021, about 100 suppliers were evaluated, with a 50% coverage of all orders. By the end of 2022, the annual target of 60% coverage was reached and exceeded, involving some 500 suppliers. The medium-term objectives aim at continuous improvement of the scores obtained in the evaluation, the implementation of sustainability assessments in procurement processes, the development of clear post-assessment rules and capacity building through ad hoc training courses on sustainable procurement.

To further concretize the Group’s commitment to the target, a new clause was formulated in all RDOs in 2022 requiring the supplier to adhere to the sustainability programmes, i.e., to share its ESG rating with the Group or to commit to obtaining it within a defined timeframe.

Lastly, a training course on Green Procurement practices was organized, which was attended by numerous colleagues from different corporate functions, with the dual purpose of raising awareness on sustainable practices and promoting capacity building initiatives.

Figure 67 Qualified A2A Group suppliers by certification held (number)

<table>
<thead>
<tr>
<th>Certification</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suppliers qualified for ISO9001 certification</td>
<td>2,239</td>
<td>2,110</td>
<td>2,354</td>
</tr>
<tr>
<td>Suppliers qualified for ISO14001 certification</td>
<td>731</td>
<td>816</td>
<td>907</td>
</tr>
<tr>
<td>Suppliers qualified for ISO 45001 certification</td>
<td>640</td>
<td>670</td>
<td>784</td>
</tr>
<tr>
<td>Suppliers qualified for SA8000 certification</td>
<td>192</td>
<td>177</td>
<td>207</td>
</tr>
<tr>
<td>Total suppliers with at least one certification</td>
<td>3,018</td>
<td>3,451</td>
<td>3,863</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Of which activated with order</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,113</td>
<td>1,239</td>
<td>1,523</td>
<td></td>
</tr>
</tbody>
</table>

* The % refers exclusively to orders of the A2A Group net of extra-perimeter companies
In 2022, 3,863 suppliers had at least one quality, environment and safety certification, 1,523 of which were activated with at least one order. The value of orders issued by the A2A Group to suppliers with at least one certification amounts to approximately 86.2% of the total value.

Fuel Suppliers
In 2022, the value of orders for the purchase of fuels used both for the Group’s power stations and conveyed to end customers amounted to 9,478.8 million euro. Of this amount, 94.70% was allocated to the purchase of natural gas, 12% to the purchase of coal, and diesel and heavy fuel oil accounted for the remaining 4.1%.

In spite of the great efforts undertaken by the Group to implement the decarbonization plan, which made it possible to reduce coal purchases to zero in 2021, the energy crisis of 2022 caused mainly by the outbreak of war in Ukraine made it necessary, due to a question of national energy security, to return to purchasing minimal quantities of coal.

The value of orders issued by the A2A Group to suppliers with at least one order.

Emissions Scope 3: 1,376,946 t CO₂eq emitted for the purchase of fuels.

10.3 Site Management
The Group is committed to ensuring workplace safety throughout its supply chain, including through specific inspection visits to construction sites aimed at certifying both compliance with current standards and safety certification. The controls carried out during the inspection are reported and tracked by means of special checklists in which any anomalies are formalized and classified as “Blocking”, “Serious” or “Significant” according to their severity. The results of the inspection are commented on and discussed with site staff. If blocking or serious anomalies are found, the project manager and customer are informed in good time so that the necessary corrective actions can be taken together with the contractors involved.

In 2022, 15.20% of inspections detected at least one anomaly. There were 298 blocking anomalies and none of them related to the category “environmental site aspects”. The other types of anomalies identified in relation to this category mainly concerned the cleanliness of the site areas; the proper handling of waste and scrap materials; and the presence of environmental emergency kits.

All anomalies detected were duly reported to the relevant staff.

Figure 68 Value of orders issued by fuel type (% of total)

Figure 69 Site inspections - summary

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of inspections carried out</th>
<th>No. of checks performed</th>
<th>Companies concerned</th>
<th>Areas concerned</th>
<th>Corrective actions planned</th>
<th>Results expected</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020</td>
<td>3,981</td>
<td>118,450</td>
<td>Unirel, A2A Ciclo Idrico, A2A Calore &amp; Servizi</td>
<td>Province: Milan, Bergamo and Brescia</td>
<td>Constant information on the results of inspections to all parties concerned</td>
<td>Minimise anomalies with a consequent improvement to safety, reduction in environmental impacts, improvement in quality of works and guarantees of complete compliance with current standards.</td>
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<tr>
<td>2021</td>
<td>5,522</td>
<td>179,017</td>
<td>Unirel, A2A Ciclo Idrico, A2A Calore &amp; Servizi</td>
<td>Province: Milan, Bergamo and Brescia</td>
<td>Constant information on the results of inspections to all parties concerned</td>
<td>Minimise anomalies with a consequent improvement to safety, reduction in environmental impacts, improvement in quality of works and guarantees of complete compliance with current standards.</td>
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<tr>
<td>2022</td>
<td>6,784</td>
<td>205,267</td>
<td>Unirel, A2A Ciclo Idrico, A2A Calore &amp; Servizi</td>
<td>Province: Milan, Bergamo and Brescia</td>
<td>Constant information on the results of inspections to all parties concerned</td>
<td>Minimise anomalies with a consequent improvement to safety, reduction in environmental impacts, improvement in quality of works and guarantees of complete compliance with current standards.</td>
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Results expected:
- Minimise anomalies with a consequent improvement to safety, reduction in environmental impacts, improvement in quality of works and guarantees of complete compliance with current standards.
- Minimise anomalies with a consequent improvement to safety, reduction in environmental impacts, improvement in quality of works and guarantees of complete compliance with current standards.
- Minimise anomalies with a consequent improvement to safety, reduction in environmental impacts, improvement in quality of works and guarantees of complete compliance with current standards.

* The systematic and tracked reporting activity was introduced in May 2017.

Specifically, during the year the Group inspected 140 contractors and an equal number of subcontractors (414 compared to last year) for a total of 6,764 inspections. The number of inspections is higher than the total number of contractors and subcontractors, as a construction site may be subject to multiple inspection visits in order to ensure sound, constant supervision. The audited sites are selected according to a logi/sequence that ensures an exhaustive number of checks and includes sites of both large and small value.

* The grand total is to be understood as the value of the orders issued by the A2A Group net of the extra-perimeter companies.
Independent auditors’ report on the consolidated disclosure of non-financial information in accordance with Article 3, paragraph 10, of Legislative Decree 254/2016 and with Article 5 of CONSOB Regulation adopted with Resolution n. 20267 of January 18, 2018 (Translation from the original Italian text)

To the Board of Directors of A2A S.p.A.

We have been appointed to perform a limited assurance engagement pursuant to Article 3, paragraph 10, of Legislative Decree 30 December 2016, n. 254 (hereinafter “Decree”) and article 5 of CONSOB Regulation adopted with Resolution 20267/2018, on the consolidated disclosure of non-financial information of A2A S.p.A. and its subsidiaries (hereinafter “A2A Group” or “Group”) for the year ended on 31st December 2022 in accordance with article 4 of the Decree and approved by the Board of Directors on 16th March 2023 (hereinafter “DNF”).

Our limited assurance engagement does not cover the information included in the paragraphs “European taxonomy” and “EU Taxonomy” of the DNF, that are required by art. 8 of the European Regulation 2020/852.

Responsibilities of Directors and Board of Statutory Auditors for the DNF

The Directors are responsible for the preparation of the DNF in accordance with the requirements of articles 3 and 4 of the Decree and the “Global Reporting Initiative Sustainability Reporting Standards” defined by GRI – Global Reporting Initiative (hereinafter “GRI Standards”), identified by them as a reporting standard.

The Directors are also responsible, within the terms provided by law, for that part of internal control that they consider necessary in order to allow the preparation of the DNF that is free from material misstatements caused by fraud or not intentional behaviors or events.

The Directors are also responsible for identifying the contents of the DNF within the matters mentioned in article 3, par. 1, of the Decree, considering the business and the characteristics of the Group and to the extent deemed necessary to ensure the understanding of the Group’s business, its performance, its results and its impact.

The Directors are also responsible for defining the Group’s management and organization business model, as well as with reference to the matters identified and reported in the DNF, for the policies applied by the Group and for identifying and managing the risks generated or incurred by the Group.

The Board of Statutory Auditors is responsible, within the terms provided by law, for overseeing the compliance with the requirements of the Decree.
Auditors’ independence and quality control

We are independent in accordance with the ethics and independence principles of the International Code of Ethics for Professional Accountants (Including International Independence Standards) (IEBA Code) issued by International Ethics Standards Board for Accountants, based on fundamental principles of integrity, objectivity, professional competence and diligence, confidentiality and professional behavior. Our audit firm applies the International Standard on Quality Control 1 (ISQC 1) and, as a result, maintains a quality control system that includes documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable laws and regulations.

Auditors’ responsibility

It is our responsibility to express, on the basis of the procedures performed, a conclusion about the compliance of the DNF with the requirements of the Decree and of the GRI Standards. Our work has been performed in accordance with the principle of “International Standard on Assurance Engagements ISAE 3000 (Revised) - Assurance Engagements Other than Audits or Reviews of Historical Financial Information” (hereinafter “ISAE 3000 Revised”), issued by the International Auditing and Assurance Standards Board (IAASB) for limited assurance engagements. This principle requires the planning and execution of work in order to obtain a limited assurance that the DNF is free from material misstatements. Therefore, the extent of work performed in our examination was lower than that required for a full examination according to the ISAE 3000 Revised (“reasonable assurance engagement”) and, hence, it does not provide assurance that we have become aware of all significant matters and events that would be identified during a reasonable assurance engagement.

The procedures performed on the DNF were based on our professional judgment and included inquiries, primarily with company’s personnel responsible for the preparation of the information included in the DNF, documents analysis, recalculations and other procedures in order to obtain evidences considered appropriate.

In particular, we have performed the following procedures:

1. analysis of the relevant matters in relation to the activities and characteristics of the Group reported in the DNF, in order to assess the reasonableness of the selection process applied in accordance with the provisions of article 3 of the Decree and considering the reporting standard applied;
2. analysis and evaluation of the criteria for identifying the consolidation area, in order to evaluate its compliance with the provisions of the Decree;
3. comparison of the economic and financial data and information included in the DNF with those included in the A2A Group’s consolidated financial statements;
4. understanding of the following aspects:
   - Group’s management and organization business model, with reference to the management of the matters indicated in the article 3 of the Decree;
   - policies adopted by the Group related to the matters indicated in the article 3 of the Decree, results achieved and related key performance indicators;
   - main risks, generated or suffered related to the matters indicated in the article 3 of the Decree.

With regard to these aspects, we obtained the documentation supporting the information contained in the DNF and performed the procedures described in item 5. a) below:

5. understanding of the processes that lead to the generation, detection and management of significant qualitative and quantitative information included in the DNF.

In particular, we have conducted interviews and discussions with the management of A2A S.p.A. and with the personnel of A2A Calore e Servizi S.p.A., A2A Gencogas S.p.A., Lomellina Energia S.r.l. and Acinque S.p.A. and we have performed limited documentary evidence procedures, in order to collect information about the processes and procedures that support the collection, aggregation, processing and transmission of non-financial data and information to the management responsible for the preparation of the DNF.

Furthermore, for significant information, considering the Group activities and characteristics:

- at Group level
  a) with reference to the qualitative information included in the DNF, and in particular to the business model, policies implemented and main risks, we carried out inquiries and acquired supporting documentation to verify its consistency with the available evidence;
  b) with reference to quantitative information, we have performed both analytical procedures and limited assurance procedures to ascertain on a sample basis the correct aggregation of data.

- for A2A Calore e Servizi S.p.A. (Canavese cogeneration plant - Milan), A2A Gencogas S.p.A. (Chivasso thermoelectric power plant) and Lomellina Energia S.r.l. (Parona waste-to-energy plant), that we have selected based on their activities, relevance to the consolidated performance indicators and location, we have carried out site visits during which we have had discussions with management and have obtained evidence about the appropriate application of the procedures and the calculation methods used to determine the indicators.

Conclusions

Based on the procedures performed, nothing has come to our attention that causes us to believe that the DNF of the A2A Group for the year ended on 31st December 2022 has not been prepared, in all material aspects, in accordance with the requirements of articles 3 and 4 of the Decree and the GRI Standards.

Our conclusions on the DNF of the Group do not refer to the information included in the paragraphs “European taxonomy” and “EU Taxonomy” of the DNF itself, that are required by art. 8 of the European Regulation 2020/182.

Milan, 3 April 2023

EY S.p.A.
Signed by: Paolo Zacchi (Auditor)

This report has been translated into the English language solely for the convenience of international readers.
GRI Content Index

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**Sustainability in Governance**
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- Compliance with laws and regulations (GRI 2-27)
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**Energy autonomy**
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**Circular economy**
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**Climate change**
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**Responsible Supply Chain Management**
- Procurement practices (GRI 204)
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* Limited scope: reporting relates solely to direct suppliers and not to level-two suppliers.

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- Governance
- Strategy
- Risk Management
- Metrics and targets

**TCFD Recommendations**
- Describe the Board's oversight of climate change risks and opportunities
- Describe the role of management in assessing and managing the risks and opportunities associated with climate change
- Describe the risks and opportunities related to climate change that the organization has identified in the short, medium and long term
- Describe the impact of climate change risks and opportunities on the organization’s business, strategy and financial planning
- Describe the resilience of the organization’s strategy, considering different climate-related scenarios, including a scenario of 2°C or less
- Describe the organization’s processes for identifying and assessing climate change risks
- Describe the organization’s processes for managing climate change risks
- Describe how the processes for identifying, assessing, and managing climate-related risks are integrated into the organization’s overall risk management
- Disclose the metrics used by the organization to assess climate change risks and opportunities in line with its strategy and risk management process
- Disclose the objectives used by the organization to manage climate change risks and opportunities and performance against the objectives

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We would like to thank all our colleagues of A2A who worked on the preparation of this Report.

A2A S.p.A.

Registered office:
Via Lamarmora, 230 - 25124 Brescia

Managerial and administrative headquarters:
Corso Porta Vittoria, 4 - 20122 Milan
T [+39] 02 77201 F [+39] 02 77203920

Created by:
Communication, Sustainability and Regional Affairs
T [+39] 02 77201 - sostenibilita@a2a.eu - gruppoa2a.it

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