

# 2022-2023 Driving innovation for energy transition

TCFD report



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# About this report

## PURPOSE

Pioneers by passion and builders by vocation, we put all our energy into accelerating genuine ecological transition.

We do it for us.  
We do it for everyone.

## MISSION

We have provided energy services to the community with efficiency, safety and excellence for over 180 years.

Advancing the energy transition by creating the networks of the future and promoting innovative and sustainable solutions.

We care for local communities. We nurture positive and generative relationships with everyone we meet: individuals, companies, suppliers and shareholders.

We are open to new markets where we can apply our distinctive skills.

We promote people's growth and develop talent by building inclusive and stimulating working environments.

## VISION

To be a leading player in the energy world, driving its evolution with continuous and sustainable innovation to improve people's quality of life.

## About this report

This report is based on the recommendations of the Task Force on Climate-Related Financial Disclosures (TCFD), a set of voluntary, consistent disclosure recommendations for use by companies in providing information to investors, lenders and insurance underwriters about the overall strategy and governance of the Group, its climate-related financial risks and opportunities, and relevant metrics and targets.

From October 2023, the TCFD has fulfilled its remit and disbanded. The FSB has asked the IFRS Foundation to take over the monitoring of the progress of companies' climate-related disclosures.

Italgas, deepening the information already provided in its Integrated Annual Report 2022<sup>1</sup>, in the Strategic Plan 2023-29<sup>2</sup>, in the Sustainable Creation Value Plan 2023-29<sup>3</sup> and taking inspiration from the recommendations of the TCFD by the Financial Stability Board, intends to disclose, to its

investors and other stakeholders, clear and comparable information not only on the climate-related impacts on the Group, but also its impact on the climate. This report refers to 2022 consolidated performance, while leveraging also on strategic approach and initiatives of the whole 2023.



*We have provided energy services to the community with efficiency, safety and excellence for over 180 years.*

<sup>1</sup> [https://www.italgas.it/wp-content/uploads/sites/2/2023/03/Integrated-Annual-Report-2022\\_PDF-format-not-ESEF.pdf](https://www.italgas.it/wp-content/uploads/sites/2/2023/03/Integrated-Annual-Report-2022_PDF-format-not-ESEF.pdf)

<sup>2</sup> [https://www.italgas.it/wp-content/uploads/sites/2/2023/06/15-06-2023-Strategic-Plan-2023-29-Italgas\\_v12.pdf](https://www.italgas.it/wp-content/uploads/sites/2/2023/06/15-06-2023-Strategic-Plan-2023-29-Italgas_v12.pdf)

<sup>3</sup> <https://www.italgas.it/wp-content/uploads/sites/2/2023/10/Sustainable-Value-Creation-Plan.pdf>

# Stakeholder letter



**Benedetta Navarra,**  
Chairwoman & Non-Executive Independent Director



**Paolo Gallo,**  
Chief Executive Officer and General Manager

Recent events have put into question some of the major energy paradigms, demonstrating their fragility, sometimes in dramatic ways. The crisis of the energy markets and the war in Ukraine have shown the centrality of gas and have forced to look at the ecological transition with different eyes.

Ecological transition remains a crucial goal, no longer to be achieved at any cost, rather by ensuring at the same time energy security and industry competitiveness. This is the so-called energy trilemma that has highlighted how energy security stems from greater diversification of sources and how business competitiveness passes through maintaining an adequate level of energy costs, thus benefitting not only production activities, but also households.

In this context, biomethane is the clearest example of a renewable energy source, already available, capable of guaranteeing energy security, decarbonization of consumption and competitiveness. By 2030 it is estimated that Italy will cover about 9% of current gas consumption with biomethane and, in the same year, the REPowerEU targets biomethane to replace 25% of the pre-conflict natural gas imports from Russia. In terms of consumption decarbonization, biomethane is produced mainly from the wet fraction of waste and agricultural remains and it can ensure zero or negative CO<sub>2</sub> if linked to Carbon Capture and Utilization Systems (CCUS).

Italgas is engaged in the front line to unlock the great potential of biomethane, not only by favoring

the connections of new production facilities, but also by guaranteeing the quality of the resource injected, thanks to its digital infrastructures. The Group is also promoting regulation aimed at facilitating the development and utilization of this mostly untapped resource. In this perspective, in April 2023 Italgas connected Italy's first biomethane plant developed in a Grappa Distillery, in Conselve (Padua), to our gas distribution network. The project stemmed from the convergence between the Distillery production approach – inspired by circular-economy and zero-waste principles – and Italgas' distinctive network development,

management and digital capabilities. Further, in November 2023 the Group closed a Memorandum of Understanding with Coldiretti, the main organization of agricultural entrepreneurs at Italian and European level, aimed at further encouraging the development of biomethane production in Italy.

In the mid to long term, hydrogen is set to unlock the full potential of renewable electricity sources due to its programmability, energy-storage potential, and compatibility with existing infrastructure. Italgas is pioneering the Power to Gas concept, through the pilot project located in Sardinia, near Cagliari,



aimed at verifying the whole green hydrogen value chain, from hydrogen production to grid injection, blending and distribution to the end uses, such as mobility, industrial applications, and residential uses. For Italgas, the Power to Gas technology represents a vital convergence point between gas and electricity sectors, offering a reliable solution balancing lack of predictability of renewable resources and management of excess production.

Thus, to foster the development of renewable gases, having a digital network is paramount. Guided by this vision, in 2017 Italgas started the digital transformation of assets, processes and people and today continues to invest targeting to have 90% of its network digitised and monitored by DANA – Digital Advanced Network Automation application to remotely control the network – by 2024 in Italy and by 2026 in Greece. The Group has also become a benchmark for its industry and, through the cutting-edge technologies developed, as already highlighted, Italgas is working on the integration of renewable gases promoting the diversification of energy sources, the decarbonization of consumption and, not a secondary aspect for a listed company, improving returns. Digital transformation is a never-ending path, rather a continuous flow where new technologies and new components

that will enable to further upgrade the system improving service quality and generating efficiencies while contributing to the realization of the idea of a “living” network, that is capable of reacting to changing conditions of the external context. In this view, in the 2023-2029 Strategic Plan presented on June 15<sup>th</sup> 2023, the Group have earmarked 4.6 billion euros, out of a total of 7.8 billion euros, of investments for the further development of the Italian gas distribution network, with another 900 million euros to be invested in the Greek network.

The technological vanguard achieved has allowed Italgas to broaden its horizons, becoming a key player first in the energy efficiency space and more recently in the water sector with the acquisition by Nepta S.p.A. (“Nepta”)<sup>4</sup> of the business unit responsible for the water concessions held in Italy by Veolia Group. Italgas is evolving to become a “Network Tech Company”. Increasingly, Italgas will borrow its gas distribution technological capabilities and know-how, to utilize them in water, improving service efficiency and targeting material loss reduction – first data suggest between 15% and 20% compared to current values. This will mark a milestone also for the communities served, further boosting the sustainable development of the country.

Pursuant to the recommendations of the Task Force on Climate-Related Financial Disclosure (TCFD), in this document (“2022-2023 - Driving innovation for energy transition”), Italgas expanded the communication of its climate strategy – as already expressed in the 2022 Integrated Annual Report and the 2023-2029 Strategic Plan –, which sees the Company strongly committed both to the decarbonisation of its own activities, with a commitment to Net-Zero carbon emissions by 2050, and of the contexts where it operates, by managing most effectively the risks and opportunities arising from climate change.



<sup>4</sup> Italgas Acqua S.p.A. changed its company name to Nepta with effect from September, 26<sup>th</sup> 2023

# About Italgas

## 1. ABOUT ITALGAS

Italgas S.p.A (Italgas, the Company or the Group) is the leading gas distribution operator in Italy and Greece and the third largest in Europe: with its affiliates and the work almost of 4,300 people at the various offices across Italy and Greece, it manages a distribution network that extended, by the end of 2022, for a total of approximately 81,300 kilometres<sup>5</sup>, through which it distributed more than 8,500 million cubic metres of gas to approximately 7,960 thousand end customers.

In Italy, the Group holds 1,904 distribution concessions, with a historical presence in the Country's main cities, including Turin, Venice, Florence and Rome, and a market share of over 33%. In 2022, the completion of DEPA transaction enabled Italgas to acquire the distribution license in 140 municipalities in Greece, of which 105 are already in operation.

With more than 185 years of history, Italgas is unanimously acknowledged as the company that has brought gas into Italian homes, contributing towards the country's social and economic development.

It is a contribution that is also renewed today: the most significant example is the methanisation of Sardinia, where since it first started back in 2018, the Group has installed 910 km of new digital native networks up to 2022 and, in 2020, the first natural gas was distributed on the island.

Italgas core business is focused on gas distribution, which it carries out as part of the wider national systems, involving the distribution of gas to end users on behalf of authorised suppliers. In addition to the distribution of gas, carried out using the local pipeline network from the city-gates (reduction and metering stations interconnected with the transmission networks), Italgas is also in charge of metering, which include the collection, processing, validation and provision of consumption data to regulate commercial transactions between operators and users.

Italgas is constantly looking to the future, with clear growth and development objectives and a major investment plan aiming at making its network smarter and capable to distribute green gases and sustaining the energy transition, with the adoption of digital technologies that make network management day by day increasingly efficient. Italgas is strongly committed to reduce methane emissions, contributing to the achievement of European climate goals<sup>6</sup>.

The Group operates in a sustainable manner, through processes and technologies that are inspired by the highest standards of environmental protection, safety and efficiency. Italgas keeps driving the evolution of the gas distribution industry, being acknowledged as a global benchmark for the capacity to innovate,

thus playing a leading role in achieving European decarbonization targets.

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Italgas has adopted advanced practices and technologies that can pave the way for a more sustainable future. These competences and solutions can also be useful for other infrastructure and energy operators or operators of other sectors, in fixing more ambitious, concrete objectives (Bludigit, the Italgas Group digital services company, with the capacities developed in the Digital Factory in the proprietary digital applications and through the partnerships with technological suppliers

globally, offers innovative solutions to third parties in support of the energy transition process).

Italgas' gas distribution networks<sup>7</sup> are managed by:

- Italgas Reti S.p.A.<sup>8</sup> – which operates nationwide, 100% owned by Italgas, fully consolidated;
- Toscana Energia S.p.A.<sup>9</sup> – operating in the Tuscany region, 50.66% owned by Italgas;
- Medea S.p.A.<sup>10</sup> – operating in Sardinia, 51.85% owned by Italgas, fully consolidated;
- DEPA Infrastructure Single-Member S.A. (DEPA Infrastructure)<sup>11</sup>, acquired on the 1<sup>st</sup> of September 2022 and 100% owned by Italgas Newco S.p.A.<sup>12</sup> DEPA Infrastructure is a holding company and operates in Greece through Public Gas Distribution Networks S.A. (DEDA)<sup>13 14</sup>.

Italgas is also active in the following businesses:

- energy efficiency, with Geoside S.p.A.,<sup>15</sup> an Energy Service Company (ESCO) providing consulting services and technological and financing solutions in the sector;
- water distribution with Nepta, former Italgas Acqua S.p.A.<sup>16</sup> which acquired from Veolia Group the business unit responsible for the concessions held in the water sector in Italy;
- IT services, with Bludigit S.p.A.,<sup>17</sup> which is both managing the business and assets of the Group in the IT area, also offering its services to the market.

<sup>5</sup> Italgas Group and affiliates

<sup>6</sup> [https://ec.europa.eu/clima/eu-action/climate-strategies-targets\\_en](https://ec.europa.eu/clima/eu-action/climate-strategies-targets_en)

<sup>7</sup> The distribution business accounted for more than 86% of total adjusted revenues in 2022

<sup>8</sup> <https://www.italgas.it/en/group/companies/italgas-reti/>

<sup>9</sup> <https://www.toscanaenergia.eu>

<sup>10</sup> <https://www.italgas.it/en/group/companies/medea/>

<sup>11</sup> <https://depanetworks.gr/>

<sup>12</sup> Italgas Newco S.p.A. (Italgas Newco) is a direct subsidiary of Italgas S.p.A. On 22 December 2022, Italgas sold to Phaethon Holdings Single-Member S.A., a holding company of the Greek industrial group Copelouzos, an equity investment of 10% of the share capital of Italgas Newco.

<sup>13</sup> <https://deda.gr/>

<sup>14</sup> Thessaloniki - Thessalia Gas Distribution S.A. (EDA Thess) and Attiki Natural Gas Distribution Single Member Company S.A. (EDA Attikis) were merged by incorporation into DEDA effective from 30<sup>th</sup> September 2023.

<sup>15</sup> <https://www.geoside.com/>

<sup>16</sup> <https://www.italgasacqua.it/>

<sup>17</sup> <https://www.italgas.it/en/group/companies/bludigit/>

# Geographical map

Geographical map with different businesses



# Business model



## 1.1 Business model

The operations of the Italgas Group are included in the business model. Below are the key processes of these operations:

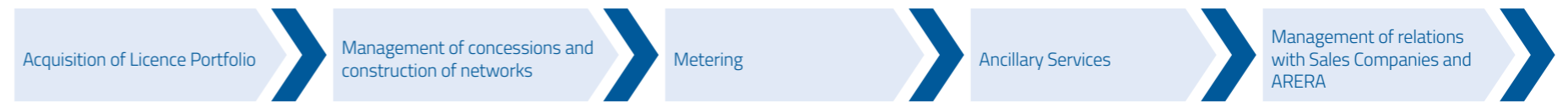
- Governance processes;
- Business processes;
- Support processes;
- Control processes.

Responsible governance, stakeholder engagement, risk management and accountability are key, essential elements of all the above activities and processes.

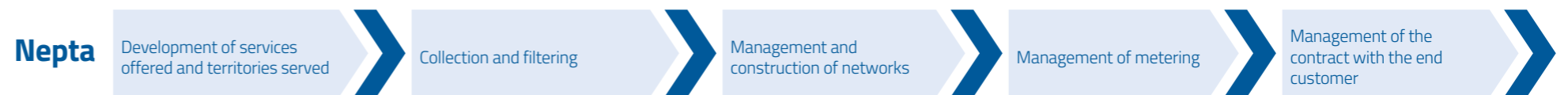
### Value chain model



#### Business process - Gas distribution and metering



#### Business Process - Water Service



#### Business Process - Energy efficiency



#### Business Process - IT Services





# Climate resilience

## 2. CLIMATE RESILIENCE INTO OUR BUSINESS STRATEGY

Italgas supports the European energy transition and decarbonization efforts through its actions of repurposing and retrofitting its distribution network, enabling the gradual substitution of fossil gas with renewable gases (biomethane, hydrogen and syn-gases) and fostering the development of energy efficiency services.

The strategic choices made in recent years by the Group have anticipated the approach of national and EU institutions towards the decarbonization and the containment of Greenhouse Gases (GHG) emissions.

In fact, the 2050 Net-Zero target, set by the European Union as part of the Green Deal, and the further boosts to the fight against climate change, the reduction of greenhouse gas emissions and the differentiation of energy sources - brought about by the European Commission's REPowerEU plan and, prior to this, the Fit-for-55 package of economic and social reforms and regulations - are nowadays confronting individual Member States with the urgency to act in this direction.

### 2.1 Use of energy and climate scenarios to build a solid strategy

In the "Special Report on the impacts of Global Warming of 1.5°C" of 2018 the Intergovernmental Panel on Climate

Change (IPCC) estimates that since the pre-industrial period human activities have increased Earth's global average temperature by approximately 1°C and that the global average temperature is currently increasing by 0.2°C per decade. Further, the study recognizes that extreme weather events such as storms, floods and wildfires are intensifying their impacts and frequency around the world. Widespread and severe consequences on people and nature are expected if global warming reaches 2°C. To secure decarbonization and global Net-Zero emissions by 2050, effective and timely adaptation and mitigation plans are therefore key.

In 1996 the Kyoto Protocol (then ratified in 2005) represented the first world's binding tool for cutting GHG, targeting 18% reduction by 2020 from 1990 levels. But it covered only 12% of global GHG due to abstention of world's largest emitters. Then, the Paris Agreement (COP21) saw the commitment of all UNFCCC Parties to embrace more incisive actions to reduce climate change (limiting global warming well below 2°C to 2050). 159 countries covering 90% of global GHG emissions were put around the table. With the European Green Deal in 2019, and the following Fit for 55 package (2021), the European Union accelerated its path towards Net-Zero by 2050, with an interim target of 55%

emission reduction by 2030 from 1990 levels, enhancing all the previously set targets.

The ongoing Russian – Ukraine conflict is accelerating the energy transition, as the need to reduce dependence on Russian fossil fuels is pushing the European Union to define urgent measures for security of supplies, diversification of sources, the use of renewables and on energy efficiency. The RepowerEU<sup>18</sup> Plan upgraded the previously set targets on renewables gases. The new target is 35 bcm of biomethane and 20 Mtons of hydrogen in energy supplies by 2030, respectively a double and four times more relative to the target set in the "Fit for 55" Plan.

At national level, Italian Government is updating the PNIEC (Piano Nazionale Integrato Energia e Clima), which sets national targets to 2030 on energy efficiency, renewables and CO<sub>2</sub> emission reduction, as well as those on energy security and interconnections, with a focus on the strategic role of distribution networks as carriers of renewable gases.

In 2021, the global economy rebounded quickly from the COVID-19 pandemic, with a 5.9% GDP growth. Energy demand increased by 5.4%, leading to a record 1.9 Gt increase in CO<sub>2</sub> emissions, totaling 36.6 Gt from the energy sector<sup>19</sup>.

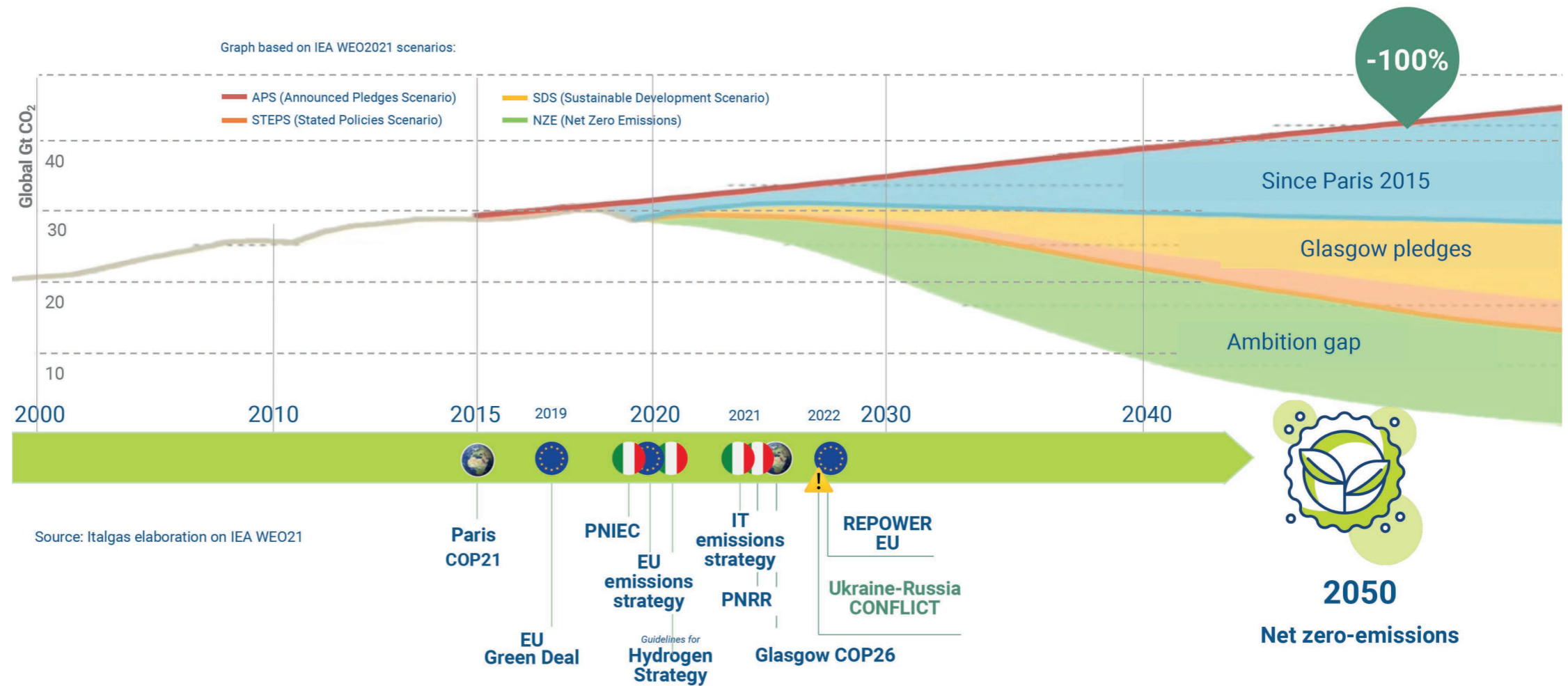


<sup>18</sup> [https://ec.europa.eu/commission/presscorner/detail/en/IP\\_22\\_3131](https://ec.europa.eu/commission/presscorner/detail/en/IP_22_3131)

<sup>19</sup> IEA WEO2022 <https://iea.blob.core.windows.net/assets/830fe099-5530-48f2-a7c1-11f35d510983/WorldEnergyOutlook2022.pdf>

Decarbonization of the energy sector requires a swift transition to resources with low environmental impact. In 2021 the European primary energy mix was represented for ~45.4% by oil and coal, ~23.3% by natural gas and 17.2% by renewable energy sources<sup>20</sup>. Gas infrastructures, due to their low carbon footprint, well spread capillarity and flexibility, will maintain a key role in decarbonization supporting in the mid-term the switch from oil and coal and in the long term the progressive substitution of fossil gas with renewables gases (biomethane, hydrogen and syn-gases).

To achieve full decarbonization the contribution of all energy sources and collaboration among energy players is paramount. Gas and electricity will need to interoperate to provide the most efficient and sustainable energy economies (i.e., "sector coupling"). This will also ensure security of supply. Policies, climate-related and energy scenarios' analysis is a key step for the development and update of the Group Strategy, supporting the organizations' critical strategic thinking and understanding how related risks and opportunities affect its business today and will affect it in the future. Through the comprehension of the energy context and outlook, Italgas at least once a year, addresses and adapts the Group strategy to fit to the environment in which it operates.



*75,000 kilometres of network into digital infrastructure to enable the distribution of gas other than methane, such as biomethane, hydrogen, and syn-gas.*



<sup>20</sup> Eurostat 2021. Other sources represent 14.1%.

The Strategic Planning process leads to the seven years' Strategic Plan, which includes the financial planning for the same horizon. The Plan is developed through a comprehensive company-wide approach, involving deep collaboration between top, mid and lower management, and it is approved by the Italgas Board of Directors in June of each year. Scenarios analysis is run to support the identification of risk and opportunities (both physical and transitional) arising from the context. The analysis helps to identify and evaluate potential business impacts and define the responses and actions necessary to manage such risks and opportunities. The Group can then drive a more consistent value creation for its business and for the community it operates in, tackling at the same time the relevant energy and climate change challenges (risks and opportunities related to climate change are summarized in Paragraph 3.2).

The analysis is based on publicly available qualitative and quantitative transition and physical scenarios. Transition scenarios on decarbonization and energy transition support critical thinking on the future role of the gas in the energy mix ensuring consistency with international and European objectives. The scenarios considered in the setting of the 2023-2029 Strategic Plan are elaborated by major institutions, special reference is made to the European Commission

forecasts, the World Energy Outlook of the International Energy Agency (IEA), ENTSOG and ENTSO-E, IRENA and National Contributions (National Energy and Climate Plan for both Italy and Greece, Snam-Terna scenarios). In particular, the IEA scenarios STEPS, APS and NZE have been analyzed with a focus on emission reduction and the mitigation actions needed to achieve Net-Zero by 2050. The ENTSOs scenarios have been analyzed to focus on CO<sub>2</sub> European trends, gas demand and supply in reference perimeter of the Group (Europe, Italy, Greece), perspective evolution of the gas mix (fossil fuels, biomethane, hydrogen and other renewable sources) and energy efficiency. Snam-Terna scenarios focus on the Italian perimeter, and they are elaborated with an integrated approach by the main gas and electricity TSOs of Italy. They show an evolution of the energy mix towards 2030 and 2040, with overall gas demand expected to remain stable in the next decades thanks to a progressive switch to green gases, with biomethane having a growing role in decarbonizing residential sector. The incidence of gas in Italian final energy uses is maintained at ~30%, in line with the historical value. Referring to the Greek perimeter, also the DESFA demand forecast study 2022-2030 is considered. This scenario to 2030 foresees an increase of gas demand, due to the gasification of new areas planned by the Greek TSO (West Macedonia,

West Greece, Peloponnese, Epirus) and increasing SSLNG services. Specifically, gas volumes in the Greek distribution network are expected to grow by 35% in 2030, compared with 2022 volumes. The overall incidence of gas in final energy uses is expected to grow to ~20% (more than double the historical values). All scenarios are compliant with Paris

Agreement and European ambitions to achieve climate neutrality by 2050, provide forecasts over mid (2030) and long term (2040-2050) and envisage an accelerated energy transition in line with IPCC RCP 1.9 to keep global warming below 1.5°C. This climate scenario requires a challenging but feasible CO<sub>2</sub> abatement resulting from profound

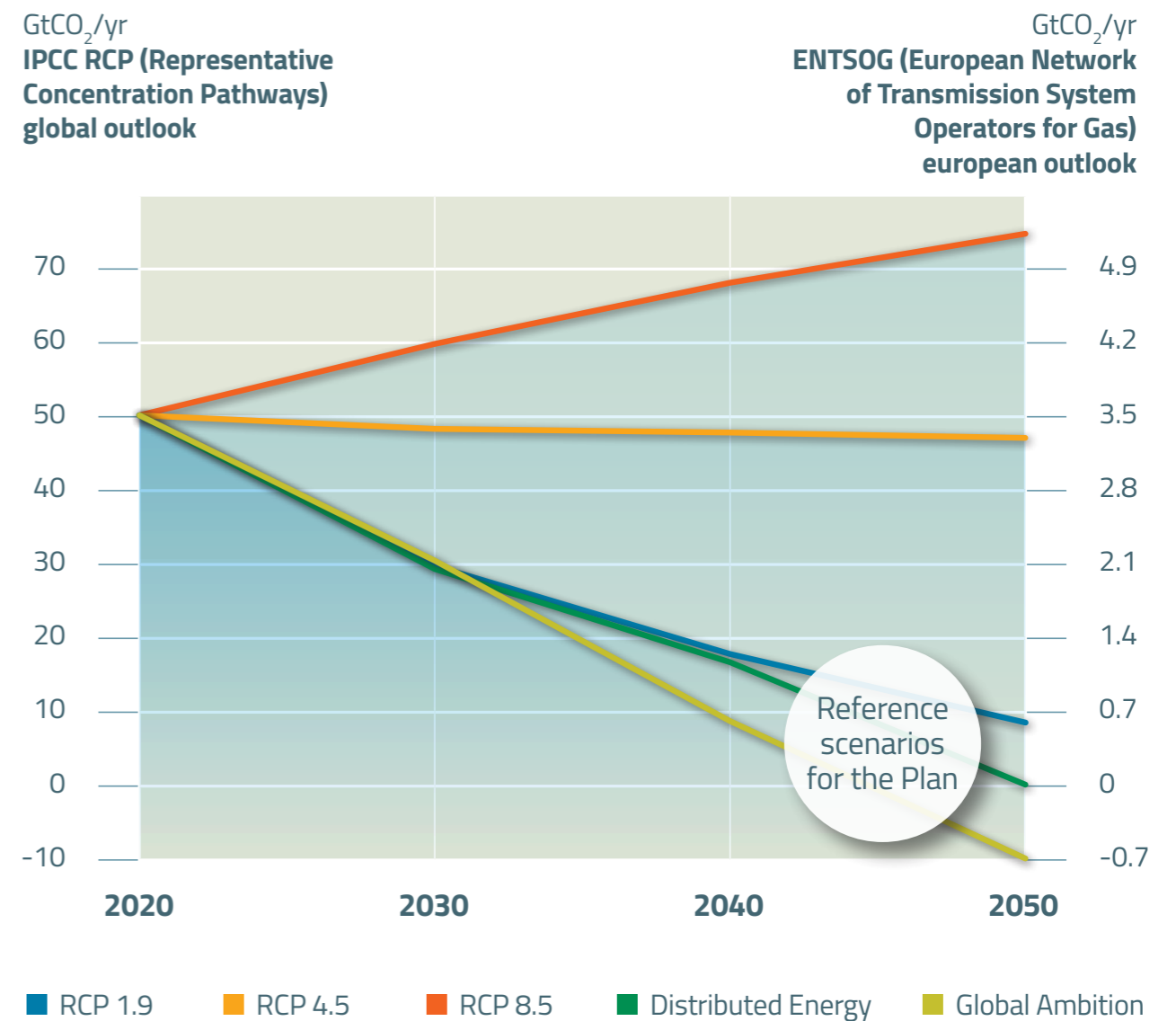


Figure 4 – Annual emissions pathway by IPCC and ENTSOG scenarios.

change of current economy. IPCC scenarios provide global outlook for CO<sub>2</sub> emissions. The figure below compares the IPCC global outlook with ENTSOs European view. The trends have been normalized on 2020 base to clearly show that both the Distributed Energy and Global Ambition ENTSG scenarios are aligned with RCP 1.9 outlook<sup>21</sup> and reach even better results in 2050.

Starting from 2021, two different quantitative scenario analysis were carried out by Italgas to evaluate physical risks, in the case mitigation and transition initiatives are not sufficient to limit the temperature below 1.5°C. The scenarios selected by Italgas are Representative Concentration Pathways (called RCPs in the AR5 and SSPs in the AR6), i.e., quantitative scenarios that are based on the physics of the climate and are defined by the concentration of greenhouse gases in the atmosphere. The first scenario selected by Italgas is the RCP 8.5 which represents the worst IPCC scenario in which there would be extreme and potentially irreversible consequences on the meteorological-climatic variables considering that no action would be taken to reduce emissions. In fact, the growth of emissions at current rates will lead to high levels of greenhouse gas concentrations and represent the inability to curb warming. This scenario assumes that, by 2100, atmospheric

CO<sub>2</sub> concentrations tripled or quadrupled (840-1120 ppm) compared to pre-industrial levels (280 ppm). This scenario is energy-intensive with a total consumption that continues to grow over the course of the century reaching well over three times the current levels<sup>22</sup>. Secondly, Italgas decided to assess its risks and opportunities through the RCP 4.5 scenario, which does not consider further mitigation commitments by states with respect to those already adopted apart the implementation of certain initiatives, such as the use of new technologies and strategies to reduce greenhouse gas emissions. Because of this, moderate transitional interventions and significant physical risks are expected. It is considered a stabilization scenario because it expects the CO<sub>2</sub> emissions to reach the peak around the middle of the century, and by 2070 they drop below current levels. The atmospheric concentration stabilizes, by the end of the century, at about double (520 ppm) pre-industrial levels.

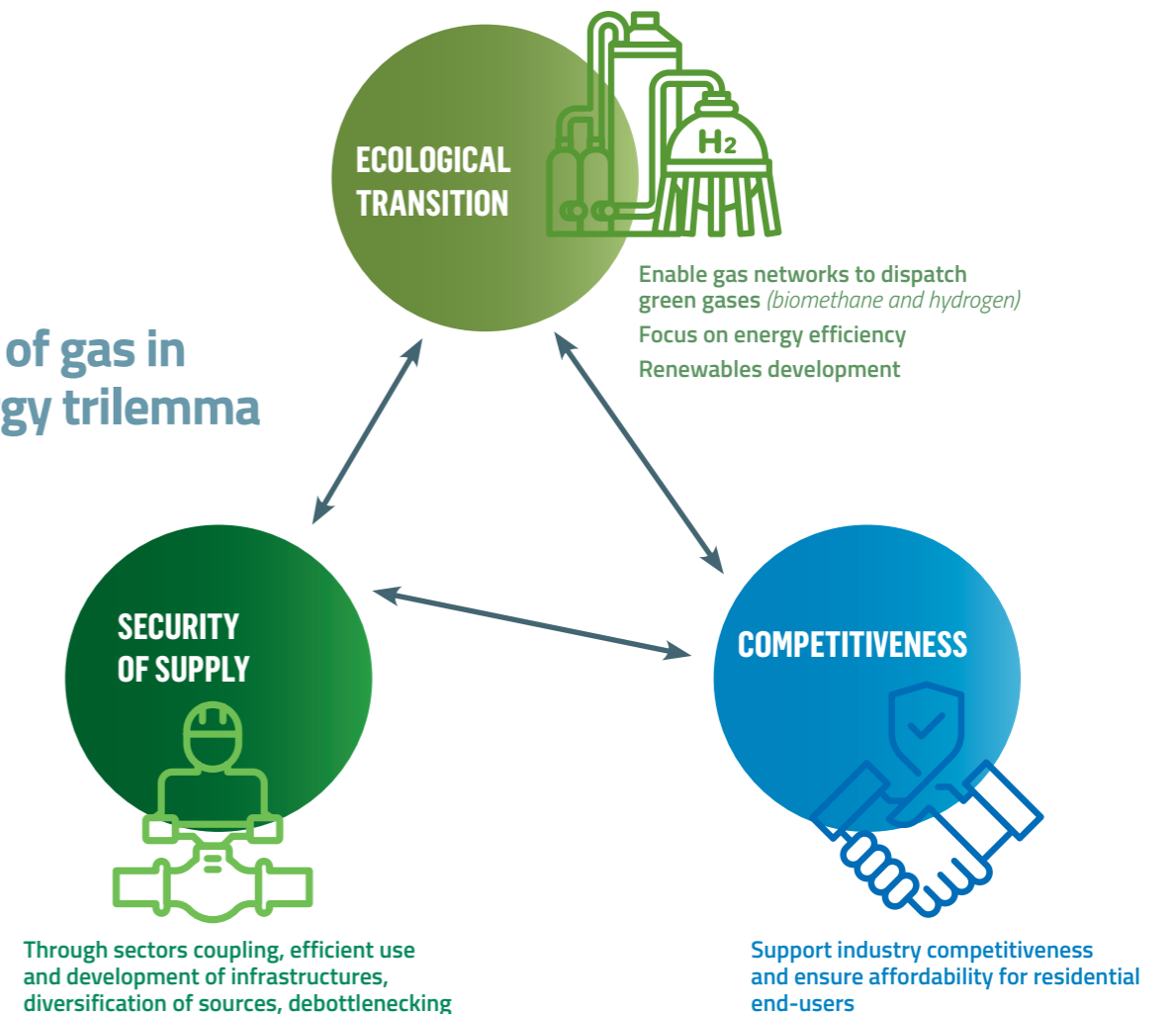
While impacts of climate change might be severe, advances in tackling it are leading to cleaner air, creating good jobs, restoring nature and, at the same time, unleashing economic growth. From transitional and physical risks, lots of opportunities arise, among those, digitization of gas network, energy efficiency and water business.

## 2.2 Strategy to deal with climate change: our transition plan

Italgas strategy shows that a cost-effective energy transition requires the collaboration of all energy sources to reach the ambitious climate-related targets of the European Union. Energy markets show intricate infrastructural challenges, and there is no universal solution that can address all of them. Progressing further in the transition of the gas sector towards renewable gases will enhance the flexibility and resilience of the whole energy system. Gas networks, given their widespread

presence and capillarity, the potential to foster the development of green gases and their strategic role in ensuring security of supply (over time and space, with significantly lower losses than electric infrastructure) support the achievement of EU climate change 2030 targets and 2050 Net-Zero. In a context of energy transition and decarbonization, Italgas faces significant risk and opportunities related to the need for decarbonization of gas sources and operations, increasing network resilience to climate change and improving end users' consumption.

### The role of gas in the energy trilemma



<sup>21</sup> The trend of emissions has been normalized on 2020 base to compare the RCPs global outlook (left axis) with European EntsoG scenarios for Europe (right axis).

<sup>22</sup> IPCC, "Climate Change - The Physical Science Basis - Annex II: Glossary", 2014.

To face this challenge, Italgas is committed to align its strategy and business model in a way that is consistent with the transition to a sustainable economy, and with the limiting of global warming to 1.5°C, in line with the Paris Agreement and with the objective of achieving climate neutrality by 2050. The Group pivots on clear strategic directions that set out the path to the achievement of this long-term objectives, regarding both the evolution of its business model and the decrease of its own GHG emissions.

To face this challenge in a tangible way, such long-term drivers are declined within the short-to-medium-term time horizon of the new Strategic plan 2023-2029, along with budget and financial

planning aligned to this long-term perspective. In fact, the aim of Italgas, as presented both in the 2023-2029 Strategic Plan<sup>23</sup> and the Sustainable Value Creation Plan 2023-2029<sup>24</sup>, which are fully integrated documents, is to ensure that its business model not only creates economic value but also allows to preserve and regenerate the capitals employed in it. Italgas is committed to create a sustainable future while maintaining financial stability and delivering value to its shareholders. The actions put in place are coherent with the objectives of mitigating climate change and adapting the operations of the Group to it, in line with Paris Agreement targets to strengthen resilience of the infrastructure and reduce vulnerability on climate related physical risks.

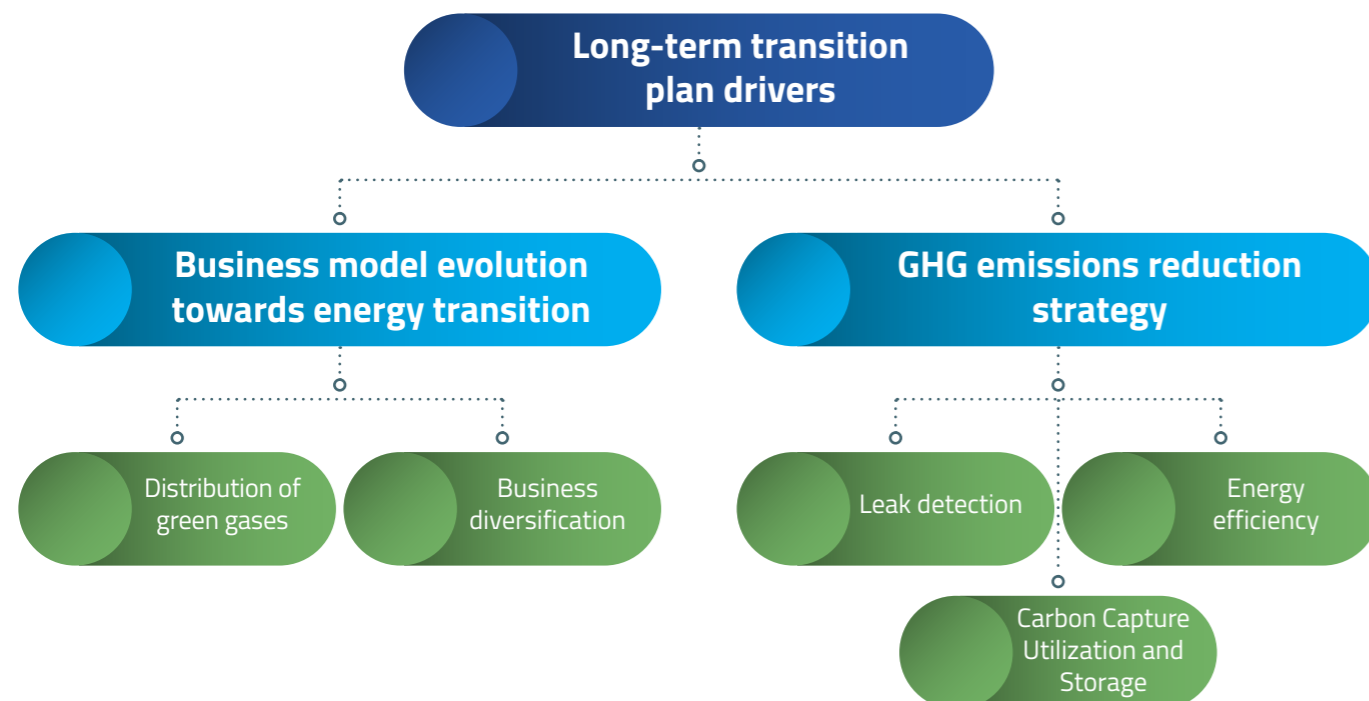
Italgas Strategy Map is therefore based on two core areas:

- **Gas distribution: consolidation, upgrade and expansion of the gas infrastructure**, maintaining the highest safety and efficiency standards and accelerating the injection and distribution of renewable gases thanks to the ongoing digital transformation;

- **Diversification: diversification of business** on contiguous sectors presenting synergies and opportunities linked to climate risk/opportunities of the gas distribution. Energy efficiency solutions become a key focus, allowing customers to optimize their energy consumption and reduce environmental impact. Italgas is also engaged in water sector, taking on the responsibility of ensuring the efficient distribution and management of this precious resource, leveraging on the wide expertise gained in the gas distribution network. Furthermore, digital services are offered to enhance resource management and enable greater operational efficiency and sustainability.

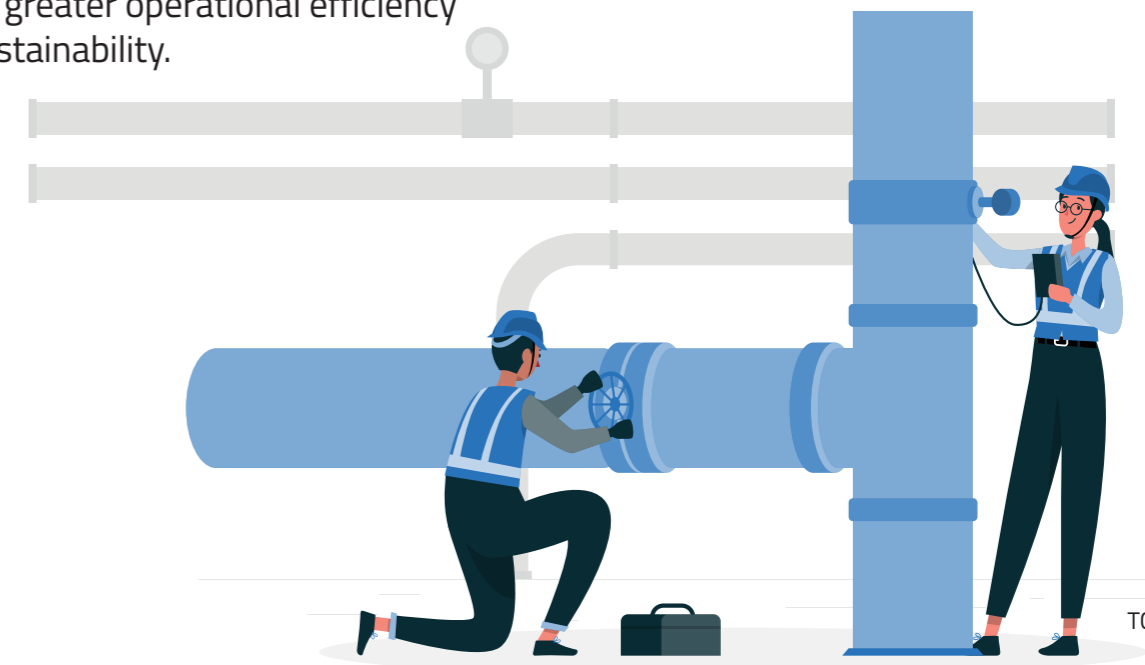
Italgas is committed to have a positive impact on the planet by promoting renewable gases, energy efficiency, and responsible water management. Beyond this, there is an unwavering dedication to enhancing the lives of its employees and communities by training new digital skills, fostering innovation, and creating valuable partnerships with organizations and stakeholders, strengthening the collective impact and advancing strategic goals.

Digitization is the firm foundation upon which data-driven decision-making and operational efficiency are built. People are the heartbeat of the organization, and their development and well-being are paramount, together with the skills of the future, key for the success of Italgas initiatives. Innovation is embraced as a driving force, keeping Italgas at the forefront of technology and sustainable practices.

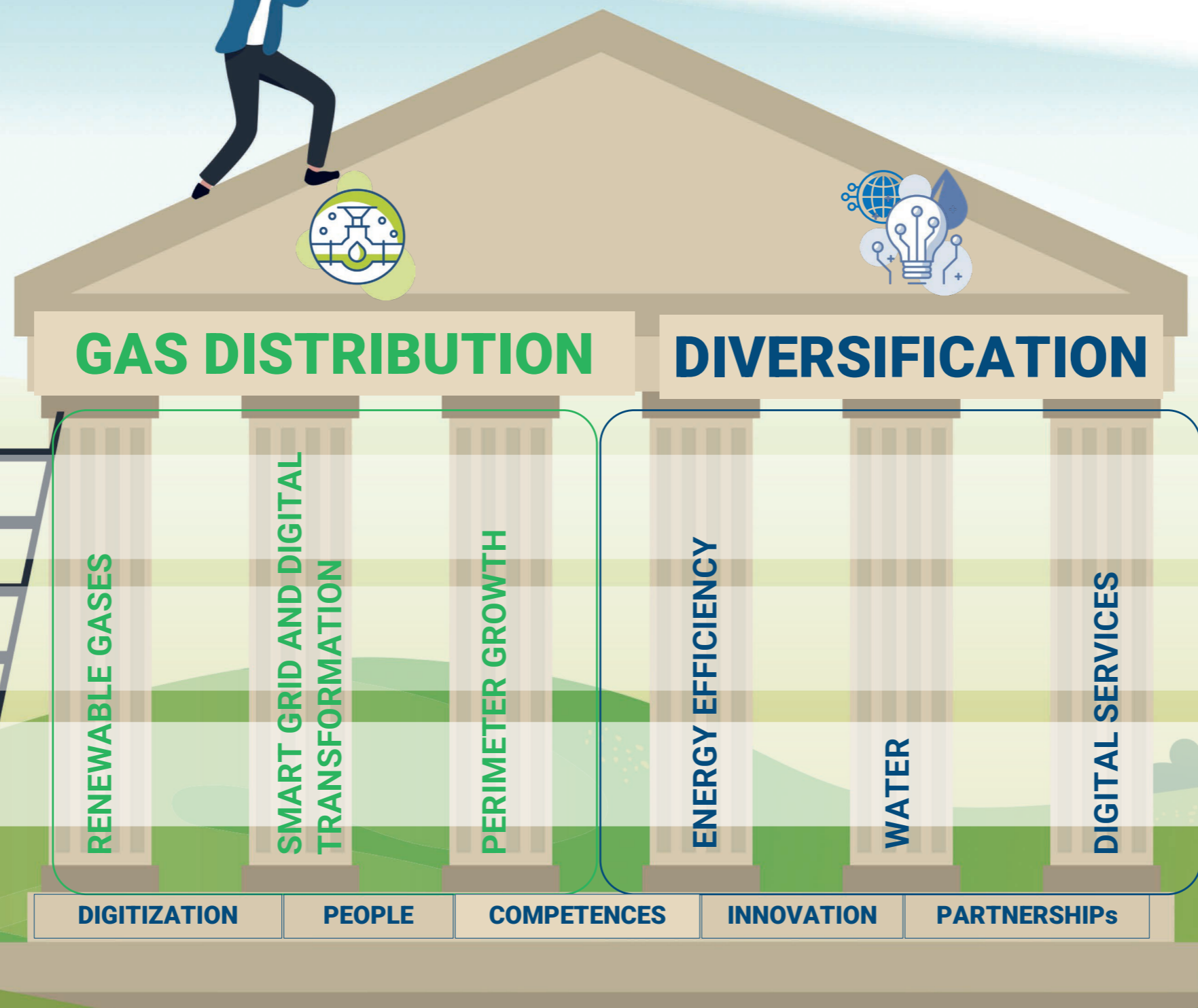


<sup>23</sup> [https://www.italgas.it/wp-content/uploads/sites/2/2023/06/15-06-2023-Strategic-Plan-2023-29-Italgas\\_v12.pdf](https://www.italgas.it/wp-content/uploads/sites/2/2023/06/15-06-2023-Strategic-Plan-2023-29-Italgas_v12.pdf)

<sup>24</sup> <https://www.italgas.it/wp-content/uploads/sites/2/2023/10/Sustainable-Value-Creation-Plan.pdf>



# Italgas, builders of our future



For the future of  
the **PLANET**

For the future of  
the **PEOPLE**

For a sustainable  
future **TOGETHER**

### 2.2.1 Business model evolution towards energy transition

On the path to energy transition, gas distribution networks play a key role due to their widespread nature, provided they are digital, smart and flexible. In this scenario, infrastructure digitization is the enabler that allows the entire distribution network to receive and manage different, renewable gases, such as biomethane, green hydrogen and synthetic natural gases. A significant investment commitment has been dedicated in businesses with strong interlinks with our core distribution business, with a primary focus on fostering growth within the infrastructure water sector and enhancing energy efficiency.

#### 2.2.1.1 Digital transformation and network upgrade to enable the distribution of green gases

In the fight to climate change, sector coupling between gas and electricity is a key element to drive an effective energy transition and ensure security of supply. Gas distribution networks digitization is an essential element of the process.

Italgas sees its digitization effort as a crucial step to accelerate the distribution and dispatch of renewable gases and, at the same time, to reduce its carbon footprint. In addition, digitization makes the network more reliable and capable of adapting to the impacts of climate change, for example, by unlocking

remote controls in the event of extreme weather events, mitigating impacts and/or reducing time of intervention (e.g., remotely securing portions of the network in case of floods, fires, earthquakes). Comparisons within national and international trade associations find that Italgas will be the first gas distribution operator in the world with an almost completely digitized and remotely monitorable network<sup>25</sup>.

The ongoing digital transformation in Italy (~€1.3 billion capex spent over 2017-2022 and €1.6 billion planned over the Plan period 23-29), aims at collecting the largest number of information, enable remote control, handle renewable gases and develop predictive maintenance programs. The replacement of all traditional district governors is ongoing; at the same time, the setting up of electrovalves, sensors, actuators, digital gas chromatographs, is going on as well as the progressive substitution of current GPRS technology based smart meters with NB-IOT ones. In 2021 the Group launched its centralized command and control system (DANA - Digital Advanced Network Automation).

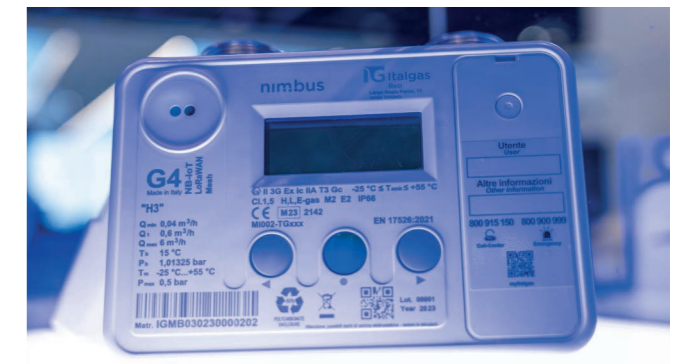
Leveraging on deployed asset digitization, DANA allows automatic remote monitoring and control 24/7, records and analyses data (e.g., measurements of gas pressure, volumes and odorization, signals and alarms). Information collected

are processed with algorithms to predict and anticipate potential network malfunctioning, enhance operational efficiency and enable real-time data-driven decisions. In 2022 DANA evolved to deal with biomethane connections to our network: thanks to a two-way inlet valve, our technicians can remotely stop the biomethane volumes if the quality of the injected gas doesn't comply with the standards. DANA was implemented on 80 Italgas plants by end 2022, reaching more than 300 distribution plants in Q3 2023, and it will cover almost the entire Italian network (>700 plants) by 2024.

€0.9 billion capex is planned for the period 2023-2029 for the development, repurposing and digitization of the Greek distribution network. Leveraging the expertise gained in the natural gas conversion process in Sardinia and the know-how of the Group in crafting native digital networks, these resources will be invested in expanding the network and its digital transformation, promoting the

penetration of natural gas in areas not yet served and enabling the distribution of renewable gases. These investments will allow the Greek network to expand from 7,491 kilometres in 2022 (the year of Depa Infrastructure acquisition) to ~11,000 kilometres by 2029 (+47% in 7 years).

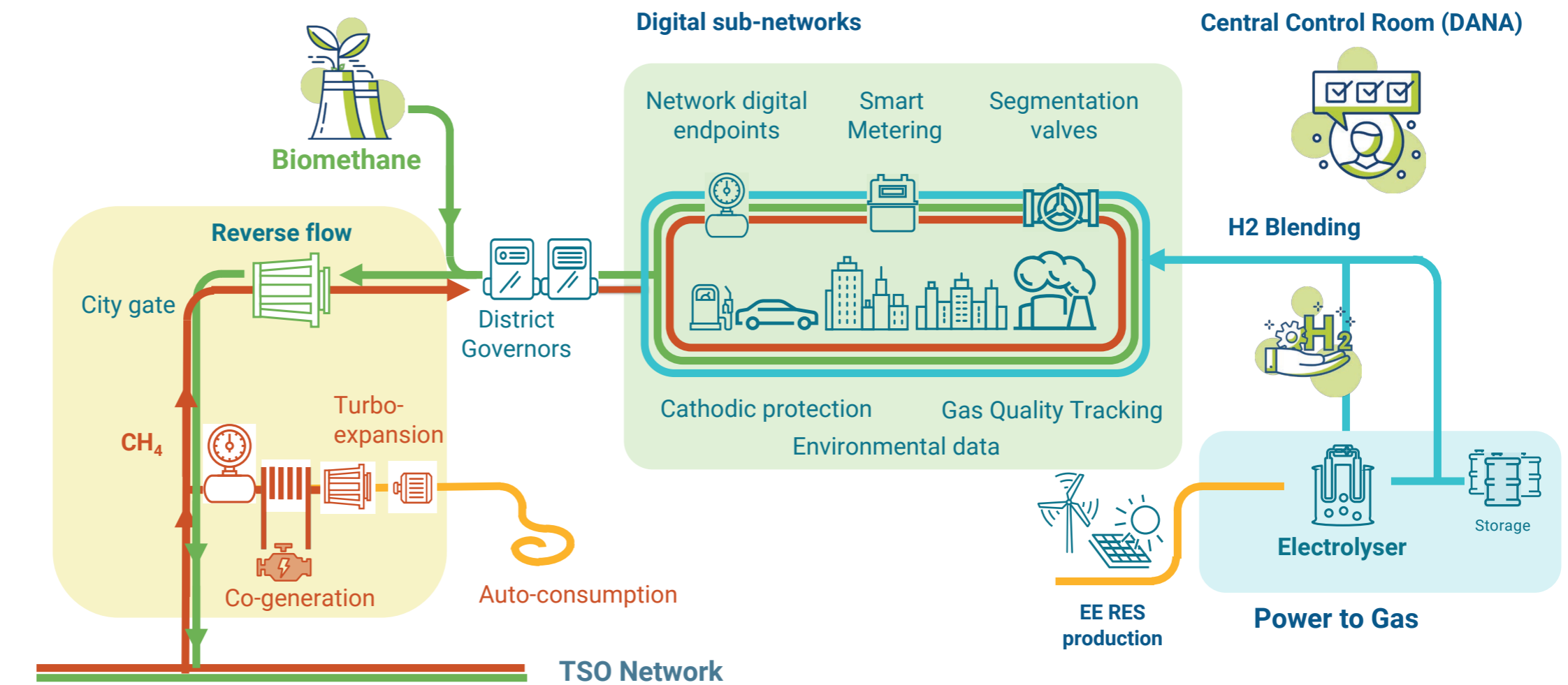
In December 2023, Italgas also launched a new proprietary hydrogen ready smart meter, designed to improve performance and guarantee safety - Nimbus. The cutting-edge Nimbus smart meter will enable Italgas networks to accommodate, distribute and measure more effectively multiple types of gas, even in blending



<sup>25</sup> Target: 90% network digitized and monitorable by DANA by 2024 in Italy and by 2026 in Greece. Please refer to Sustainable Value Creation Plan: <https://www.italgas.it/wp-content/uploads/sites/2/2023/10/Sustainable-Value-Creation-Plan.pdf>

with each other, including Natural Gas-Hydrogen (H<sub>2</sub>) mixtures up to 23%. The new Nimbus has an average battery life of 15 years, about twice that of conventional smart meters on the market and it is composed up to 85% of recyclable material in line with the circular economy approach that allows Italgas to reduce the environmental footprint associated with its activities. It is smaller, easier to carry and install, yet compatible with more gas blends. Its digital interface provides a really smart user experience. Also, Nimbus guarantees maximised safety on all fronts, as it is equipped with detectors to prevent tampering or disconnection from the network, as well as a pressure sensor, a seismic sensor and a temperature sensor that interrupt the gas supply in case of earthquake and fires. The prototype, will be tested on the ground in 2024. Our 2023-2029 strategic plan includes investments related to the large-scale installation of the new meter<sup>26</sup> in Italy and Greece, starting from 2025-2026, including the replacement of GPRS technology meters that are being phased out.

Existing gas distribution networks, thanks to retrofitting and repurposing, are a key enabling factor in achieving the EU decarbonization goals. Italgas foresees ~€2.4 billion investments in the period 2023-2029 to further improve network flexibility and reliability, to be ready to handle different types of gases



in the next years. The repurposing of the network sees, among other things, the full replacement of pipelines, risers and plants made of grey cast iron, unprotected steel without cathodic protection system and other obsolete materials, guided by predictive maintenance principles, avoiding gas leakages in atmosphere and allowing green gases injection in our network. To deepen our smart maintenance project, please see Par. 2.3.

The digitization program tackles also our processes. In 2018, Italgas set up an internal Digital Factory which has led to the development of continuous innovative outputs. It is the driving force of Italgas digital transformation, where we design and implement cutting-edge proprietary technologies that, in recent years, have helped to digitize our processes and improve operations, network management and service quality. In the last 4 years, more than 500

people have been involved in the cross-functional team of one of the 15 digital rooms. Over 30 digital projects have been developed and in operation, with positive environmental impact. An example is ClickToGas, an application released in 2021 that allows the end user to share information and photographs with Italgas or even to activate video-collaboration sessions in augmented reality, eliminating the need for physical site inspections at the end user's premises and drastically

<sup>26</sup> Target: 50% of all active smart meters designed according to «Design for environment» criteria in lieu of GPRS meters by 2028. Please refer to Sustainable Value Creation Plan: <https://www.italgas.it/wp-content/uploads/sites/2/2023/10/Sustainable-Value-Creation-Plan.pdf>



reducing the time necessary to provide a quotation for a new connection to the gas network and the travel time for Italgas employees.

### Supporting the development of renewable gases and decarbonization of sources

The key to facilitating the distribution of renewable gases such as biomethane, hydrogen, and syn-gases, while also supporting the battle against climate change, lies in digitization and upgrading the network infrastructure. Biomethane is the more viable carbon neutral option today. Its technology is well-established, and with the integration of CCS-CCUS systems, it can even have a net negative carbon impact. To achieve cost reduction and enhance the efficiency of the connections, collaborative efforts are underway between Italgas, the Regulator and the producers to determine the optimal technical solutions. Early 2023, Italgas connected the first biomethane plant to its network; the new plant produces 2.5 million cubic meters of biomethane from the liquid waste of the distillation of grape-based products, decarbonizing gas consumption of 3,000 families.

Biomethane plants in Europe nearly tripled in the last 5 years, reaching 4 Bcm production in 2022, but there's a high potential of development, as foreseen by REPowerEU plan. Italgas plans to give its

contribution to the European goals, by connecting 400 biomethane plants to its network in Italy and Greece by 2029, with an investment of more than €130 million. Additionally, since 2022, Italgas is actively working with the Regulator and the major Italian TSO to define the regulatory and tariff framework necessary to carry on reverse flow projects. The reverse flow allows to overcome absorption limits in some portions of the network and enable re-injection of surplus biomethane into the transport network. Italgas recently got the green light from ARERA for two innovative reverse flow pilot projects, planned to be carried out in Ostiglia (Lombardy) and Manduria (Puglia). ARERA will fund these projects under Resolution 404/2022 framework, with €1.4 mln.

In the longer term, hydrogen can unlock the full potential of renewable electricity sources due to its programmability, storage potential and compatibility with existing infrastructure. Italgas is pioneering the Power to Gas concept, through its pilot project located in Sardinia, near Cagliari, which is the first application in the EU aimed at verifying the whole green hydrogen value chain, from the production powered by a photovoltaic plant to the grid injection, blending and distribution to the end uses, such as mobility, industrial applications, and residential uses. Italgas believes that Power to Gas technology represents a vital convergence point between

gas and electricity sectors, offering a reliable solution to the challenge of the reduced programmability of renewable resources and management of the excess production. The plant will be connected to the new "native digital" network that Italgas is developing in Sardinia. The region, formerly the sole area in Italy without access to natural gas, now boasts the country's most modern infrastructure. The P2G plant will produce and distribute about 200 tons of green hydrogen by 2028, demonstrating the validity of the solution for industrial, residential and transport and use.



### Bonollo biomethane plant

In April 2023, Italgas contributed to the connection to the gas distribution network of Italy's first biomethane plant in a Grappa Distillery, namely Distillerie Bonollo Umberto in Conselve (Padua). The project implementation resulted from the convergence between Bonollo's production approach, inspired circular economy and zero waste principles, and Italgas' distribution network digital transformation, an enabling element for the development of renewable gases. It took 16 months of work to enable the technological upgrade of the previous biogas production plant and to build the connection to inject biomethane into the Italgas network. The service connection for Distillerie Bonollo uses the DANA application, which allows continuous monitoring of the quality of the gas fed into the network as well as remote management of the injection point, with the possibility of giving the plant orders and instructions for flow regulation. The new plant produces biomethane using liquid residuals from distillation activities with an average daily amount of approximately 10,000 cubic meters of biomethane, corresponding to about 2.5 million cubic meters per year.

### Memorandum of Understanding with Coldiretti to enhance biomethane production

In November 2023, Italgas signed a Memorandum of Understanding with Coldiretti, the main organization of agricultural entrepreneurs at Italian and European level, aimed at encouraging the development of biomethane production in Italy. The MoU commits the parties to put in place actions to support the construction of new biomethane production plants, the conversion of those currently producing biogas and their connection to gas distribution networks. Coldiretti will ensure the involvement of members in information and training plans on biomethane and raise their awareness of its use in various production and industrial areas. Also, it will carry out a mapping of existing biogas plants that have the potential to be converted to biomethane. On the other hand, Italgas undertakes to contain the evaluation time for proposals to connect new plants to its networks, identifying and implementing actions aimed at reducing the connection costs. Among other goals of the agreement, there's also the commitment to push the Regulator to create the conditions for a more effective allocation of grid connection costs and to implement actions to overcome the limits of receptive capacity of local distribution networks. In this way biomethane will become a real opportunity for agricultural

enterprises, while offering environmental benefits in terms of circular economy and energy transition.

### Network for H<sub>2</sub> distribution

In 2021 the Group performed a study with a technical advisor to assess the level of readiness of its network for hydrogen. Preliminary results have showed high levels of compatibility with hydrogen blending up to 10%, a consistent level considering that EU scenarios envisage ~5% hydrogen in the network by 2030. After this preliminary evaluation of network H<sub>2</sub> readiness, the assessment continues with a detailed analysis of network and plant materials and equipment. As a result, Italgas expects to gather useful information to prioritize and the define the interventions required on the infrastructure to make it "hydrogen ready" by 2028.



### 2.2.1.2 Business diversification

Energy transition constitutes a relevant climate related opportunity for the Italgas Group, which started a multifaceted journey that leverages its expertise in innovation and digitalization. In the water sector, Italgas has set its sights on modernizing Italy's aging water infrastructure, a significant portion of which currently experiences leakages. With water being a finite and precious resource, the urgency to minimize leakages and enhance efficiency cannot be ignored.



Furthermore, Italgas recognizes the pivotal role played by energy efficiency services in advancing climate-related objectives. Through strategic M&A operations, Italgas has consolidated its position in the energy services market, finally creating Geoside, allowing the company to offer a diverse portfolio of services. Italgas also makes available to other operators its expertise in leak detection, acquired over the years through intensive collaboration with Picarro. The EU legislative framework on methane emissions is evolving, and Italgas can leverage the advantage it has been working on for years.

#### Empower management of water resource

To tackle and mitigate climate risk, Italgas strategy foresees a growth in the water segment, taking advantage of the competences developed for the innovation and digitization of the natural gas distribution infrastructure. The demand for investments in the water sector is substantial in Italy, where about the 42% of distributed water is leaked along the network, according to market estimates<sup>27</sup>. Recognizing that water is a finite and precious resource, there is a pressing need to modernize the aging Italian water infrastructure and implement digital metering technologies

promptly. This proactive approach aims to detect and prevent water leakage throughout the entire network. Since 2018, Italgas Acqua initiated a digitization program of its 279-kilometer water network, which is currently fully monitored and controlled remotely. In June 2023, Italgas signed with Veolia an agreement for the acquisition of the stakes held by the Veolia Group in some companies active in the water sector in the regions of Lazio, Campania and Sicily. Post-closing, in 16<sup>th</sup> of October 2023, Italgas positioning in water sector moved to ~10% of Italian population covered, with 6 million people served directly or indirectly. €0.4 billion capex are foreseen in the Strategic Plan 2023-2029, including both the M&A and development plan, whose main initiatives are the smart meters program completion, the modernization of network and plants, and the digital transformation of water business, aiming at improving network operational and energy efficiency and reducing water leakages.

#### Develop energy efficiency business

In 2018, Italgas made a strategic decision to enter the energy services market, driven by the recognition of the crucial role that energy efficiency services play in advancing climate-related objectives. The Group acquired the Energy Saving Companies (ESCO): Seaside S.r.l. in 2018 and acquired control of Toscana Energia

GREEN S.p.A., through the subsidiary Toscana Energia S.p.A. in 2019. In 2021, Toscana Energia GREEN S.p.A. has been incorporated into Seaside S.r.l. The strategic path followed has seen more recently the merger by acquisition of the ESCo Fratelli CERESA S.p.A. (acquired in 2022) into Seaside S.p.A.<sup>28</sup>; afterwards, Seaside S.p.A. changed its company name to Geoside S.p.A. (Geoside) with effect from 21<sup>st</sup> of September 2022. Thanks to these strategic deals, the Group has been enriched with specialized expertise, enabling it to offer a wide portfolio of services to the market. The creation of Geoside confirms Italgas' role as a major player in consolidating the fragmented energy efficiency sector, which plays a pivotal role in achieving the climate goals set by the European Union. From its birth, Geoside has been developing cutting-edge technologies for the energy efficiency sector, promoting the sustainable growth of the businesses it serves and the communities in which it operates. With its proprietary technologies, it offers customised solutions to private customers, companies and public administration that accompany them on the path towards reducing their energy and environmental impact, aimed at continuous improvement. The digital spirit of Geoside is the key that allows to constantly innovate and lead the industry towards the conscious use of resources and respect for the environment.

<sup>27</sup> Report Istat of 22 March 2021. <https://www.istat.it/it/files/2021/03/Report-Giornata-mondiale-acqua.pdf>

<sup>28</sup> On 2 August 2021, Seaside's Extraordinary Shareholders' Meeting approved the transformation from a limited liability company (S.r.l.) to a joint stock company (S.p.A.).

Within the residential sector, Geoside follows different projects of building renovation leading to higher efficiency (e.g., under *Superbonus 110*, *Ecobonus*, etc. incentive framework). The offer is enriched by the internal development of different digital products to monitor and manage household energy consumption (*Savegas*, *Savetermo*, *Savecharge*). In the industrial and tertiary sectors, Geoside provides a wide range of digital energy management services to large, medium and small industrial clients. Leveraging the power of Artificial Intelligence and big data analysis through its proprietary software, *Savemixer*, Geoside can effectively monitor and optimize client's energy consumption. *Savemixer* employs Predictive Energy Analytics to anticipate consumption models, minimize waste, reduce energy costs, provide cost forecasts, and proactively schedule replacements or maintenance activities on the equipment, preventing breakdowns. Additionally, *Savemixer* is instrumental in verifying and reporting the energy savings achieved through Energy Performance contracts, under which, ESCOs are remunerated based on their ability to guarantee predetermined levels of energy savings to their clients. Geoside offers innovative services both to the market and internally, to support Italgas energy transition (with a mutual benefit). The result is an increase in revenues through demand for lower emissions products and services.

Moreover, Geoside allows Italgas to be more competitive in gas tenders, offering local communities the implementation of energy efficiency initiatives as a "value added service" in addition to gas network management and development in the concession area. Strategic Plan envisages further expansion in the sector to become a tier 1 player, with €0.3 billion investments over the plan period 2023-2029, with proactive role in promotion of Energy Efficiency among all segments of our society. On the organic side of its operations, Geoside continues to expand its client base, focusing on digital services, heat plant management, and innovative offerings. In addition to its organic growth efforts, Geoside actively pursues M&A and strategic partnerships with major operators and B2B channels. These collaborations aim to expand both the portfolio of services offered and the breadth of clients reached, further solidifying Geoside's position as a dynamic and forward-thinking player in the energy efficiency sector.

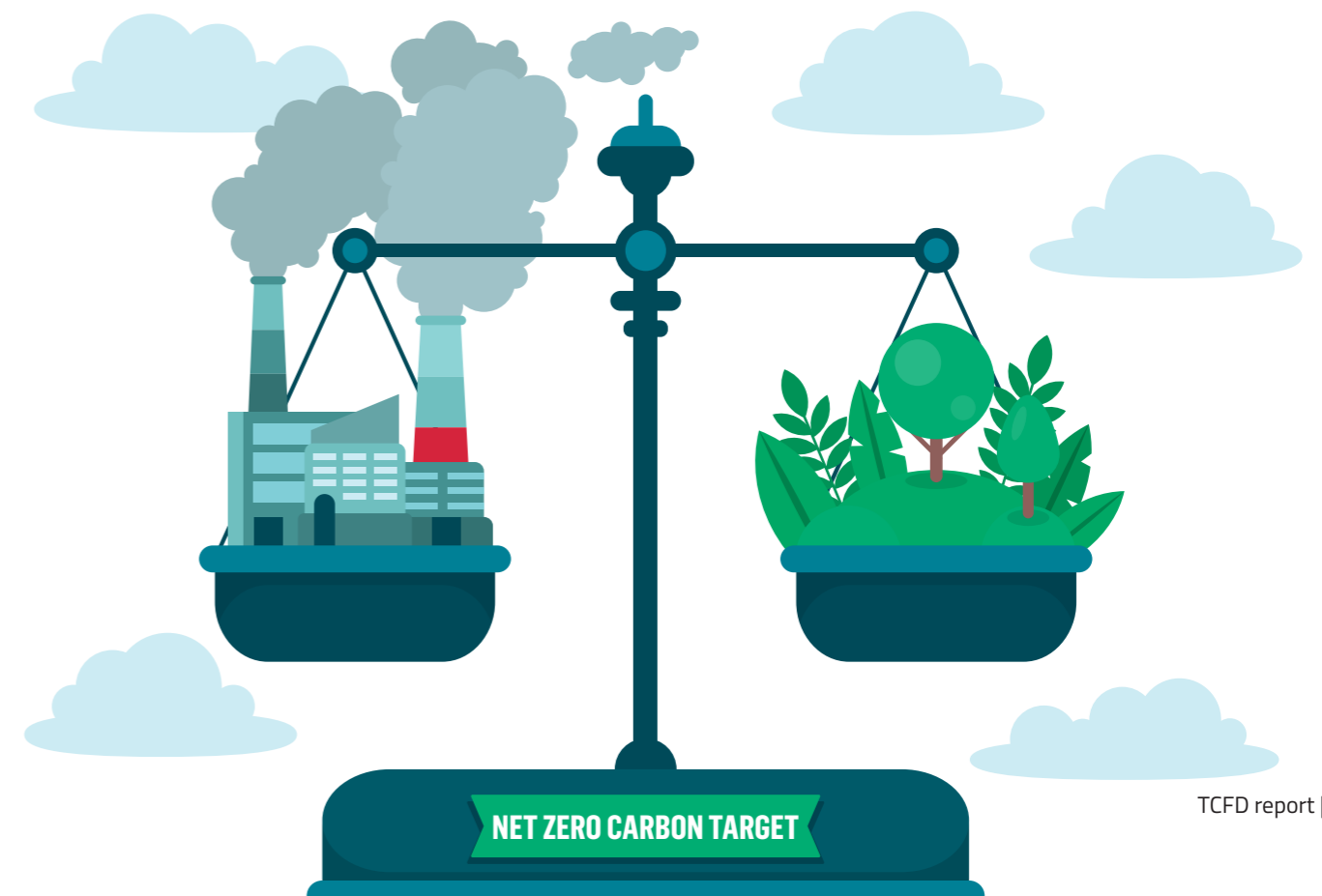
**The fight against fugitive emissions as a business**

Since 2021 Italgas, in collaboration with Picarro, supports other gas distribution system operators (DSOs) to effectively tackle the network leaks and fugitive emissions (see details on the technology at Par. 2.3.2.1). Leveraging its experience with the innovative Cavity Ring- Down Spectroscopy (CRDS) technology,

achieved in setting up the operational model, the Italgas technological hub, Bludigit, provides innovative gas leaks detection and advisory services to the market, proposing the outstanding combination of Picarro technology and Italgas expertise. In 2022, Italgas strengthened its partnership with Picarro through the acquisition of a minority share of the US Company, becoming the sole industrial partner and contributing to the further development of the technology for the fugitive methane emissions abatement, now at the heart of European decarbonization objectives. Thus, by combining its business and environmental goals, Italgas confirms its strong commitment in accelerating the reduction of GHG emissions and promoting the diffusion of cutting-edge technologies.

**2.2.2 GHG emissions reduction strategy**

Italgas' Strategic Plan pivots on ESG factors and responds to the challenges of sustainability, setting objectives for 2028 and 2030, in line with the Net Zero Carbon target for 2050. Scope 1 and 2 targets of the Group are supported by the intensive fugitive emissions detection program and the many energy efficiency initiatives carried out in cooperation with Geoside, Group's ESCo. Reducing emissions is likely not enough to achieve EU 2050 Net-Zero target. The deployment of carbon capture and usage technologies is therefore needed to meet long-term climate targets. Italgas is engaged in the study of these innovative solutions and technological best practices.



### 2.2.2.1 Scheduled gas leakage detection

An important pillar of Italgas strategy is the progressive decarbonization of the managed infrastructure, mainly reducing fugitive methane emissions through a frequent, granular control of the network and all possible emission points, in line with the guidelines provided by the European Commission.

The Group is very committed on minimizing the fugitive methane emissions, using and promoting the adoption of the most advanced leak detection solutions. Already in 2018, Italgas introduced Picarro Surveyor, the most cutting-edge technology available in the field of network monitoring and the identification of gas leaks based on CRDS (Cavity Ring- Down Spectroscopy) technology, a sophisticated sensing technology that, as compared with traditional technologies, offers important advantages in terms of speed of action, sensitivity in detection and scope of the areas under control. Since 1 January 2020, Picarro Surveyor fully replaced other traditional systems on 100% of the natural gas network managed by Italgas. In 2023 Picarro technology has been deployed also in Greece, to inspect nearly 9,000 km of pipelines, corresponding to the 120% of the network.

Furthermore, Italgas is actively engaged in a global scouting of new technologies and solutions designed to enhance the precision and effectiveness of fugitive emissions detection. One such solution

involves the use of satellites equipped with multispectral imaging sensors to identify fugitive emissions in areas that are otherwise inaccessible. This approach offers several advantages, including remote leakage detection, data collection from remote and challenging locations, rapid results availability within hours, and the potential to expand the range of services, such as obtaining optical images for monitoring high-pressure pipelines and unstable terrains.

Italgas, as a company member reporting under the OGMP 2.0 Reporting Framework (see details at Par. 2.5.2), submits annually the required information and, in 2021, 2022 and 2023, achieved the “Gold Standard”. To achieve such recognition, Italgas had to demonstrate an explicit and credible path to reach the required reporting levels for operated and non-operated assets<sup>29</sup>.

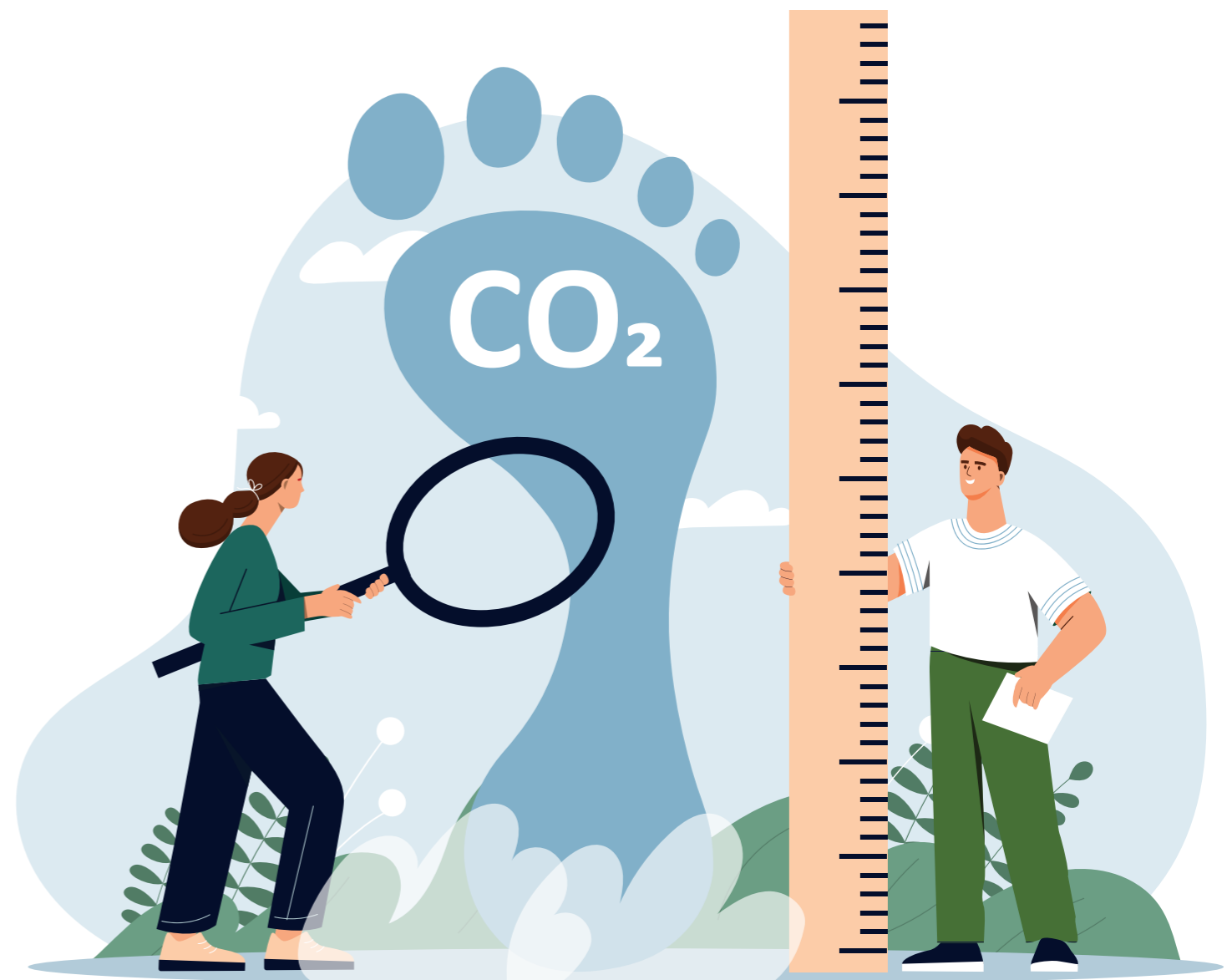
### 2.2.2.2 Foster our energy efficiency

The scenario analysis conducted for the Strategic Plan also revealed the need for Italgas to mitigate, transfer and adapt its assets to the risks deriving from climate change. Italgas has embarked on a challenging mission to reduce its net energy consumption through a series of strategic initiatives aimed at enhancing industrial efficiency and innovation is at the core of these actions to improve asset energy efficiency.

To achieve these goals Italgas

implemented a series of efficiency-enhancing measures, including the implementation of additional optimization systems, the digitization of monitoring and control systems, and the widespread adoption of energy intelligence solutions provided by Geoside, the ESCo of the Group (see details at Par. 2.3.1.2). One notable initiative involves enhancing energy

efficiency on preheating systems of Italgas’ IPRM (withdrawal, reduction, and metering plant) through the utilization of cogeneration, heat pumps and thermal storage using phase change materials to reduce gas industrial consumption; furthermore, Italgas Strategic Plan 2023-2029 outlines also a green self-production and consumption strategy (e.g. at the reduction stations).



<sup>29</sup> Italgas faced this challenge by setting a target for the reduction of fugitive emissions by 30.8% by 2027, starting from 2020: this specific target is also taken into consideration in the target for Scope 1 and 2 GHG emissions reduction of the Group.

Italgas is also carrying on building renovation projects in its operational offices throughout Italy and Greece, with a primary focus on reducing energy consumptions and mitigating (and adapting to) the impact of an increasing annual average temperature, which would otherwise lead to higher energy usage during the hot season. Further, to reduce the energy consumption of its vehicles, Italgas is committed on fleet optimization and renewal. The new operational fleet will benefit from the technology advancements made by the car industry since 2017, when the current fleet was awarded. Also, the innovations delivered by the Digital Factory of the Group are positively impacting the kilometres travelled by the fleet. An example is WorkOnSite, an AI application that automates and remotely supervises construction sites, significantly reducing the presence of Italgas

technicians on-site, and consequently both Italgas and external contractors' needs to travel back-and-forth to the construction sites. In addition to the above-mentioned changes to the fleet, in 2022 Italgas has implemented a fleet management software designated to monitor fuel consumption and vehicle status. Additionally, the Company is conducting annual training activities aimed at promoting safe and sustainable driving practices among its personnel. Also, Italgas implemented "Eco Drive Challenge", that is a challenge targeting all employees to whom a car was assigned. Such challenge aims at making every driver aware of sustainability issues and spur them to drive better and better in terms of fuel consumption and driving safety. These combined efforts underscore Italgas' commitment to reduce energy consumption and promoting sustainability across various aspects of its operations.



### 2.3 Strategy to deal with climate change: our adaptation plan

Coherently with Group Strategic Plan targets and the climate scenario analysis outcomes, the Group has identified and is currently implementing a set of specific actions that enable the adaptation to climate change, in order to anticipate the adverse effects of climate change and to take appropriate action to prevent and/or minimize the damage it can cause.

#### Network: mitigating impacts and/or reducing time of intervention in case of occurrence of extreme natural events

- **Replacement of grey cast iron with hemp and lead joints**

*Timeline:* Completion expected in 2023 (subject to permitting)

The repurposing of the network sees, among other things, the full replacement of grey cast iron and other obsolete materials pipes with new ones to prepare the network to handle different types and blends of gases and be more effective in coupling with the consequences of climate change remote controls in case of occurrence of extreme climate events, mitigating impacts and/or reducing time of intervention (e.g., remotely securing network portions in case of floods, fires, earthquakes).

- **DANA – Digital Advanced Network Automation – the command-and-control**

#### system of the network of the future

*Timeline:*

- 2021: Project Launch (status: completed);
- 2022: Installation on 21 distribution plant Italgas Reti and on 59 distribution plant MEDEA (status: completed);
- 2023-2024: 90% network digitised and monitorable by DANA by 2024 in Italy and by 2026 in Greece.

The command-and-control system unlocks 3 major benefits: i) Ensure the monitoring of a distributed system in which physical variables are interdependent; ii) Enable remote management with commands on main processes of network and plants and increase the efficiency of the governed processes and the flexibility of the network; iii) Enable management of renewable gases (e.g., biomethane, hydrogen). It is a practical example of Italgas' adaptation on climate risks.

- **Smart maintenance initiative**

*Timeline:*

- 2022: release of an initial prototype (completed);
- 2023–2024: roll out plan to all Italgas distribution plants

Digitization increases efficiency, improves safety, network management and the quality of the service, enables predictive maintenance, for more effective control of the operating parameters, and helps to guarantee operation under any conditions.

In 2021, the development of a Geographic Information System (GIS) was started in collaboration with Picarro, of a GIS model for asset management used to design smart maintenance for the Italgas networks, with a view to extension to Group level thereafter. Continuing with the enabling of smart maintenance, new solutions have been introduced based on machine learning and AI for predictive analysis and the optimisation of the function of critical components of the network, such as smart meters and the odourisation stations.

▪ **Radio Frequency Identification Markers in new networks**

*Timeline:*  
 – 2019: first installation (completed);  
 – currently ongoing (23.441 markers already installed as of end of 2022).  
 The new distribution networks are equipped with Rfid markers, again positioned inside the excavation at an average step of 1 every 50 metres, which allow for the traceability and localisation of the pipes directly from the road level without any need for invasive interventions in the subsoil and consequent interference with traffic. In case of adverse meteorological phenomena impacting the network, this represents an effective adaptation tool allowing to intervene quickly.

**Real Estate: reducing office energy**

**consumptions, mitigating the impact of an increase of annual average temperature (that would otherwise result in an increase of energy consumption)**

▪ **Building renovation**

*Timeline: 2023-2024*  
 The virtuous reduction of civil consumption, now an integral part of real estate management, will continue during 2023 and 2024 along the following lines: –the process to renew building stock; –installation of photovoltaic systems to increase the amount of electricity self-produced and consumed on site; –extension to all the Group’s operating sites of the ability to monitor consumption in real time and analyse it using the proprietary platform developed by Geoside, thanks to introduction of smart sensors.

**Water leakages: reducing water leakages, mitigating the impact of an increase in average annual temperature (which would otherwise lead to a decrease in the volume of available water)**

▪ **Digital transformation for Water Business**

*Timeline: 2023-2029*  
 Water smart meters, network (DMAs) balancing, real-time monitoring and predictive maintenance to improve network operational and energy

efficiency and reduce water leakages. In 2023, installation of water smart meters, including real-time pressure sensors, began throughout the network. The subsequent subdivision of the whole network map – necessary to collect precise data on water leakages – will be completed within 2024.

**Industrial consumption: energy auto-production to mitigate effects on energy insecurity due to the occurrence of extreme climate events**

▪ **Installation of photovoltaic plants**

*Timeline: 2023-2024*  
 In 2023 and 2024, Italgas Reti plans to replace traditional circulators with inverter-driven electro- circulators inside thermal power plants for preheating, revamp existing photovoltaic plants with more efficient modules, as well as new installations of photovoltaic plants on both IPRMs and GRFDs, to ensure the self-production of the electricity needed to satisfy the needs of the new digitised plants.



## 2.4 Training programs for a just transition

The digitization process has been accompanied by a commitment to support Italgas' workforce through upskilling and reskilling initiatives, enabling the employees to effectively navigate and anticipate the changes brought about by the digital transformation.

This pioneering approach has proven increasingly effective, equipping Italgas' people with the skills and tools they need to interpret and use the vast amount of data generated daily by IoT sensors deployed in the infrastructure. In alignment with the Sustainable Value Creation Plan, each employee is going

to receive 45 training hours per year by 2029, with a specific emphasis on digital proficiency.

In 2023, the Italgas Academy was launched, as a vital resource for promoting continuous upskilling and lifelong learning. Recognizing that the primary challenges posed by digital transformation pertain to people, there is a continued dedication to investments in upskilling and reskilling initiatives.

The Italgas Academy aims to empower people to achieve strategic business objectives through the constant involvement, motivation, and professional development, in particular to:

- support the change management process, culture change and diversification of business;
- disseminate the leadership model and accompany the evolution of management at all levels towards an effective use of evaluation and feedback;
- develop effective up-reskilling paths acting our internal subject matter experts;
- strengthen the culture of innovation and technological evolution.

Also, Italgas committed to extending digital literacy within the broader energy sector beyond the organization. In fact, the Group is engaging with schools both to encouraging children, in a simple and fun way, to respect the environment and its resources, and to providing information and training in the field dedicated to students and teachers.

These latter projects have multiple objectives, including sharing information on the energy and gas distribution sector, developing relations between the company and schools, promoting the development of talent and supporting guidance around decisions about transitioning to university or looking for a job. Within its Sustainable Value Creation Plan, Italgas committed to engage 30,000 people in external training activities dedicated to the energy transition by 2029.

## 2.5 Main partnerships on climate change

### 2.5.1 Supply chain engagement

The Group also intends to achieve an important objective: aware of the relevance of including its supply chain in the fight against climate change, Italgas is developing an approach inspired by "Partnerships for the goals" (SDG 17), by promoting the best techniques/ technologies available or, where possible, by identifying new solutions with its suppliers. Based on this journey, the Group determined, in the Strategic Plan, a specific target for the reduction of Scope 3 emissions.

Value chain engagement plays a significant role in realizing a climate transition plan and organizations with significant emissions in their supply chain, can leverage their buyer power and engage their suppliers towards a 1.5°C aligned transition. In this perspective, Italgas is progressively introducing specific climate-related contractual clauses, among which the requirement by suppliers to have set a target that is aligned with SBTi GHG emissions reduction path or, if no SBTi target setting methodology is available for their sector, a GHG emissions reduction target that is aligned with the Group's ones. Supply chain engagement on climate issues is in fact one of the main elements to deliver a just transition, with the aim not to leave





anyone behind in the fight against climate change.

The plan for achieving the targets for the supply chain emissions includes the following main activities:

- a continuous supply chain engagement with awareness and training campaigns, also considering the relevance of small and medium enterprises;
- the inclusion of rewarding criteria in tenders for suppliers, for example according to the level of adoption of good/best practices in the reduction of own GHG emissions, and in contractual clauses;
- the promotion of the best available techniques/technologies for circular economy or, where possible, the identification of new solutions together with the suppliers.

### 2.5.2 Other partnerships

The vocation for energy transition has also led the Group to actively participate in several important international initiatives and partnerships, focused on the sector and on the fight against climate change.

Some of the most important associations which Italgas collaborate with:

- **GD4S:** Italgas is among the founding members of GD4S<sup>30</sup>, a non-profit association that unites the ten major operators in the natural gas distribution sector in Europe. Italgas active role in

the association is witnessed by the Presidency of the CEO, Paolo Gallo from 2020 to 2022. The association's mission is to promote the energy transition through the adoption of most innovative and sustainable technologies in gas sector, facilitating the transition towards a low carbon economy.

In particular, GD4S supports biomethane development, the study and implementation of Power to Gas technologies for the production of "green" hydrogen and its use as energy carrier (for its ability to carry and store renewable energy), taking advantage of the existing infrastructure now used for natural gas, the promotion of circular economy, and the reduction of the carbon footprint of its members.

In 2022, GD4S expressed opinions, also through joint statements with other associations on policy topics like biomethane, specifically calling for biomethane binding targets to be included in Gas Decarbonising packages in line with the REPowerEU targets and made specific proposals on unbundling rules for hydrogen, pushing the view that DSOs role should be clearly recognised in EU Hydrogen Regulation, as they act as accelerator of green gases development.

- **OGMP:** Moreover, Italgas has taken a leadership role in the gas DSO industry by joining in November 2020 the second edition of the Oil and Gas Methane Partnership Initiative (OGMP<sup>31</sup> 2.0),

as soon as it was extended to sectors midstream and downstream of the O&G chain. OGMP 2.0 is a voluntary initiative created by the Climate and Clean Air Coalition (CCAC) and the United Nations Environmental Program (UNEP), originally launched during the United Nations (UN) Secretary-General's Climate Summit in 2014. It aims at encouraging the participating companies of the Oil and Gas (O&G) sector to report methane emissions from operated and not operated assets and to declare a reduction target of such emissions to be achieved within 2025 (base year 2015). Companies fully and reliably reporting methane emissions data and showing progress toward the declared target via a credible implementation plan are annually awarded the "Gold Standard" Badge in the IMEO - International Methane Emissions Observatory - annual report.

Italgas is considered one of the leading companies of the distribution sector in the measurement, reporting and verification of Methane Emissions. It was awarded the "Gold Standard" badge in 2021, 2022, and 2023.

- **Proxigas:** Italgas is also a member of Proxigas<sup>32</sup>, which is also very proactive and strongly fosters European ambitions towards climate change, by supporting the use of gas infrastructures to effectively achieve the energy transition towards decarbonization, through an increase in the production and use of biomethane, renewable syn-gas and green or decarbonized hydrogen. Proxigas analyses and advocates almost on any gas-related subject: technical, legal, regulatory and policy. Internal work is carried out by various bodies (committees, WGs and TFs).



<sup>30</sup> <https://gd4s.eu/>  
<sup>31</sup> <https://www.ogmpartnership.com/>  
<sup>32</sup> <https://www.anigas.it/>

In 2022 Italgas chaired the Labor Commission and participated in the task force Concessions, Tariffs, Technical Standards on Service and Technical Standards on Measurement. It also participated in or contributed on almost every topic, excluding market related issues.

- **Ready4H2:** in 2021, Italgas adhered to “Ready4H2<sup>33</sup>” (Ready for Hydrogen) to promote access to hydrogen by end users and the development of the entire value chain. The project aims at sharing knowledge and competences and establish how a solid European hydrogen market can be crafted, making information available to European and national decision-makers to define public policies supporting a hydrogen economy. In 2022 and 2023 Ready4H2 mapped the readiness of the European gas distribution grid to inject and distributed green hydrogen, estimated to be around 92%, and offered a platform for knowledge sharing to the DSOs participating to the initiative to help achieving hydrogen injection.

- **EUROGAS:** Italgas is also member of EUROGAS<sup>34</sup>, the European trade association that groups together different gas DSOs. The main topics covered in its working groups are energy transition and the role of infrastructure in the decarbonization process, tackling down climate change. In 2022 and 2023

Eurogas has been particularly active on the Gas Package, advocating for the inclusion of a European binding target for biomethane injection in the gas grid, consistent with REPowerEU ambition and on Methane Emission Regulation, requesting a technically feasible and cost-effective approach to reduce methane leaks across the whole gas value chain.

- **BIP:** Italgas entered at the end of 2022 into the Biomethane Industrial Partnership<sup>35</sup>, a European Commission initiative aimed at translating into reality REPowerEU’s 35 bcm ambition of biomethane production by 2030. More specifically, Italgas is a member of task force on the optimization of biomethane plant connection to the gas grids and is an active contributor to the other TFs.

### 2.5.3 Climate change innovation platforms

Innovation is a key enabler of Italgas energy transition, and it is pursued through a combination of internal R&D, open innovation and venture funds.

#### Open innovation

Italgas has stepped up its search for technologies to support the transformation and sustainability of gas distribution networks through Ideas4Italgas platform, a brand of the Open Innovation initiatives, a tool

to accelerate corporate innovation and strategic positioning along the international innovation chain, gathering the best ideas from both outside and inside the Company and developing them in a collaborative manner, and through the continuous and permanent scouting of start-ups and innovative national and international SMEs, as well as through the consolidation and strengthening of branches in Silicon Valley and Tel Aviv, with the aim of actively presiding over two of the world’s largest innovative technology hubs. In 2023 ended the first internal innovation call with the aim of bringing out employees’ talent and creativity, gathering proposals and solutions on various topics; Italgas is now working to create prototypes of the three winning projects. In addition to continuous and permanent scouting, to accelerate the issue of sustainability, a vertical challenge was launched on electrical

energy harvesting from renewable and thermal sources. An initiative called “Supplier Driven Innovation” was also launched for the first time, aimed at stimulating innovation among suppliers and other stakeholders working in the gas, water and energy efficiency industries. The objective is to find technological and disruptive solutions in the areas of operational excellence, digitalisation and sustainability. A new open innovation challenge has been launched in collaboration between the Group’s ESCo and Lazio Region and it has been called “Smart Energy for Industry 5.0”. This challenge aims to stimulate participants to present solutions and technologies for energy efficiency in the industrial and service sectors that can help boost business efficiency, resilience and sustainability, all this through 4.0 technologies such as IoT, Big Data Analytics and Artificial Intelligence.



<sup>33</sup> <https://www.ready4h2.com/>

<sup>34</sup> <https://www.eurogas.org/>

<sup>35</sup> <https://bip-europe.eu/>

### Venture investing

Open innovation continues to be a formidable lever to get in touch with the best innovative companies and to bring cutting-edge technologies within the Group. Italgas joined the new initiative of CDP Venture Capital SGR<sup>36</sup>, being part of the Energy Tech sector. The objective is to seize every useful opportunity to expand the perimeter of innovation and continue to play a pivotal role in energy transition.

### Polytechnic University of Turin

The partnership between Italgas and the Polytechnic University of Turin was signed in July 2020, aiming at developing joint research, innovation and training activities favoring the energy transition, a sustainable mobility and circular economy. The collaboration includes research projects on different topics, such as digital innovation, optimization of energy consumption, improvement of network efficiency and recovery of resources. These actions have the objective to develop innovative technologies for feeding renewable gases into existing networks, like “power to gas” systems to recover surplus energy production, and to create an advanced gas smart meter especially for “smart” networks.

The Polytechnic and Italgas will also be working on several educational fronts, with joint projects aimed at developing university Master’s courses, courses for recent graduates, events and

dissemination activities through national and international networks. Italgas has also provided professors and researchers with the spaces and expertise of its Digital Factory, the driving force behind the digital transformation of the Group.

### Innovation Antenna in Silicon Valley

To respond to the need to improve the performance of both our Group and, in the future, of the entire gas distribution sector and therefore of the country, Italgas decided to go even further by opening a stable presence, Italgas’ technological outpost, at INNOVIT, the home of Italian Innovation & Culture in Silicon Valley. The Group believes in the open innovation approach which allows companies to grow faster and improve their level of competitiveness. Italgas also consolidated its presence in US by dedicating greater effort to the activities conducted with the antenna already started with Mind The Bridge in recent years, an international platform that advises and supports companies and government organizations in the field of open innovation.

Italgas has also strengthened its presence in Tel Aviv by sponsoring the “Climate Solution Prize” initiative with the aim of finding the best startups that are working to solve the problems related to climate change and launching an initiative aimed at decarbonising the infrastructure of the Group.



<sup>36</sup> [https://www.cdpventurecapital.it/cdp-venture-capital/it/dettaglio\\_comunicato.page?contentId=COM2455](https://www.cdpventurecapital.it/cdp-venture-capital/it/dettaglio_comunicato.page?contentId=COM2455)

# ERM Model

## and climate-related risks and opportunities

### 3. ERM MODEL AND CLIMATE-RELATED RISKS AND OPPORTUNITIES

#### 3.1 Enterprise Risk Management Model

In line with best practices and risk management standards (e.g. the COSO framework and ISO 31000), Italgas ERM process ensures the identification, evaluation, prioritization, treatment, monitoring and reporting of risks related to Group processes. ESG related risk, including physical and transitional risks related to climate change, are integrated in the process.

The ERM process is performed quarterly depending on severity as well as in case of changes of internal/external context. All risks are assessed at least yearly.

ERM process covers all controlled entities, all relevant parts of value chain and all the potential applicable events. Italgas also use its influence, as appropriate under the circumstances, to ensure that the entities in which it has a non-controlling interest meet its standards.

Italgas adopts a central organizational model for managing the ERM process: the ERM Function provides methodological and operative support across the Group,

to ensure a proper risk management system, cataloguing, consolidating and homogenizing all corporate risks, including climate change related risks.

Risk Identification involves Process Owners across the Organization: each risk is described in terms of business sector, process, root causes and consequences. For each risk, a Risk Ownership is identified. The ERM Function supports risk identification analyzing the context to incorporate updates on the description, significance and management of the risks already existing in the portfolio, and the detection of new emerging risks.

To ease climate change risks identification, the ERM Function also performs a specific analysis based on physical and transition scenarios to identify the main drivers of climate change that could impact Italgas businesses in the short (1 year), medium (from 2 to 7 years) and long-term time horizon (beyond 7 years), and, for each of these drivers, a predefined risk/opportunity events list applicable to Italgas. The list is then fine-tuned and better depicted with Strategy



Function, Sustainability Function as well as with the Risk Owners. Climate change risk and opportunities are reported to Control and Risk Committee, Sustainable Value Creation Committee and Board of Directors.

Risk measurement consists in rating risk likelihood and impacts concerning both quantitative and qualitative aspects: financials, HSE (including also specific assessment of impact in terms of GHG emission, energy or water consumption, waste), Operation, HR, compliance, market and reputation impacts. To support the evaluation, the Group has defined "risk scoring scales", in which a specific "scoring grid" is defined for risk probability and risk impact measurement. Climate change risk/opportunities measurement, given the long timeframe of the impact, are evaluated in terms of likelihood and impacts, both over Strategic Plan timeframe (2023-2029) and beyond it (2029-2050 timeframe). Their quantification has been performed based on Italgas Strategic Plan assumptions and evaluating the possible alternative evolution of physical parameters and energy market variables that could impact Italgas Businesses. Such parameters and their values came from Physical RCP 1.9, 4.5, 8.5 scenario analysis as well as energy scenario analysis (e.g. ENTSOG-ENTSO-E TYNDP 2022 scenario, ...). Risk/opportunity quantification outcomes have been performed with Strategy Function, Sustainability Function as well as with the Risk Owners.

Risk prioritization consists in prioritizing each risk assigning a "risk rating", based on risk measurement outcomes. The ERM function consolidates the assessments results assigning the risk rating (critical, high, medium and low) to each risk and sharing it with the Risk Owner.

Risks scored as critical are also considered to have a substantial strategic impact – such score depends on the combination of high level of probability and maximum impact on at least one of the identified scales. Regarding climate change risk/opportunities, given the long timeframe of the impact, risks are prioritized based on likelihood, Impact over 2023-2050 timeframe and the expected time horizon.

Risk strategy and treatment: for all identified risks, based on their nature and related information collected, as well as risk evaluation performed, a risk strategy (monitor, mitigate) is defined. Risk strategy is then "listed" (at an operational level) into "risk treatment actions", distinguishing between "actions in place" and "planned risk treatment actions" with related deadlines. Risk treatment plans for the main risks are presented to all the subjects involved in the process (Risk Owner, Top Management, Control and Risk Committee). Risk reporting is shared/discussed with Top Management, Control and Risk Committee, Board of Statutory Auditors, Supervisory Body to enable the assessments on the effectiveness of the Internal Control and Risk management System.

Risk report is addressed to other functions with specific duties regarding internal control and risk management (e.g. Compliance, Head of Audit Dept.). Finally, the Sustainability Committee examines and assesses the integration of ESG aspects into the ERM matrix (including Climate Change topics). Italgas' strategy is deeply influenced by climate change: climate scenario analysis and related risks and opportunities, in fact, are constantly considered while drafting the Strategic Plan.

Italgas strategy is deeply influenced by climate change: climate scenario analysis and related risks and opportunities, in fact, are constantly considered while drafting the Strategic Plan. Physical and transitions scenarios have been compared in terms of GHG emission in 2020-2050 timeframe to identify comparable scenarios and to set the reference scenario upon which Strategic plan is based. In drafting the Strategic Plan, the ERM function, in coordination with all relevant departments and functions, carries out specific in-depth analysis of risks, opportunities and uncertainties related to the Strategic Plan including those arising from climate change. What If analysis and Montecarlo simulation allows to estimate the overall volatility of the Plan economic and financial targets and to evaluate the level of resilience of the Strategic Plan. Finally, the Risk Analysis section of the Strategic Plan document is approved by the Board of Directors.

### **Climate Risk Assessment – Physical and transitional risks**

Given the long timeframe that must be considered to fully take into the account of occurrence and/or impact of climate risks and opportunities, such events are measured both over the Strategic Plan 7-years' timeframe and beyond it. Regarding Physical risks and opportunities of Climate Change, our climate scenario analysis is based on a third-party climate model that allows to obtain the evolution of main physical parameters up to 2050, under RCP 1.9, 4.5, 8.5 scenarios in all the local areas (up to municipal level) already served by Italgas or in those areas the Group plans to serve in the future. Physical parameters considered by the model include, for example, heating degree days and days with heavy rainfalls. Their potential impacts are then assessed on key business variables (e.g. active redelivery points), as well as considering potential damages to overall gas infrastructure (upstream and downstream relative to distribution). Regarding Transition risks and opportunities of Climate Change, they are analyzed based on several third parties' climate and energy scenarios up to 2050 and involving key Process Owners to deepen key transition drivers (e.g. regulation, technology) and the embedded risks and opportunities. Considerations of impacts include the overall gas infrastructure (upstream and downstream related to distribution).

### **3.2 Climate change risks and opportunities**

Climate change risk/opportunity assessment (described above) enabled to identify the main drivers of climate change that could impact Italgas businesses. For each driver, both risks and opportunities

were identified and analyzed over 2023-2050 timeframe. Some of the opportunities identified - embedded in our seven years Strategic Plan - also bring a contribution in terms of risk mitigation, i.e. decreasing the likelihood of risk events and/or risk impact in case of occurrence.

CATEGORY	DRIVER	RISK	OPPORTUNITY
PHYSICAL - Chronical	Increase of average temperatures	(A) Increase of Cooling Degree Days and decrease of Heating Degree Days in the areas in which Italgas operates	(F) Business Diversification: growth in Energy Efficiency Business
PHYSICAL - acute	Increase of frequency/intensity of extreme natural events	(B) Increase of severity and frequency of extreme natural events, causing damages to Italgas assets	(H) Demand growth for gas leakage detection services (G) Business Diversification: growth in Water sector
TRANSITION Regulation	Legal and regulatory environment related to greenhouse gas emissions	(C) Regulatory review to Increase of penalties and/or to reduce incentives related to natural gas leakages	(H) Demand growth for gas leakage detection services (I) Regulatory review to promote network upgrade enabling the distribution of gas other than methane (biomethane, hydrogen, e-gases)
TRANSITION Technology and markets	Energy Transition (technology and markets)	Weakening of gas weight in residential energy mix related to: (D) Cooking / water heating (E) Space heating	(J) Assets repurposing and digitization, in order to enable the use of renewable gases to satisfy residential demand (F) Business Diversification: growth in Energy Efficiency Business (K) Entrance into new markets (geographies) to support and to accelerate energy transition (L) Reduction of internal energy consumption

# Climate change risks matrix



Area	Risk	Time horizon <sup>37</sup>	Likelihood	Financial Impact	Main Management Methods
Physical - Chronic	<b>(A)</b> Increase of average temperatures in the areas in which Italgas operates, driving to an increase of Cooling Degree Days and a decrease of Heating Degree Days	Long Term	Likely	Low	<ul style="list-style-type: none"> <li>- Commitment in reducing greenhouse gas emissions<sup>38</sup>:                             <ul style="list-style-type: none"> <li>i) Scope 1 and 2: reduction by 34% by 2028 and by 42% by 2030 (baseline 2020) with Net-Zero goal by 2050,</li> <li>ii) Scope 3: reduction by 30% by 2028 and by 33% by 2030 (baseline 2020) with Net-Zero goal by 2050;</li> </ul> </li> <li>- Commitment in reducing net energy consumption by 27% by 2028 and by 33% by 2030 (baseline 2020)<sup>39</sup>.</li> <li>- Group presence in energy efficiency business through the subsidiary Geoside, with growth perspectives (see OPPORTUNITY F)</li> <li>- actions aimed at reducing civil and industrial energy consumption and emissions (natural gas and electricity): energy efficiency interventions and the renewal of the Group's real estate assets, technological innovations to optimise industrial consumption, energy intelligence solutions by the ESCo, Geoside - on the distribution network plants equipped with pre-heating.</li> <li>- Group presence in Water business through the subsidiary Nepta (former Italgas Acqua) with growth perspectives (see OPPORTUNITY G)</li> <li>- Actions reducing water leakages: Digital transformation of water grids: Water smart meters, network (DMAs) balancing, real-time monitoring and predictive maintenance to improve network operational and energy efficiency and reduce water leakages. In 2023, installation of water smart meters, including real-time pressure sensors, began throughout the network. The subsequent subdivision of the whole network map – necessary to collect precise data on water leakages – will be completed within 2024.</li> </ul>

<sup>37</sup> A "time horizon" less than or equal to 1 year is considered short-term, between 2 and 7 years is considered medium-term, longer than 7 years is considered long-term. The classification of Likelihood and Magnitude of financial impact categories refers to CDP classification (<https://www.cdp.net/en/guidance/guidance-for-companies>). The magnitude of financial impact is assessed based on the impact on the Group Net Profit.

<sup>38</sup> The perimeter of reporting is the same as the scope of consolidation for financial data as of 31/12/2022. Reported data cover as of such date every consolidated subsidiary, regardless of legal form, host country or size, and refer for the future to an unchanged perimeter – i.e. excluding any changes following M&As, and ATEM (Minimum Territorial Area) tenders of gas distribution concessions.

<sup>39</sup> Ibidem

# Climate change risks matrix



Area	Risk	Time horizon	Likelihood	Financial Impact	Main Management Methods
Physical - Acute	<b>(B)</b> Increase of severity and frequency of extreme natural events causing damages to Italgas assets	Medium Term	Likely	Low	<ul style="list-style-type: none"> <li>- Commitment in reducing greenhouse gas emissions<sup>40</sup>:</li> <li>i) Scope 1 and 2: reduction by 34% by 2028 and by 42% by 2030 (baseline 2020) with Net-Zero goal by 2050,</li> <li>ii) Scope 3: reduction by 30% by 2028 and by 33% by 2030 (baseline 2020) with Net-Zero goal by 2050;</li> <li>- Commitment in reducing net energy consumption by 27% by 2028 and by 33% by 2030 (baseline 2020)<sup>41</sup>.</li> <li>- Third Party Liability Insurance and Asset Protection coverage.</li> <li>- Integrated Centre for Supervision (ICS) active 24/7 which makes it possible to monitor the status of the network remotely using remote monitoring systems, manage requests for prompt intervention, identify the places that require intervention and monitor the progress of making conditions safe.</li> <li>- Procedures and systems for emergency management, emergency plans with measures defined to make plants safe and guarantee service continuity.</li> <li>- Health and safety procedures, communication campaigns, training and meetings to raise awareness and analyse the prevention of accidents, initiatives Low that also involve suppliers/contractors.</li> <li>- Actions mitigating impacts and/or reducing time of intervention in case of occurrence of extreme natural events:</li> <li>i) continuously invest in network maintenance, replacement of cast iron pipes with mechanical joints, replacement the grey cast iron pipes with hemp and lead joints to prepare the network to handle different types and blends of gases</li> <li>ii) progressive adoption of DANA - Digital Advanced Network Automation - the command-and-control system of the network of the future: the command-and-control system unlocks 3 major benefits: a) Ensure the monitoring of a distributed system in which physical variables are interdependent; b) Enable remote management with commands on main processes of network and plants and increase the efficiency of the governed processes and the flexibility of the network; c) Enable management of renewable gases (e.g., biomethane, hydrogen). At the end of 2022 DANA manages 80 plants in the Italgas network. The adoption of DANA is also enhanced within the Sustainable Value Creation Plan, which include the following target: 90% network digitised and monitorable by DANA by 2024 in Italy and by 2026 in Greece.</li> <li>iii) Smart Maintenance Initiative: Geographic Information System (GIS) model in place, implemented with Picarro, to address smart maintenance for the Italgas networks, with a view to extension to Group level thereafter. Continuing with the enabling of smart maintenance, new solutions have been introduced based on machine learning and AI for predictive analysis and the optimisation of the function of critical components of the network, such as smart meters and the odourisation stations.</li> <li>iv) Radio Frequency Indicator Markers in new distribution network: new distribution networks are equipped with Rfid markers, again positioned inside the excavation at an average step of 1 every 50 metres, which allow for the traceability and localisation of the pipes directly from the road level without any need for invasive interventions in the subsoil and consequent interference with traffic.</li> <li>-Actions mitigating effects on energy insecurity due to the occurrence of extreme climate events: Installation of photovoltaic plants: In 2023 and 2024 Italgas Reti plans to replace traditional circulators with inverter-driven electro- circulators inside thermal power plants for preheating, revamp existing photovoltaic plants with more efficient modules, as well as new installations of photovoltaic plants on both IPRMs and GRFDs, to ensure the self-production of the electricity required to satisfy the needs of the new digitised plants.</li> </ul>

<sup>40</sup> Ibidem

<sup>41</sup> Ibidem

# Climate change risks matrix



Area	Risk	Time horizon	Likelihood	Financial Impact	Main Management Methods
Regulatory	<b>(C)</b> Regulatory review to increase penalties and/or to reduce incentives related to natural gas leakages	Medium Term	Unlikely	Medium-low	<ul style="list-style-type: none"> <li>- Planned search for gas leakages using the best systems and technologies (Picarro Surveyor) and with higher levels of coverage of the network inspected on an annual basis than the standards defined by ARERA.</li> <li>- Adoption of more stringent gas leakage repair service levels with respect to those defined by ARERA</li> <li>- Italgas joined the second edition of the Oil and Gas Methane Partnership Initiative (OGMP 2.0), the voluntary initiative aimed at helping companies cut methane emissions in the Oil&amp;Gas sector, created by the Climate and Clean Air Coalition (CCAC) and by the United Nations Environmental Programme (UNEP). In 2021, 2022 and 2023 Italgas was recognized as a Gold Standard company, thanks to a quality of data mainly considered "excellent" for operated assets and for non-operated assets. In addition, the same report certifies that the Company has presented a good implementation plan, assisted by credible scheduling, objectives and technological developments. It also declares that it has already begun making an important effort to also involve companies in which it holds an investment but not operative control, in the reporting programme and to extend the adherence of other subjects to the OGMP 2.0 initiative.</li> <li>- Active participation in consultations called by the Italian government or by European community organisations (GD4S, OGMP, Proxigas, Eurogas, Ready4H2, BIP) on relevant topics.</li> </ul>
Energy Transition (technology and markets)	<b>(D)</b> Weakening of gas weight in residential energy mix related to: Cooking / water heating	Medium Term	About as likely as not	Medium-low	<ul style="list-style-type: none"> <li>- Promotion of responsible business practices, by joining the UN Global Compact and the OGMP 2.0 of the UNEP.</li> <li>- Guidance aimed at defining unified trade positions in Italy and abroad.</li> <li>- Active participation in consultations called by the Italian government or by European community organisations on relevant topics.</li> <li>- Active participation in the activities of European sector associations to oversee technological changes</li> <li>- Process of converting the network into digital infrastructure in order to enable the distribution of gas other than methane, such as hydrogen, biomethane and e-gas.</li> </ul>
Energy Transition (technology and markets)	<b>(E)</b> Weakening of gas weight in residential energy mix related to: Space heating	Long Term	About as likely as not	Medium-high	<ul style="list-style-type: none"> <li>- Enhance the use renewable gases such as biomethane and hydrogen. Such issue is included within Sustainable Value Creation Plan, that includes the following targets: 400 biomethane production plants, built by third parties, connected to the distribution network by 2029; 100% network ready to accommodate hydrogen by 2028; 90% network digitised and monitorable by DANA by 2024 in Italy and by 2026 in Greece.</li> <li>- Development of Nimbus, the new generation smart meter, a cutting-edge tool, equipped with remote control devices and safety sensors, and compatible with blends of methane, biomethane, hydrogen and synthetic gases. The first prototype, made with recycled and recyclable materials, has been released in novembre 2023, will be tested on field in the following year and installed at scale from 2025, to replace today's meters communicating with GPRS technology.</li> <li>- Development of power-to-gas technology powered by renewable energy in order to produce renewable gas that can be used in the existing networks: the pilot Power to Gas project in Sardinia, near Cagliari, the very first application in the EU, aimed at verifying the whole green hydrogen chain, from the production of hydrogen from electricity produced by photovoltaic panels, to the distribution in the networks and the end uses. Italgas believes that Power-to-Gas technology is another way in which gas and electricity sectors are merging, able to offer a reliable solution to the problem of the reduced programmability of renewable resources. Such commitment is included also within a specific Sustainable Value Creation Plan target: 200 tons of green hydrogen produced and distributed in the Group's P2G pilot plant in by 2028, demonstrating the validity of the solution for industrial and residential transport and use.</li> <li>- Carrying out energy efficiency projects through the subsidiary Geoside with Sustainable Value Creation Plan target to save 280,000 MWh by ESCo customers, corresponding to about 62,000 tons of CO<sub>2</sub>eq, thanks to energy efficiency interventions implemented between 2022 and 2028.</li> <li>- Group presence in energy efficiency business through the subsidiary Geoside, with growth perspectives (see OPPORTUNITY F)</li> <li>- Group presence in Water business through the subsidiary Nepta (former Italgas Acqua) with growth perspectives (see OPPORTUNITY G)</li> </ul>



# Climate change opportunities matrix



Area	Opportunity	Time horizon	Likelihood	Financial Impact	Main Actions to reach the opportunity
Energy Transition (technology and markets)	<b>(F)</b> Business Diversification: growth in Energy Efficiency Business	Medium Term	Likely	Medium-high	<ul style="list-style-type: none"> <li>- Strategic Plan Target for creating one of the main national players in the energy efficiency sector: the planned investment in the energy efficiency business has been confirmed, which represents a fundamental lever for achieving the targets indicated by REPowerEU and is increasingly central to Italgas' development strategies. The Strategic Plan allocates over 300 million euros to the development of the Group's ESCo, both for targeted M&amp;A operations and to strengthen activities and the customer portfolio in the key sectors such as building, public sector, industrial and tertiary sector.</li> </ul>
Energy Transition (technology and markets)	<b>(G)</b> Business Diversification: growth in Water sector to enable the digital transformation of water distribution networks, reducing leakages also to increase water availability in case of prolonged water scarcity	Medium Term	More likely than not	Medium-low	<ul style="list-style-type: none"> <li>- Strategic Plan allocates over €400 million for Water Sector selected M&amp;A operations and the application of best practices and technologies developed in the gas distribution sector to the water networks currently managed and newly acquired. Approximately €115 million has been dedicated to the completion of the acquisition by Nepta of the business unit responsible for the concessions held in the water sector in Italy from Veolia Group, including companies operating in the regions of Lazio, Campania, and Sicily. With this transaction, the Group will directly and indirectly serve 6.2 million people, approximately 10% of the Italian population.</li> <li>- Systematic analysis on the balance of water consumption on all municipalities served and preventive identification of any hidden leaks.</li> <li>- Actions reducing water leakages: Digital transformation of water grids: Water smart meters, network (DMAs) balancing, real-time monitoring and predictive maintenance to improve network operational and energy efficiency and reduce water leakages. In 2023, installation of water smart meters, including real-time pressure sensors, began throughout the network. The subsequent subdivision of the whole network map – necessary to collect precise data on water leakages – will be completed within 2024.</li> </ul>
Energy Transition (technology and markets)	<b>(H)</b> Gas leakage detection services to other gas DSOs, both on regular basis and "spot" in case of occurrence of natural event, to promptly identify gas leakages and to assess network resilience	Short Term	Very likely	Low	<ul style="list-style-type: none"> <li>- Dedicated digital company of Italgas Group: Bludigit, the competence centre, unlocking value of proprietary solutions in the market with the objectives to: ensure the constant update of technologies while optimizing costs, develop digital services available to the business, improving resiliency and scalability, open sales channels and new partnerships, offer proprietary solutions as license to energy and infrastructure operators.</li> <li>- Partnership with Picarro Inc., strengthened through the acquisition of a minority share of the US company, a leading technology start-up in the field of sensors applied to the monitoring of gas distribution networks, as well as in technologies designed for those sectors requiring extremely sensitive measurements, such as environmental measurements of the concentration of Hazardous Air Pollutants and the electronics industry for the detection of impurities in semiconductor foundries.</li> </ul>

# Climate change opportunities matrix



Area	Opportunity	Time horizon	Likelihood	Financial Impact	Main Actions to reach the opportunity
Regulatory	(I) Regulatory review to promote network upgrade enabling the distribution of gas other than methane (biomethane, hydrogen, e-gases)	Medium Term	Unlikely	Medium	<ul style="list-style-type: none"> <li>-Promotion of responsible business practices, by joining the UN Global Compact and the OGMP 2.0 of the UNEP.</li> <li>- Italgas is part of the GD4S (Gas Distributors for Sustainability), the non-profit association of European gas distributors that seeks to represent the position of the gas distribution sector at European institutions, specifically concerning the role that such infrastructures can play in the energy transition process towards a low carbon economy.</li> <li>- Italgas is member of Eurogas, an association of companies and associations belonging to the gas wholesale and retail market and the natural gas, biomethane and hydrogen distribution sector. Eurogas supports the transition to carbon neutrality through dialogue and advocacy about optimising the use of gases. In 2022, Eurogas contributed in various ways, through targeted meetings with European Commission officials, the signing of joint statements with other organisations, the preparation and dissemination of position papers and direct meetings with members of the European Parliament, to the process of shaping various legislative projects, such as the Gas Package, the Methane Emissions Regulation, the EPBD and others, all with the aim of fostering the development of renewable gases by highlighting the contribution of the distribution sector.</li> <li>- Italgas adhered to the "Ready4H2", an international-reach initiative that brings together the experience and expertise of the most important gas DSOs of 18 European countries to promote access to hydrogen by consumers and the development of the entire value chain, including through the entrance into the market of new producers. With this initiative, distributors want to make sure that their specific competences, and those developed through collaboration with all the other players in the hydrogen chain, are made available to European and national decision-makers as part of the process for defining public policies in support of a hydrogen economy.</li> <li>- Active participation in consultations called by the Italian government or by European community organisations on relevant topics.</li> <li>- Active participation in the activities of European sector associations to oversee technological changes</li> </ul>
Energy Transition (technology and markets)	(J) Assets repurposing and digitization, in order to enable the use of renewable gases to satisfy residential demand	Medium Term	Unlikely	Medium-high	<ul style="list-style-type: none"> <li>- Sustainable Value Creation Plan Target: to develop 400 biomethane production plants, built by third parties, connected to the distribution network by 2029.</li> <li>- Development of power-to-gas technology powered by renewable energy in order to produce renewable gas that can be used in the existing networks: the pilot Power to Gas project in Sardinia, near Cagliari, the very first application in the EU, aimed at verifying the whole green hydrogen chain, from the production of hydrogen from electricity produced by photovoltaic panels, to the distribution in the networks and the end uses. Italgas believes that Power-to-Gas technology is another way in which gas and electricity sectors are merging, able to offer a reliable solution to the problem of the reduced programmability of renewable resources. Such commitment is included also within a specific Sustainable Value Creation Plan target: 200 tons of green hydrogen produced and distributed in the Group's P2G pilot plant in by 2028, demonstrating the validity of the solution for industrial and residential transport and use.</li> <li>- Network and facility analysis initiatives for the evaluation of their adequacy and of interventions intended to enable the distribution of gas other than methane, such as hydrogen, biomethane and e-gas.</li> <li>- Process of converting the network into digital infrastructure in order to enable the distribution of gas other than methane, such as hydrogen, biomethane and e-gas. Such commitment is included also within specific Sustainable Value Creation Plan targets: 100% network ready to accommodate hydrogen by 2028; 90% network digitised and monitorable by DANA by 2024 in Italy and by 2026 in Greece</li> <li>- Development of Nimbus, the new generation smart meter, a cutting-edge tool, equipped with remote control devices and safety sensors, and compatible with blends of methane, biomethane, hydrogen and synthetic gases. The first prototype, made with recycled and recyclable materials, has been released in novembre 2023, will be tested on field in the following year and installed at scale from 2025, to replace today's meters communicating with GPRS technology.</li> </ul>

# Climate change opportunities matrix



Area	Opportunity	Time horizon	Likelihood	Financial Impact	Main Actions to reach the opportunity
Energy Transition (technology and markets)	<b>(K)</b> Reduction of internal energy consumption	Short Term	Very likely	Medium	<p>To foster the ecological transition process, the Group extended to 2028 the target for reducing net energy consumption compared to 2020, bringing it to -27% and setting a new target of -33% by 2030 . The achievement of these objectives includes energy efficiency initiatives and the digitization and optimization of the control and management system of all operational assets, also thanks to the expertise of the Group’s ESCOs, as well as the renewal of the Group’s fleet of service vehicles.</p> <ul style="list-style-type: none"> <li>- actions aimed at reducing civil and industrial energy consumption and emissions (natural gas and electricity): energy efficiency interventions and the renewal of the Group’s real estate assets, technological innovations to optimise industrial consumption, energy intelligence solutions by the ESCo, Geoside - on the distribution network plants equipped with pre-heating.</li> <li>- actions aimed at reducing electricity consumption for industrial use: design, implementation, and commissioning, at the main city gates, of turbo-expanders for energy recovery and cogeneration plants.</li> <li>- actions aimed at reducing consumption and emissions of the Group’s fleet of service vehicles: modernisation of the operations fleet, removal of cars powered exclusively by petrol and diesel from the car list, of the Managers class, introduction of hybrid vehicles (electric-petrol), among the cars for mixed personal/business use as well as operations vehicles, with the consequent installation of charging points at the Group’s offices. In addition to changes to the fleet, the following is envisaged: the implementation of a fleet management software for monitoring consumption and vehicle status and training activities for safe and sustainable driving.</li> </ul>

# Governance

## 4. GOVERNANCE

Italgas is committed to maintaining and consolidating an effective governance system, aligned with international best practices and regulation.

The Group set up a specific governance model on sustainability topics to best manage the business complexities, to face sustainable development challenges towards a low carbon economy, and to monitor and manage the impacts of climate change on strategy and operations of the Group. Matters relating to climate change are considered when defining the Strategic Plan and Sustainable Value Creation Plan of the Group, the risk management process, the performance goals of the Group and the related monitoring process.

The Board of Directors, the Sustainable Value Creation Committee (SVCC) and the Control, Risk and Related Party Transactions Committee (CRRPTC) are periodically informed as to aspects relating to climate change (strategy, initiatives and performances). The Appointments and Compensation Committee is involved in the provisions of incentives for the management of climate-related issues and sustainability-linked targets. Finally, at least once a quarter, the Board of Directors is informed about GHG emissions and net energy consumption performance and on the level of achievement of the related targets, in occasion of the quarterly results approval, then communicated to all relevant stakeholders.



### 4.1 Role of Management

The Chief Executive Officer (CEO) is responsible of the administration of the Group and of the definition and proposal of the main strategic targets and initiatives, also climate related, which are then submitted to the Board of Directors for approval.

As examples of climate related decisions, the CEO, with the support of the competent internal functions, proposes annually the Strategic Plan (see details of the Strategic Plan at Par 2.2 "Strategy to deal with climate change: our transition plan), which is submitted to the Sustainable Value Creation Committee, as for the part regarding non-financial indicators and objectives, for its exams and afterwards to the Board of Directors as a whole for its approval. The Strategic Plan:

- includes climate related targets, relating to net energy and emissions reduction (both long term and intermediate targets), associated investments and action plans, strategies;
- states Italgas vision on energy transition starting from the capex plan and the infrastructure digitization effort, to allow the entire distribution network to be smart, flexible and able to accommodate and manage different gases, such as biomethane, green hydrogen and synthetic natural gases;
- aims at boosting circular economy, in particular by providing a stimulus to the

biomethane sector, and at testing and implementing technologies that will make new renewable gases available in the distribution networks (ready for hydrogen);

- aims at the diversification of the assets portfolio, extending digital management of the infrastructure to the water sector and accelerating energy efficiency measures in the civil sector;
- includes the investments related and the expected financial impacts of such initiatives as well as the risk opportunity analysis on the overall plan including that related to climate change.

The CEO is regularly informed on climate change issues. In particular:

- chairs the monthly Sustainability Business Review (established in 2021) in which a detailed assessment of key environmental and climate change KPI and progress of relevant initiatives are monitored and discussed (see details in the "Box: Sustainability Business Review" in the Par. 5.3).
- chairs the monthly Innovation Committee to evaluate and sponsor initiatives that allow the improvement of the efficiency of Italgas operations including those with a focus on emissions reduction/increased energy efficiency/network technological improvements to make it ready to distribute green gases hence abating emissions;
- drafts and proposes the Non-financial

Statement, which is examined by the Sustainable Value Creation Committee and then submitted for approval to the Board of Directors. The Non-financial Statement contains information related to environmental, governance and social issues and is part of the Integrated Annual Report of the Group. Starting the first half of 2021, Italgas discloses the main climate change KPIs quarterly;

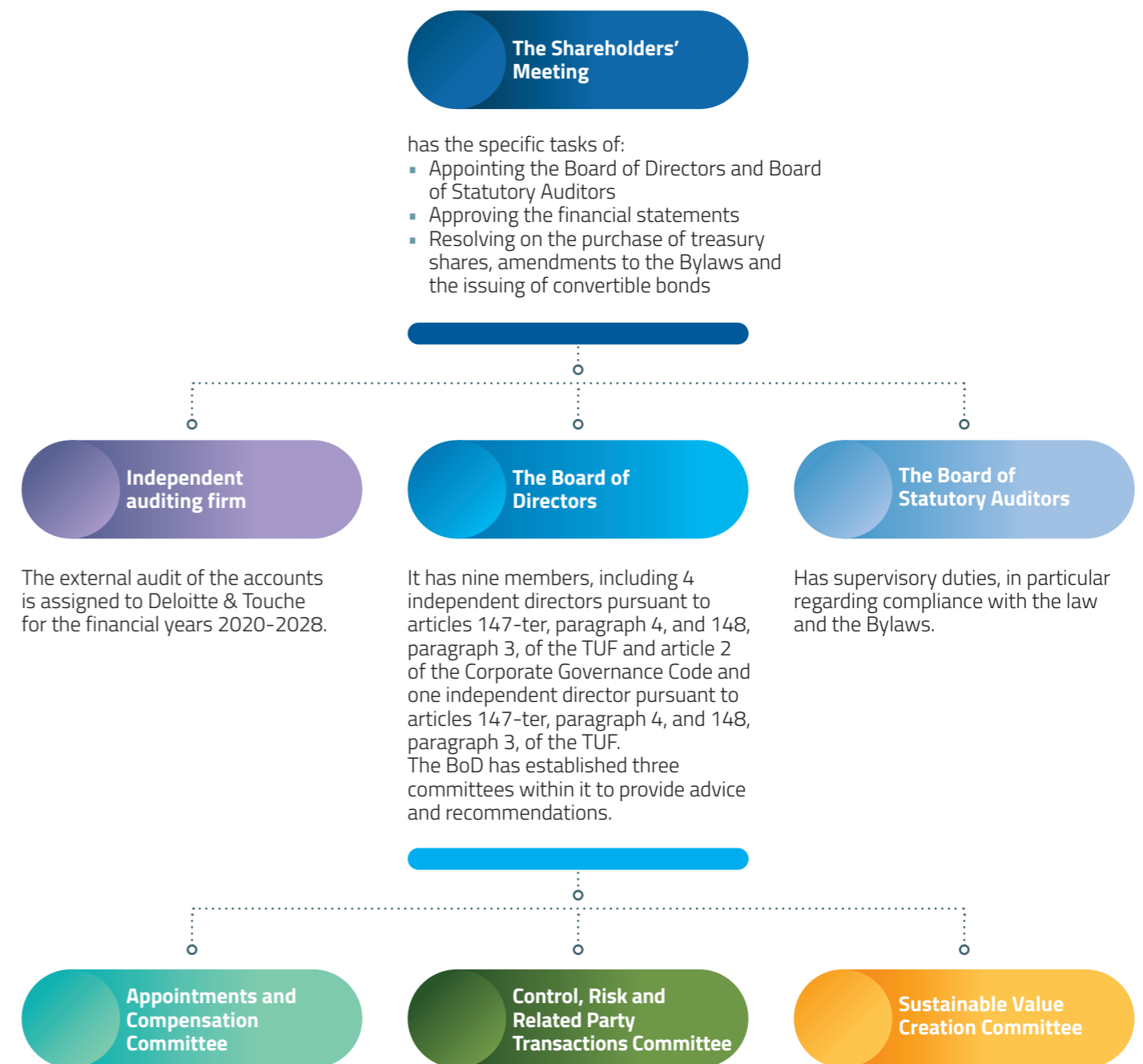
- in addition to proposing the Strategic Plan annually, the CEO proposes the Sustainable Value Creation Plan to be submitted to the Sustainable Value Creation Committee for its exam and after to the Board of Directors for its approval. Starting from 2022, Sustainable Value Creation Plan and Strategic Plan are approved jointly by the Board of Directors. The Sustainable Value Creation Plan contains our actions, commitments and measurable climate related goals (see details in the Par. 5.2 "Sustainable Value Creation Plan targets").

In its tasks, the CEO is supported primarily by the executive team which, at Italgas, includes the Chief Financial Officer (CFO), the Chief Corporate Strategy Officer (CCSO), the Procurement and Material Management Executive Vice President, the Executive Vice President External Relations & Sustainability and the Heads of Institutional and Regulatory Affairs, Security, Internal Audit, Legal, Corporate Affairs and Human Resources functions.

These executives are members of the Executive Committee, which holds the responsibilities for all the climate-related issues. Furthermore, each executive has specific targets within its area of competence. The main executives with climate change related roles are CFO, CCSO, Procurement and Material Management Executive Vice President and Executive Vice President External Relations & Sustainability. The Sustainability Function and Executive Vice President External Relations & Sustainability operate alongside the Sustainable Value Creation Committee, monitor sustainability processes, interface constantly on relevant topics with each function of the Group (like Energy manager, Environmental, Health, and Safety manager, Procurement and Material Management, ERM). They coordinate the drafting and implementation of the Sustainable Value Creation Plan, are responsible for monitoring the progress of actions, guide the collection of non-financial data, including those climate-related, and all the works in preparation of the monthly Sustainability Business Review, guide the definition of climate related targets included in the Strategic Plan and the coherence of such targets with the planned initiatives. With the Sustainability team the Executive Vice President External Relations & Sustainability is also in charge of climate-change and ESG internal training.

The CFO and the CCSO support and guide the strategic planning process of the Group and the economic assessment of the investments plan actions, also in relation to climate change related

initiatives. They are, at different levels, also in charge of M&A initiatives in relations to energy efficiency and, in the case of the CFO, of sustainable finance initiatives and budgeting. The CFO also



<https://www.italgas.it/en/governance/>

supports and revises the evaluation of financial impacts of climate related risks and opportunities carried out by the Risk Owners under the coordination of ERM function and presented quarterly to the Control and Risks and Related-Party Transactions Committee by the head of ERM and to the Board by the CEO. The CCSO is responsible for both assessing and managing climate-related risks leading the definition of the strategic plan considering the impact of climate change on the business and its assets and evaluating potential opportunities in terms of strategic development like energy efficiency businesses. The Procurement and Material Management Executive Vice President is committed to integrating climate-related issues into the operational and procurement process to achieve strategic goals, also relating to climate change. The commitment of value chain partners depends mainly on her and her team's efforts. She works with the Sustainability team to define strategies to reduce Scope 3 emissions and achieve stated targets. Energy managers, among others, have specific responsibilities on the planning and implementation of energy reduction initiatives, given their knowledge on the matter. Such structure of responsibilities and reporting ensures that both the executive structure and the Board have ability to oversee climate related issues

in line with their role and the internal corporate governance.

#### 4.2 Role of the Board and the Committees

The **Board of Directors** (BoD or Board) is in charge of the ordinary and extraordinary management of the Group and has the faculty to carry out all the acts deemed appropriate for the implementation and achievement of the corporate purpose, including sustainability and climate related objectives. The BoD is responsible of defining the strategic guidelines and objectives for the Italgas Group, also in relation to climate change related actions, at the recommendation of the CEO.

Annually the Board is called to approve Italgas seven years Strategic Plan and the updates of the Sustainable Value Creation Plan. The Strategic Plan approval process, which embed targets of Sustainable Value Creation Plan, includes: (i) the exam and the approval by the BoD of the scenarios (including climate related scenarios), of the ESG targets comprising environmental and climate-change targets on emissions reductions, energy efficiency and related initiatives; (ii) the exam and the approval by the BoD of the financials of the plan including investments. The meetings' agenda also includes the discussion

and approval of the specific section of the Strategic Plan dedicated to risk and opportunities, included those referring to climate change.

The BoD is regularly informed on climate change issues. In particular, the Board:

- reviews quarterly the implementation of the plan and approves annual budgets and their two infra-year updates, including capex initiatives related to climate change risks and opportunities;
- examines the proposal of the Sustainable Value Creation Committee and approves non-financial data, including climate change related

information submitted by the Sustainable Value Creation Committee and the sustainability reporting submitted quarterly by the Sustainable Value Creation Committee, thus also monitoring progress towards targets and implementation of plans referring to both energy consumption and GHG emissions reduction;

- examines and approves the Annual Integrated Report, which is then presented to the Annual General Meeting; oversees and approves relevant M&A initiatives, including climate-related aspects;



- is responsible of evaluating, on annual basis, the adequacy of the organisational, administrative and accounting structure of Italgas and its subsidiaries with strategic relevance, with particular reference to the internal control and risk management system, also in terms of climate change; reviews periodically sustainability policies aimed at ensuring the creation of value in the medium/long-term for all shareholders and stakeholders as to the

principles of sustainable development and sustainability guidelines, objectives and processes. During the 2022 financial year, the Board of Directors met fourteen times and the rate of Director participation in the meetings was 99%. Given the relevance of sustainability topics for the Group, the Board of Directors examined ESG issues, including climate change, in approximately 86% of the meetings held in 2022.



The **Sustainable Value Creation Committee** promotes proposals and has a consultation function to the BoD on matters of sustainability and climate change. Examples are the processes, initiatives and activities aimed at the sustainable development of the Group along its whole value chain. In particular, the SVCC:

- examines and evaluates periodically sustainability policies aimed at ensuring the creation of value in the medium/long-term for all shareholders and stakeholders as to the principles of sustainable development and sustainability guidelines, objectives and processes;
- examines and evaluates the sustainability reporting submitted quarterly to the BoD;
- monitors the positioning of the Group in the financial markets on the topic of sustainability and climate change, including ratings, and in the sustainability indices and ratings;
- examines national, European and international undertakings and initiatives with regard to sustainability and the participation of the Company in them, aimed at consolidating sustainable success and corporate reputation internationally;
- examines any sustainability initiative in agreements submitted to the BoD, also as to the subject of climate change; the profit and non-profit strategy, and the gas advocacy of the Group;

- examines the content of periodic non-financial reporting relevant to the internal control and risk management system;
- examines, assesses the integration of ESG aspects into the Enterprise Risk Management matrix;
- examines, evaluates the disclosure of non-financial information, including climate change related information, to be submitted to the BoD, in coordination with the Control, Risk and Related Party Transactions Committee in relation to the assessment of the suitability of the periodical financial and non-financial information; on request of the Board, expresses an opinion on other matters regarding sustainability.

The Committee examines the Strategic Plan and the Sustainable Value Creation Plan, both containing climate related targets like emissions and energy reductions and reports about it to the BoD.

The SVCC reports to the BoD:

- at the first meeting of the BoD after each of its own meetings, with regard to subjects dealt with and the observations, recommendations and opinions formulated;
- at least every six months and before the deadline for approval of the annual and half-year financial report, at the meeting indicated by the Chairman of the BoD, on the activities carried out. In 2022 the SVCC met 11 times.

While the main responsibility on the topic of climate change lies with the SSVC, the **Control and Risks and Related-Party Transactions Committee** has been carrying out, given its role, proposals on the topic of climate change in regards, for example, to the risks management initiatives it oversee. The CRRPTC poses significant attention on the topics with implications on climate change and monitors the presence of activities aimed to the identification, evaluation, prioritization, treatment, monitoring and reporting of risks and opportunities related to climate change.

The ESG aspects are part of the ERM system applied by the Group. Each risk in the ERM risk map has been linked to the themes included in the materiality matrix and in the Sustainable Value Creation Plan and valued using (where relevant) ESG scales, taking into account mitigation actions. Specific ESG, including those referring to climate change, are included in the map. CRRPTC examines the periodic reports drawn up by the Enterprise Risk Management department for identifying, assessing, managing and monitoring the main risks. The Sustainable Value Creation Committee examines and evaluates the integration of ESG aspects into the ERM matrix. The CRRPTC reports to the BoD:

- at the first meeting of the Board after each of its own meetings, with regard to

subjects dealt with and the observations, recommendations and opinions formulated;

- at least once every six months - and as a rule at (or prior to) the meetings held to approve the annual financial report and the half-year financial report – on the activities carried out and the adequacy of the internal control and risk management system.

During 2022, the CRRPTC met 14 times, of which two in joint session with the SVCC.

**4.2.1 Remuneration policy**  
The **Appointments and Compensation Committee** (ACC) is involved in the provision of incentives for the management that are also based on climate-related issues and sustainability-linked targets. In particular, both short-term and long-term variable remuneration of core managers include climate related targets.

The remuneration of the CEO and the Executives with Strategic Responsibilities is described in greater detail in the remuneration report that the ACC submits annually to the approval of the Annual General Meeting. In 2022, 7.5% of short-term incentive is linked to gas leakage rate and 7.5% to reduction of the energy intensity. In 2023, 7.5% of short-term incentive is

linked to the leakage on the distribution network (expressed in terms of percentage of network km inspected during the year out of the total network km managed) and 7.5% to reduction of the energy intensity. Long-term incentives depend also on the level of achievement of Sustainability

targets. The 2020-2022 and 2021-2023 LTI plans had performance conditions related to emission reductions and the inclusion in sustainability indexes/ ratings in the three-year period. The new 2023-2025 LTI plan is linked to emission reductions and energy efficiency, with an overall weight of 20%.





# Metrics & Targets

## of our transition plan

### 5.1 Decarbonization targets

The Strategic Plan 2023-2029 pivots on ESG factors and responds to the challenges of sustainability by setting objectives up to 2030, in line with the Net-Zero carbon target for 2050, further raising those defined in 2022 in terms of emissions reduction, energy efficiency, competences, and people development to make the change effective. The same targets are also included in the Sustainable Value Creation Plan 2023-2029<sup>42</sup> of the Group.

Sustainability targets presented in both Plans, including decarbonization targets, include within their scope also Depa Infrastructure, the leading Greek gas distribution operator, which 100% acquisition has been completed by Italgas on 1 September 2022.

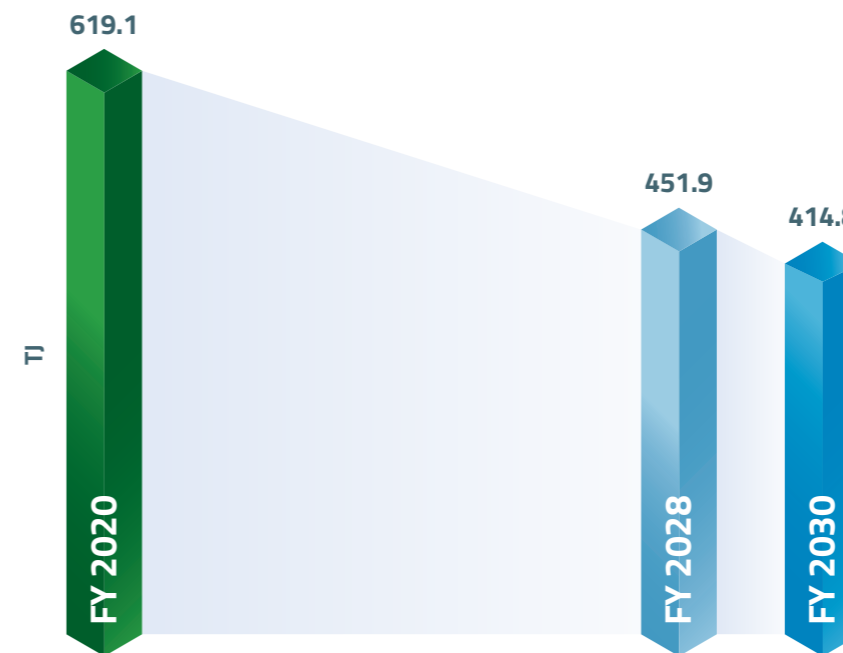
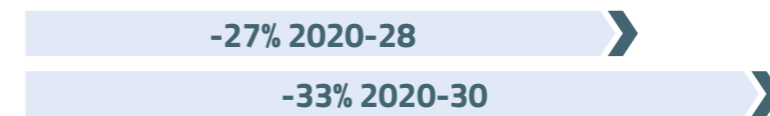
#### 5.1.1 Net Energy Consumption

Italgas has set specific operating targets, fully aligned with the GHG emissions reduction targets in terms of perimeter, related to reduction of its net energy consumption<sup>43</sup> by 27% by 2028 and by 33% by 2030 with the baseline year 2020.



# Targets

TJ	Baseline: 2020	2028	2030
<b>Total net energy consumption</b>	619.1 <sup>44</sup>	451.9 <i>Corresponding to a 27% reduction (vs 2020 baseline)</i>	414.8 <i>Corresponding to a 33% reduction (vs 2020 baseline)</i>



**Efficiency measures for industrial consumption:** additional optimisation systems, digitalization of monitoring and control systems, on-site renewable energy production and auto-consumption.

Constant process of **optimisation, renewal, digitalization of monitoring and control systems** of the Group's **buildings**.

Optimisation and renewal of the **car fleet** and high-tech solutions for reduction of travelling for the operation.

This commitment is focused on several initiatives for the reduction of consumption of fuel energy for civil and

industrial use, net electricity for civil and industrial use, fuel energy for vehicles and thermal energy for civil use.

<sup>42</sup> <https://www.italgas.it/wp-content/uploads/sites/2/2023/10/Sustainable-Value-Creation-Plan.pdf>

<sup>43</sup> This refers to total energy consumption, from which any self-produced and self-consumed electricity consumption is subtracted.

<sup>44</sup> Baseline figure includes both Italian and Greek perimeter. The latter has been calculated post-acquisition in order to set a relevant target that take into account also Depa Infrastructure. That figure differs from 2020 "Total net energy consumption" reported in paragraph 5.3.1, which refers to the performance of the Group as of the 31st of December 2020 consolidated perimeter.

### 5.1.2 Scope 1 and Scope 2 GHG emissions

The Group monitors, reports and set targets regarding the following emissions:

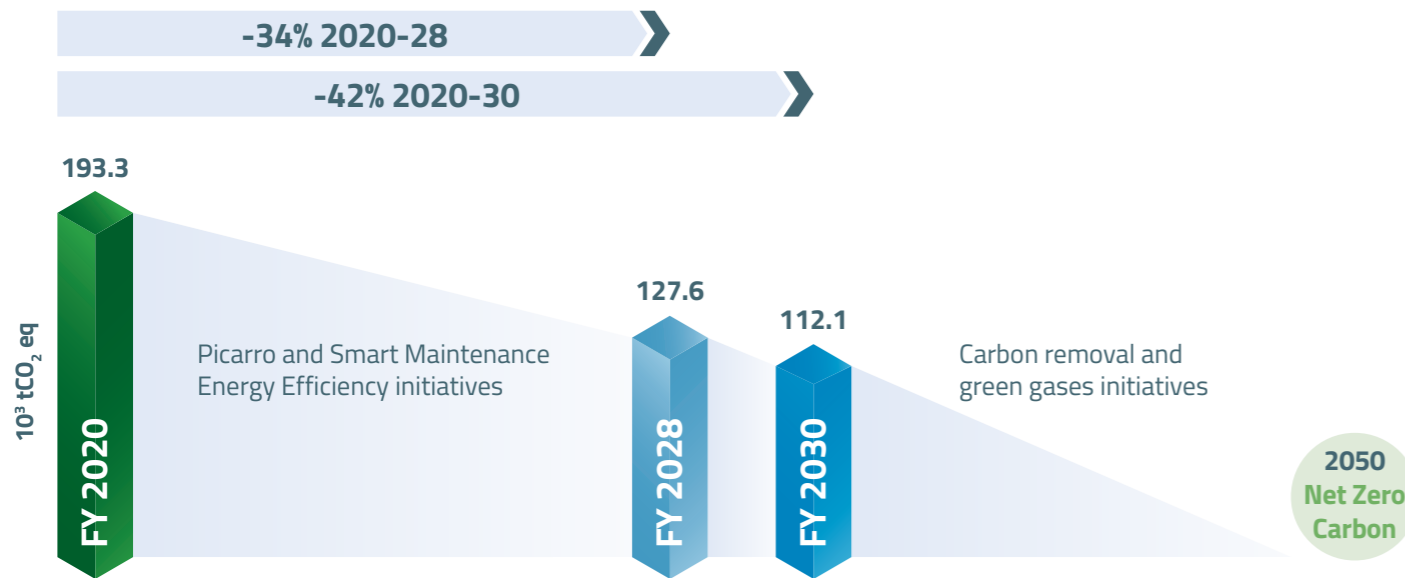
- direct emissions (Scope 1): deriving from the civil consumption and industrial consumption of gas<sup>45</sup>, from fuel consumptions for vehicles and grid

losses (“fugitive emissions”);

- indirect emissions (Scope 2): deriving from the consumption of electricity and district heating purchased, provided by a third party.

The sustainability targets set for 2028 aim to reduce CO<sub>2</sub> emissions in line with the EU ambition for 2030<sup>46</sup>: thanks to the digital transformation of the network

10 <sup>3</sup> t CO <sub>2</sub> eq	Baseline: 2020	2028	2030
<b>Total Scope 1 and 2 Market Based</b>	193.3 <sup>47</sup>	127.6 <i>Corresponding to a 34% reduction (vs 2020 baseline)</i>	112.1 <i>Corresponding to a 42% reduction (vs 2020 baseline)</i>



**Scope 1 and 2 emission reduction targets are aligned to «1.5°C ambition» pathway scenario**  
(results following analysis by independent consulting firm)

<sup>45</sup> The emissions from air conditioning units are considered not to be relevant as they refer to a very small amount of HFC gases refilled during the reporting year (e.g., for 2022 the estimate is approximately 124 tCO<sub>2</sub> eq, the 0.08% of overall Scope 1 and 2 emissions). SF<sub>6</sub> emissions are not relevant as such gas is present at just a few sites and the gas is contained in hermetically sealed systems (e.g., for 2022 the estimate is approximately 235 tCO<sub>2</sub> eq, the 0.16% of overall Scope 1 and 2 emissions).

<sup>46</sup> [https://ec.europa.eu/clima/eu-action/european-green-deal/2030-climate-target-plan\\_en](https://ec.europa.eu/clima/eu-action/european-green-deal/2030-climate-target-plan_en)

<sup>47</sup> Baseline figure includes both Italian and Greek perimeter. The latter has been calculated post-acquisition in order to set a relevant target that take into account also Depa Infrastructure (Italian values were calculated using Picarro-CRDS technology, while Greek baseline values were calculated applying Marcogaz standard emission factors to network consistency, thus considering differentiations in terms of network pressure and materials). That figure differs from 2020 “Total Scope 1 and 2 Market Based” reported in paragraph 5.3.2, which refers to the performance of the Group as of the 31<sup>st</sup> of December 2020 consolidated perimeter.

and innovative technologies, from CRDS, a cutting-edge technology in the gas network monitoring field, designed and developed by Picarro, of which Italgas has recently become a shareholder, to the implementation of the know-how of its subsidiary Geoside, Italgas estimates that, by 2028, it will have reduced its GHG emissions (Scope 1 and Scope 2 Market based<sup>48</sup>) by 34%, compared to 2020 levels<sup>49,50</sup>.

This commitment is primary linked to the initiatives designed to reduce fugitive methane emissions from the gas distribution infrastructure, given their relevance (see Par 5.3.2) and, in the second instance, initiatives to reduce the emissions related to the energy consumption of the Group already outlined in Par. 5.1.1. Italgas targets are in line with the main timelines defined by the EU Green Deal, planning a 42% reduction in GHG emissions by 2030 and a “Net-Zero Carbon Target” by 2050, based on the above-mentioned initiatives and on carbon removal activities<sup>51</sup>.

Not only Italgas’ medium-term targets to reduce its Scope 1 and 2 GHG emissions have been designed to meet the EU objectives over the same timeframe, in

compliance with long-term objective to limit climate change, but they are also aligned to a 1.5°C pathway in support of the Paris Agreement and are, moreover, integral to the long-term goal of reaching Net Zero by 2050.

In 2022, in fact, Italgas obtained the confirmation of the alignment of its targets with a 1.5°C scenario pathway by an independent consultancy company (Carbonsink, a South Pole company), specialized in the analysis of climate scenarios. The alignment confirmation was based on the analysis of Italgas’ GHG emissions targets and decarbonization trajectory considering selected credible pathways.

The alignment of the Scope 1 and Scope 2 GHG emissions targets and trajectories of the Group with a 1.5°C scenario pathway was assessed as follows:

- an assessment of the emissions profile and targets against a set of 157 publicly accessible global pathways for CO<sub>2</sub> and CH<sub>4</sub> emissions in Eastern and Western Europe, collated by the IPCC in the 6<sup>th</sup> Assessment Report was performed. Such pathways are designed to limit the global temperature increase to 1.5°C with more than 50% probability, with or without overshooting such global

<sup>48</sup> The market-based emissions data has been selected to reflect the Group choice of purchase and consumption of electricity produced from certified renewable sources, as attested by the Management System of Guarantees of Origin (GO). Both Scope 2 market-based and location-based data is available in the Integrated Annual Report.

<sup>49</sup> 2020 was considered the baseline as it was the first year with the full application of the CRDS Picarro, which is considered a state-of-the-art methodology for fugitive emissions detection and calculation.

<sup>50</sup> The perimeter of reporting is the same as the scope of consolidation for financial data as of 31/12/2022. Reported data cover as of such date every consolidated subsidiary, regardless of legal form, host country or size, and refer for the future to an unchanged perimeter – i.e. excluding any changes following M&As, and ATEM (Minimum Territorial Area) tenders of gas distribution concessions.

<sup>51</sup> Starting from 2030 carbon removal actions and offsets will be implemented.

warming threshold before reaching net zero emissions by 2050 at the latest. Italgas 2030 target was found to be more ambitious than 151 of these scenarios (96%, top quintile). This result indicates that Italgas' Scope 1 and Scope 2 2030 target is largely within the range of those included within IPCC 1.5°C global pathways;

- a comparison run using the Science Based Targets initiative (SBTi<sup>52</sup>) Absolute Contraction Approach indicated that Italgas' targets are precisely matching the SBTi 1.5°C curve in terms of trajectory from 2020 to both 2028 and 2030. The targets are forecasting a 4.2% annual reduction throughout both the 8-year and 10-year periods under analysis and are, therefore, aligned with the global annual emissions reduction rate that is required to meet 1.5°C considering a General Sector pathway. To date, the specific SBTi methodology for the O&G sector and to be applied to gas distribution is not available, thus it is not possible for the targets to be formally validated by the SBTi<sup>53</sup> yet. Setting its targets in alignment with SBTi's public cross sectorial approach for alignment with a 1.5°C scenario is therefore, as of today, the most effective approach Italgas could take with regards to SBTi. Nevertheless, Italgas is willing to obtain SBTi validation of its targets once it becomes possible;

- an application to the 2028 and 2030 targets of the Group of the Temperature Scoring Methodology, an open-source methodology developed by Carbon Disclosure Project (CDP) and World Wide Fund For Nature (WWF) to translate the ambition of corporate GHG emissions reductions into temperature ratings for corporates. Such application proved the association of the targets' ambition with a 1.5°C long term temperature outcome. Building on the work of SBTi, the temperature rating methodology expands the temperature assessment of short- and medium-term corporate ambition against a wide range of end of century (2100) temperature outcomes – between 1.5 – 5°C – and aims to translate reported corporate targets into long-term temperature trajectories;
- a comparison to International Energy Agency (IEA) Net Zero Emission (NZE) 1.5°C aligned emissions reduction pathways demonstrated that the medium term (2028 and 2030) targets of Italgas compare favourably with an NZE 1.5°C pathway at those junctures, when referring to the absolute emissions for "Other industries" within Advanced Economies. Such pathway would require a reduction of emissions of 29% by 2030 against a 2020 baseline, while Italgas' target forecasts a 42% reduction over the same period.

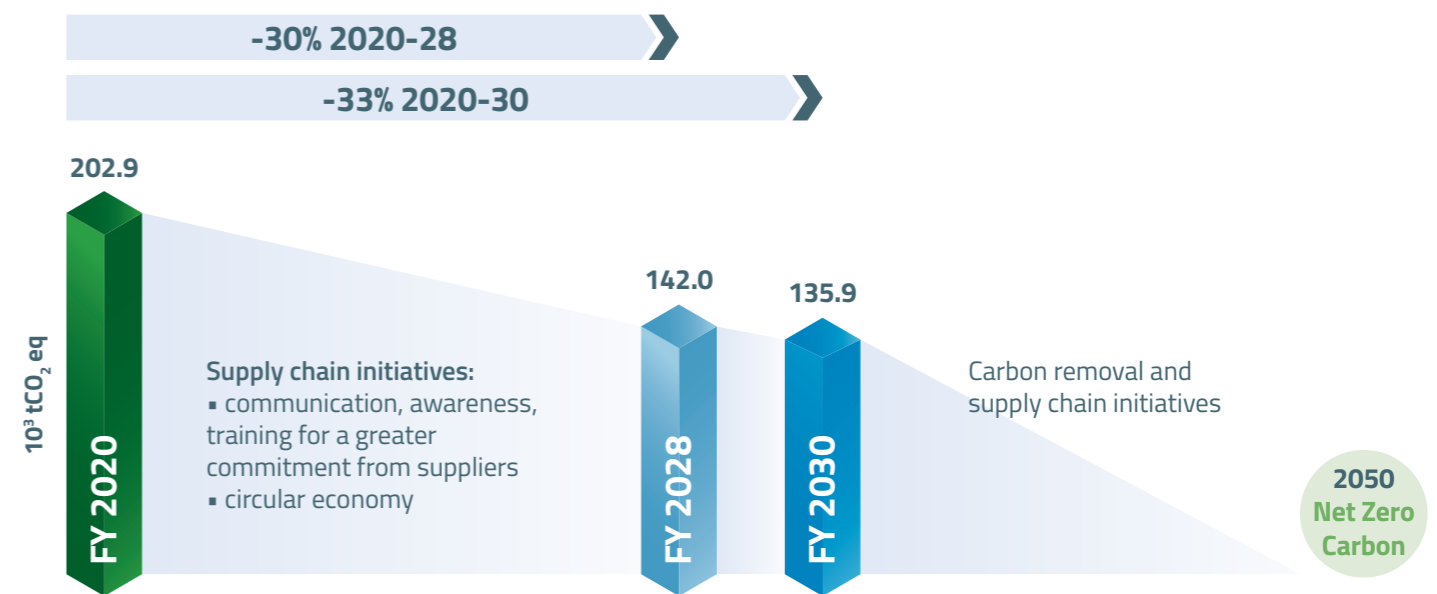
### 5.1.3 Scope 3 GHG emissions from supply chain

The Group also defined a target for Scope 3 GHG emissions from supply chain, planning a 30% reduction by 2028 and a 33% reduction by 2030 compared to 2020, through an increased engagement with its suppliers. Also, for Scope 3 GHG emissions from supply chain, the Group set itself a "Net-Zero Carbon Target" by 2050 also considering the

implementation of carbon removal and offsets initiatives beyond 2030. GHG emissions from supply chain considered are in the following categories<sup>54</sup>, included for their relevance for a gas DSO:

- Purchased goods and services;
- Capital goods;
- Upstream transportation and distribution;
- Waste generated in operations;
- Upstream leased assets.

10 <sup>3</sup> t CO <sub>2</sub> eq	Baseline: 2020	2028	2030
Scope 3 - supply chain	202.9 <sup>55</sup>	142.0 <i>Corresponding to a 30% reduction (vs 2020 baseline)</i>	135.9 <i>Corresponding to a 33% reduction (vs 2020 baseline)</i>



Scope 3 emission reduction targets are aligned to «Well-below 2°C» scenario. Some of the analysis carried out even highlighted alignment to «1.5°C scenarios» (results following analysis by independent consulting firm)

<sup>52</sup> SBTi scenarios are drawn primarily from the Integrated Assessment Modelling Consortium and the International Energy Agency. From an initial set of 177 scenarios from 25 models, a stepwise filter produces a final 1.5°C envelope of 20 scenarios and a final Well-Below 2°C envelope of 28 scenarios. Within these, the minimum reduction rates associated with each temperature goal correspond to the minimum reduction rate of a scenario in each respective envelope. The minimum annual linear reduction rates aligned with 1.5°C and Well-Below 2°C are 4.2% and 2.5%, respectively.

<sup>53</sup> <https://sciencebasedtargets.org/sectors/oil-and-gas#what-is-the-sb-tis-policy-on-fossil-fuel-companies>

<sup>54</sup> [https://ghgprotocol.org/sites/default/files/standards/Corporate-Value-Chain-Accounting-Reporting-Standard\\_041613\\_2.pdf](https://ghgprotocol.org/sites/default/files/standards/Corporate-Value-Chain-Accounting-Reporting-Standard_041613_2.pdf)

<sup>55</sup> Baseline figure includes both Italian and Greek perimeter. The latter has been calculated post-acquisition in order to set a relevant target that take into account also Depa Infrastructure. That figure differs from 2020 "Total Scope 3 – Supply chain" reported in paragraph 5.3.3, which refers to the performance of the Group as of the 31st of December 2020 consolidated perimeter.

Italgas' medium-term targets to reduce its Scope 3 GHG emissions from supply chain are aligned with a Well-Below 2°C pathway in support of the Paris Agreement and, moreover, are integral to the long-term goal of reaching Net Zero by 2050.

In 2022, in fact, Italgas obtained the confirmation of the alignment of its targets with a Well-Below 2°C scenario pathway in all the analyses performed and with a 1.5°C scenario pathway in specific analyses (see details below) performed by an independent consultancy company (Carbonsink, a South Pole company), specialized in the analysis of climate scenarios. The alignment confirmation was based on the analysis of Italgas' targets on Scope 3 GHG emissions from supply chain against selected credible pathways towards a 1.5°C and Well-Below 2°C scenarios.

The alignment of Italgas' Scope 3 GHG emissions from supply chain reduction targets with a 1.5°C and Well-Below 2°C scenario pathways were assessed as follows:

- an assessment of the emissions profile and targets against a set of 157 publicly accessible global pathways in Eastern and Western Europe, collated by the IPCC in the 6th Assessment Report was performed. Such pathways are designed to limit the global temperature increase

to 1.5°C with more than 50% probability, with or without overshooting this global warming threshold before reaching net zero emissions by 2050 at the latest. Italgas' 2030 targets were found to be more ambitious than 72 of these scenarios (46%). These results indicate that Italgas Scope 3 targets on supply chain are within the lower half of those within IPCC 1.5°C global pathways. The same exercise was performed against a set of 221 publicly accessible global pathways in Eastern and Western Europe, collated by the IPCC in the 6th Assessment Report and designed to limit the global temperature increase to 2.0°C with more than 67% probability (Well Below 2°C). Against those scenarios, Italgas' targets were found to be more ambitious than 165 of those considered (75%). These results indicate that Italgas' Scope 3 targets on supply chain are within the range of those within IPCC Well Below 2.0°C global pathways;

- a comparison run using the SBTi<sup>56</sup> Absolute Contraction Approach indicated that Italgas' target exceeds the minimum ambition required by SBTi for a Scope 3 target on supply chain aligned with a Well-Below 2°C scenario in terms of trajectory from 2020 to both target years (2028 and 2030). The 2028 target forecasts a 3.8% annual reduction throughout the 8-year period under analysis and is, therefore, aligned with the global annual emissions reduction rate

that is required to meet Well Below 2°C considering a General Sector pathway. The 2030 target is forecasting an annual 3.3% reduction throughout the 10-year period under analysis and is, therefore, aligned with the global annual emissions reduction rate that is required to meet Well Below 2°C considering a General Sector pathway. To date, the specific SBTi methodology for the O&G sector and to be applied to gas distribution, is not available, thus it is not yet possible for the targets to be validated by SBTi. Nevertheless, Italgas is willing to obtain SBTi validation of its targets once it becomes possible;

- an application to the Scope 3 GHG emissions from supply chain 2028 and 2030 targets of the Group of the Temperature Scoring Methodology, an open-source methodology developed by CDP and WWF to translate the ambition of corporates' GHG emissions reductions into temperature ratings for corporates. Such application on Scope 3 GHG from supply chain of the Group proved the association of the targets' ambition with a 1.68°C long term temperature outcome, corresponding to a Well-Below 2°C scenario. This is in line with the Paris Agreement goal of "limiting global warming to well below 2, preferably to 1.5 degrees Celsius, compared to pre-industrial levels". Building on the work of the SBTi, the temperature rating methodology expands the temperature assessment of short and medium-term corporate

ambition against a wide range of end of century (2100) temperature outcomes, between 1.5 – 5°C, and aims to translate reported corporate targets into long-term temperature trajectories;

- a comparison to International Energy Agency Net Zero Emission 1.5°C aligned emissions reduction pathways demonstrated that the medium term (2028 and 2030) targets of Italgas compare favourably with an NZE 1.5°C pathway at those junctures, when referring to the absolute emissions for "Other industries" within advanced economies. Such a pathway would require a reduction of Scope 3 GHG emissions from supply chain 29% by 2030 against a 2020 baseline, while Italgas' target sets a 33% reduction in the same time span.

As outlined in Par 2.5.1, the plan for achieving the target for the reduction Scope 3 GHG emissions from supply chain includes the:

- continuous supply chain engagement with awareness and training campaigns, also considering the relevance of small and medium enterprises;
- inclusion of rewarding criteria in tenders for suppliers, for example according to the level of adoption of good/best practices in the reduction of own GHG emissions, and in contractual clauses; promotion of the best available techniques/technologies for circular economy or, where possible, the identification of new solutions together with the suppliers.

<sup>56</sup> SBTi scenarios are drawn primarily from the Integrated Assessment Modelling Consortium and the International Energy Agency. From an initial set of 177 scenarios from 25 models, a stepwise filter produces a final 1.5°C envelope of 20 scenarios and a final Well-Below 2°C envelope of 28 scenarios. Within these, the minimum reduction rates associated with each temperature goal correspond to the minimum reduction rate of a scenario in each respective envelope. The minimum annual linear reduction rates aligned with 1.5°C and Well-Below 2°C are 4.2% and 2.5%, respectively.

## for the future of the PLANET

**Digitalise to bring about the energy transition and decarbonisation**

**Contribute to the fight against climate change**

**Protect the ecosystems and promote a circular economy**



## for the future of PEOPLE

**Improve the quality of life and ensure the safety of employees, citizens and the national energy system**

**Develop and disseminate the skills of the future**

**Valorise diversity and support equal opportunities and inclusion**



## for a sustainable future TOGETHER

**Promote innovation and dialogue through partnerships**

**Promote the principles of sustainability in the supply chain**

**Take care of the territory**



## 5.2 Sustainable Value Creation Plan targets

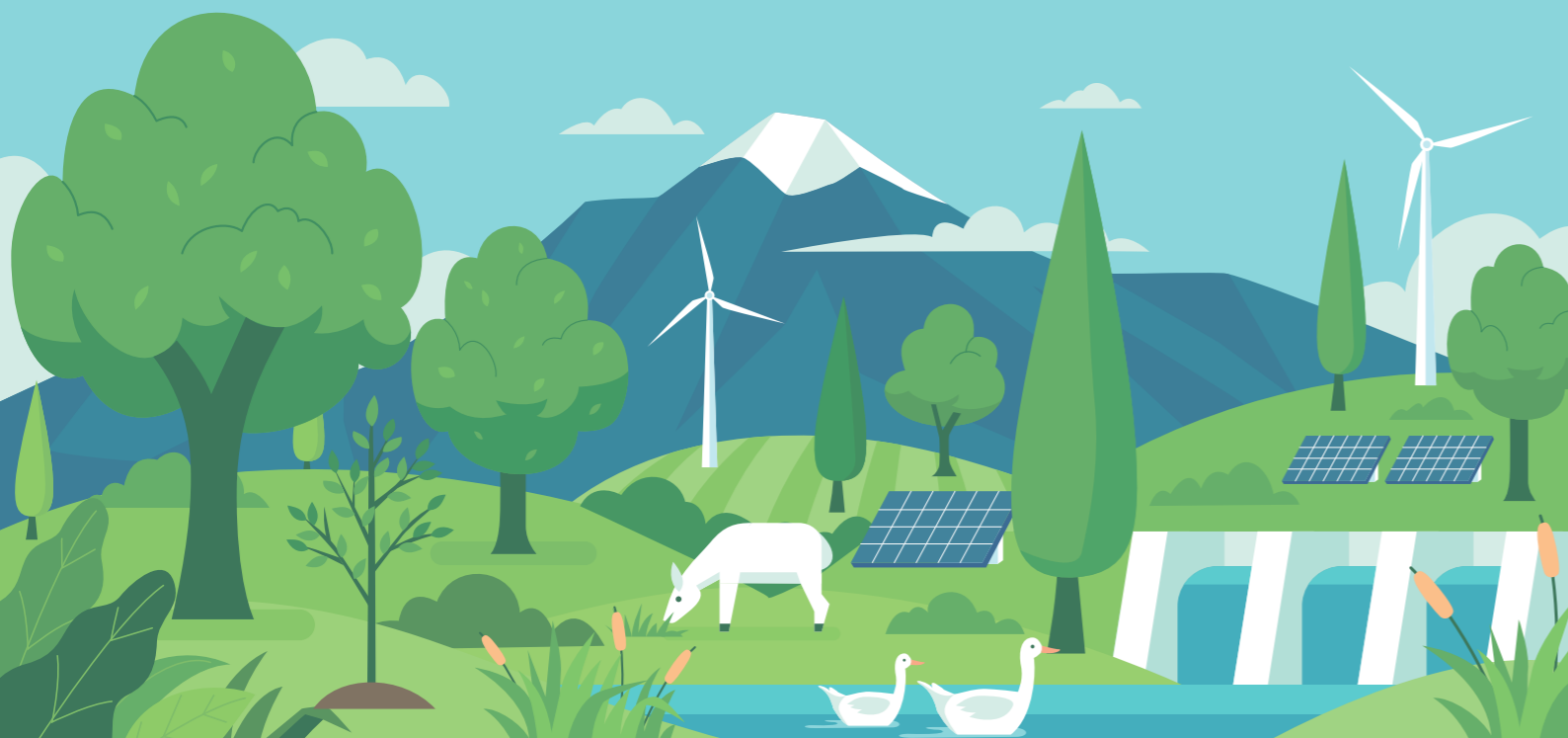
In addition to the decarbonization targets included in the Strategic Plan (see Par. 5.1), Italgas has defined other specific goals related to its Transition plan. Such targets are linked to specific planned CAPEX, being them preliminary to the achievement of both decarbonization targets and energy transition targets. Transition plan targets are included in the broader Sustainability Value Creation Plan, closely related to the strategy of the Group to manage climate-related risks and opportunities.

In fact, in accordance with the Strategic Plan and with the commitment to preserve and develop the capitals used in its business model, Italgas Sustainable Value Creation Plan is composed by three pillars: the planet, the people, the partnerships.

Through these pillars, the Group is called to preserve the capital connected to the risks and opportunities related to climate change (e.g., natural, manufactured, intellectual...). For this reason, with the view of becoming an enabler of the energy transition, Italgas confirms its strong commitment to the repurposing and digitization of its infrastructures, promoting the integration of renewable gases and hydrogen in the network, the methanisation of the areas that currently use sources of higher emissions, contributing to the diversification of energy supplies and to internal and external training to foster digital skills and energy-related competences in the territories in which the Group operates.

The above-mentioned pillars provide the path for Italgas actions, commitments, and measurable targets. These actions will produce medium-long-term impacts that will contribute to mitigation and adaptation of climate change at Italian level.

During 2023, Sustainable Value Creation Plan was updated to better represent the evolution of the sustainability strategy and ambition of the Group. The targets now include within their scope also Depa Infrastructure, the leading Greek gas distribution operator, which 100% acquisition has been completed by Italgas on 1<sup>st</sup> September 2022.



Actions	Targets <sup>57</sup>	Long-term impacts
<b>Repurposing the network to increase its flexibility and ensure the necessary connections for the distribution of biomethane and hydrogen</b>	<ul style="list-style-type: none"> <li>100% network ready to accommodate hydrogen by 2028</li> <li>90% network digitised and monitorable by DANA by 2024 in Italy and by 2026 in Greece</li> </ul>	<ul style="list-style-type: none"> <li>Economic development of the Country</li> <li>Decarbonisation of the Country in accordance with EU goals</li> <li>Digitization, innovation, efficiency, safety and Sustainability of gas distribution infrastructure</li> </ul>
<b>Extending the network to non-methanised territories</b>	<ul style="list-style-type: none"> <li>360,000 new users connected to the Group natural gas distribution networks by 2029, thus replacing more polluting sources, allowing sector coupling and reducing costs for customers<sup>58</sup></li> </ul>	<ul style="list-style-type: none"> <li>Economic development of the Country</li> <li>Decarbonisation of the Country in accordance with EU goals</li> <li>Digitization, innovation, efficiency, safety and Sustainability of gas distribution infrastructure</li> <li>Safe and efficient access to energy for all</li> </ul>
<b>Enhancing the activities of ESCo Geoside</b>	<ul style="list-style-type: none"> <li>280,000 MWh saved by ESCo customers, corresponding to about 62,000 tons of CO<sub>2</sub>, thanks to energy efficiency interventions implemented between 2022 and 2028</li> </ul>	<ul style="list-style-type: none"> <li>Decarbonisation of the Country in accordance with EU goals</li> </ul>
<b>Promote the diversification of national energy supply</b>	<ul style="list-style-type: none"> <li>400 biomethane production plants, built by third parties, connected to the distribution network by 2029</li> <li>200 tons of green hydrogen produced and distributed in the Group's P2G pilot plant in Sardinia by 2028, demonstrating the validity of the solution for industrial and residential transport and use</li> </ul>	<ul style="list-style-type: none"> <li>Energy security for the Country</li> <li>Decarbonisation of the Country in accordance with EU goals</li> </ul>
<b>Promoting the dissemination of digital skills for the energy sector outside the organization</b>	<ul style="list-style-type: none"> <li>30,000 persons engaged in external training activities dedicated to the energy transition by 2029</li> </ul>	<ul style="list-style-type: none"> <li>Energy and digital literacy of the citizens in the service of the energy transition</li> </ul>
<b>Developing digital skills and repositioning skills towards higher value-added activities</b>	<ul style="list-style-type: none"> <li>45 hours of training per year per employee, with a focus on digital training, by 2029</li> </ul>	<ul style="list-style-type: none"> <li>Energy and digital literacy of the citizens in the service of the energy transition</li> </ul>

<sup>57</sup> The perimeter of the targets is the same as the scope of consolidation for financial data as of 31st of March 2023. Any changes following M&As, and ATEM (Minimum Territorial Area) tenders of gas distribution concessions, if relevant, will be considered in the review of the target.

<sup>58</sup> Organic growth of redelivery points (combination of new connections and cut-offs), without considering contribution of future tenders.

### 5.3 Metrics

The following metrics, regarding Scope 1, Scope 2, Scope 3 GHG emissions, energy consumption and the carbon intensity metrics, as well as 2022 performance of other relevant targets for the contribution to the energy transition included in the Sustainable Value Creation Plan, are reported both in the 2022 Integrated Annual Report<sup>59</sup> (and have been verified by the independent auditing firm appointed), and in the half-year financial report and 1st and 3rd

quarter consolidated reports. Also, 2022 performance includes values related to Greek company only for its consolidation period, thus covering September to December 2022.

#### 5.3.1 Net Energy Consumption

Natural gas is the energy source mostly used in the activities of the Group for both civil and industrial uses, and for vehicles. Since 2016, Italgas has monitored its consumption with the aim of reducing its environmental impact over time according to a continuous improvement process.

Net Energy Consumption <sup>60</sup>	U.o.m.	2020	2021	2022 <sup>61</sup>	Change 2021-2022
Fuel energy consumption for industrial use	(TJ)	322.5	319.3	243.8	-23.6%
Fuel energy consumption for civil use		45.5	46.7	32.9	-29.6%
Fuel energy consumption for vehicles		123.0	137.2	116.0 <sup>62</sup>	-15.5%
Net electricity consumption for industrial use		56.8	56.6	52.1	-8.0%
Net electricity consumption for civil use		44.0	37.1	35.6	-4.0%
Thermal energy consumption for civil use		0.3	0.3	0.3	0.0%
<b>Total</b>		<b>592.1</b>	<b>597.2</b>	<b>480.7</b>	<b>-19.5%</b>

<sup>59</sup> [https://www.italgas.it/wp-content/uploads/sites/2/2023/03/Integrated-Annual-Report-2022\\_PDF-format-not-ESEF.pdf](https://www.italgas.it/wp-content/uploads/sites/2/2023/03/Integrated-Annual-Report-2022_PDF-format-not-ESEF.pdf)

<sup>60</sup> This refers to total energy consumption, from which any self-produced and self-consumed electricity consumption is subtracted.

<sup>61</sup> 2022 figures include the contribution of Greek company for its consolidation period (September-December 2022).

<sup>62</sup> In 2022, we were able to subdivide the mileage for private and business use of cars so that only the consumption and emissions for business use would be taken into account. The reduction in private use mileage means a reduction of about 3 million km on an annual basis, which corresponds to a decrease in fuel consumption of 8.5 TJ (from 120.0 to 111.5) and emissions of 1.4 10<sup>3</sup> tonnes CO<sub>2</sub> (from 5.9 to 4.5).

Total energy has decreased from 2021 (-19.5%, corresponding to -116.5 TJ, even with an increase of 8.7 TJ due to the inclusion of the DEPA Infrastructure Group). Thanks to energy optimization and efficiency measures, fuel energy consumption for industrial use decreased between 2021 and 2022 (-23.6% corresponding to -75.5 TJ, including also the increase of 1.2 TJ related to Greek perimeter). That result was achieved due to the continuing efficiency measures, such as the replacement of boilers and the installation of optimization systems at the reduction and measurement collection plants with preheating, as well as optimized regulation of the plants, also thanks to the digitization of the monitoring and regulation processes, which allowed for operations under conditions of greater efficiency.

In relation to fuel energy consumption for civil use, a decrease can be observed from 2021 to 2022 (-29.6%, corresponding to -13.8 TJ, including also the increase of 0.5 TJ related to Greek perimeter), thanks to an even more careful management based on the continuous monitoring of the main parameters of the offices and their consumption (also by digitizing the monitoring and regulation processes), with the resulting improvement in energy performance. This was reached through a series of initiatives including, for example, optimal management of heating and/or

air conditioning plants and the related set-points, delayed switch-on of such according to external climate conditions, greater segmentation of plants in the main sites so as to allow for their switch-off when no staff are in the premises and planned closure of the sites during the holidays.

Moreover, fuel energy consumption for vehicles recorded a decrease (-15.5% compared to 2021, corresponding to -21.2 TJ, despite a contribution of 4.5 TJ related to the Greek perimeter), in line with the decrease in kilometers travelled during the year (-16.8% compared to 2021), equal to around 35.6 million kilometres. Those changes are mainly the result of the optimization and renewal of the car fleet and the introduction of high-tech solutions, such as online quotations, which resulted in a reduction in travel by operating personnel.

With reference to electricity consumption for civil use (-4.0% compared to 2021, corresponding to -1.5 TJ, despite a contribution of 2.1 TJ related to the Greek perimeter), the decrease recorded is attributable to improved efficiency in the use of the offices of the Group, including replacement lighting fixtures with LED technology, the optimal configuration – modulated over the course of the year – of the operating logics of lighting outside buildings and greater system regulation accuracy during the summer

season. Similar to civil consumption, the industrial electricity consumption of the Group also decreased in 2022 (-8.0% compared to 2021, corresponding to -4.5 TJ, even including the increase of 0.4 TJ related to Greek perimeter), a reduction mainly attributable to various efficiency measures, despite the fact that various new users (PODs) were activated in 2022 connected with the installation of the Final Digitised Reduction Groups (GRFDs), which generated additional consumption of above 0,5 TJ.

### 5.3.2 Scope 1 and Scope 2 GHG emissions and carbon intensity metrics

In line with what done in relation to consumption, Italgas has been also monitoring over the years its GHG emissions, with the objective of reducing its carbon footprint.

Fugitive emissions of natural gas from distribution networks, gas preheating processes in the decompression systems for gas distribution (industrial use) and the use of cars in the corporate fleet are the main GHG emissions contributors of the Group.

Scope 1 and Scope 2 GHG emissions	U.o.m.	2020	2021	2022 <sup>63</sup>	Change 2021-2022	
Fugitive gas emissions	10 <sup>3</sup> tCO <sub>2</sub> eq	146.6	133.4	126.3	-5.3%	
Emissions from gas consumption for industrial use		18.2	18.1	13.9	-23.2%	
Emissions from gas consumption for civil use		2.6	2.6	1.8	-30.8%	
Emissions from fuel consumption for vehicles		5.7	6.4	5.6 <sup>64</sup>	-12.5%	
Emissions from thermal energy for civil use		0.0	0.0	0.0	0.0%	
Emissions from electricity consumption for industrial use		0.2		0.0	0.0	0.0%
Emissions from electricity consumption for civil use				0.2	0.5	150.0%
<b>Total</b>			<b>173.3</b>	<b>160.7</b>	<b>148.1</b>	<b>-7.8%</b>

<sup>63</sup> 2022 values include the contribution of Greek company for its consolidation period, i.e., September-December 2022

<sup>64</sup> See note 62.

Scope 1 and Scope 2 GHG emissions	U.o.m.	2020	2021	2022 <sup>65</sup>	Change 2021-2022
Scope 1	10 <sup>3</sup> tCO <sub>2</sub> eq	173.1	160.5	147.6	-8.0%
Scope 2 market-based		0.2 <sup>66</sup>	0.2	0.5	150.0%
<b>Total</b>		<b>173.3</b>	<b>160.7</b>	<b>148.1</b>	<b>-7.8%</b>

Carbon intensity	U.o.m.	2020	2021	2022	Change 2021-2022
Gas distributed	10 <sup>6</sup> Sm <sup>3</sup>	8,477	8,887	8,233	-7.4%
Physical carbon intensity <sup>67</sup>	10 <sup>3</sup> tCO <sub>2</sub> eq/10 <sup>9</sup> Sm <sup>3</sup>	20.4	18.1	18.0	-0.6%
Total revenue <sup>68</sup>	Million €	1,333.8	1,370.8	1,555.9	13.5%
Economic carbon intensity <sup>69</sup>	10 <sup>3</sup> tCO <sub>2</sub> eq/10 <sup>6</sup> €	0.130	0.117	0.095	-18.8%

2022 saw a drop in total Scope 1 and Scope 2 emissions of 7.8% lower than 2021, corresponding to -12.6 10<sup>3</sup> tCO<sub>2</sub>eq, even against an increase of 6.9 10<sup>3</sup> tCO<sub>2</sub>eq due to the inclusion of the DEPA Infrastructure Group. The main components that contributed to this decrease are fugitive emissions and emissions from gas consumption for industrial use, which, in total, make up for almost 95% of the total Scope 1 and Scope 2 emissions in 2022.

It is important to note how this reduction is even more significant against an increase in the operations of the Group, in that timeframe in terms of increase of network consistency (+9.5% compared to 2021 corresponding to 6,903 kilometres).

Emissions from gas for civil and industrial use and from fuel consumption for vehicles are in line with the consumption trend described in

Paragraph 5.3.1 “Energy consumption”, while those from electricity consumption are slightly increasing as a result of the inclusion of electricity energy consumption by the Greek company that does not come from certified renewable sources (certified by the guarantee of origin management system).

### 5.3.2.1 Fugitive emissions

Italgas 2022 fugitive emissions decreased by -5.3% compared to 2021 (corresponding to -7.1 10<sup>3</sup> tCO<sub>2</sub>eq, despite a contribution of 6.3 10<sup>3</sup> tCO<sub>2</sub>eq related to the Greek perimeter).

By analysing the characteristic KPIs of the process in more depth, the Gas Leakage rate (Natural gas fugitive emissions/gas distributed) remained substantially flat (from 0.087% in 2021 to 0.089% in 2022), while a significant decrease was recorded in the ratio between the fugitive emissions of natural gas and the network consistency (-13.6%, from 106.2 Sm<sup>3</sup>/km in 2021 to 91.8 in 2022). The prompt inspection, localisation and repair of leaks resulted in significant savings of fugitive emissions leaked into the atmosphere.

Other carbon intensity (fugitive emissions)	U.o.m.	2020	2021	2022 <sup>70</sup>	Change 2021-2022
Natural gas fugitive emissions	10 <sup>6</sup> Sm <sup>3</sup>	8.5	7.7	7.3	-5.3%
CO <sub>2</sub> fugitive emissions	10 <sup>3</sup> tCO <sub>2</sub> eq	146.6	133.4	126.3	-5.3%
Natural gas distributed	10 <sup>6</sup> Sm <sup>3</sup>	8,477	8,886	8,233	-7.4%
Gas Leakage Rate <sup>71</sup>	%	0.100	0.087	0.089	2.3%
Network consistency <sup>72</sup>	km	71,184.5	72,503.1	79,406.1	9.5%
Fugitive emissions of natural gas / network consistency	Sm <sup>3</sup> / km	118.9	106.2	91.8	-13.6%

<sup>65</sup> 2022 values include the contribution of Greek company for its consolidation period, i.e., September–December 2022.

<sup>66</sup> In 2020, 2021 and 2022, the market-based method was used, whose calculation provides that the emission quota relating to renewable sources is zero and that the residual mix emission factor is used for the portion not covered by such contracts.

<sup>67</sup> Calculated as Scope 1 and Scope 2 emissions/gas distributed.

<sup>68</sup> Unlike the legal statement, the reclassified income statement requires the listing of Total revenues and Operating costs net of the impact of IFRIC 12 “Service concession agreements” (€ 772.0 and € 727.8 million respectively in 2021 and 2022), connection contributions (€ 19.6 and € 19.2 million respectively in 2021 and 2022), repayments from third parties and other residual components (€ 0.8 and € 9.6 million respectively in 2021 and 2022).

<sup>69</sup> Calculated as Scope 1 and Scope 2 emissions/total revenue.

<sup>70</sup> 2022 values include the contribution of Greek company for its consolidation period, i.e., September–December 2022.

<sup>71</sup> Natural gas fugitive emissions/gas distributed.

<sup>72</sup> Note that the kilometres of network used for the 2022 KPIs are related to the ARERA consistency declared in 2021 (i.e., as at 31/12/2021). In addition, for 2022 the network kilometres investigated in a second phase were also accounted for. For the other gas network consistency of Medea, an average consistency for the previous year was considered, given the variability due to multiple conversions of the networks to natural gas during the year.



### Sustainability Business Review

The Strategic Plan and the Sustainable Value Creation Plan are also influenced by the internal monthly collection and reporting of current and forecasted energy consumptions and GHG emissions data. Such data and the underlying trends are analysed, using specific KPIs during monthly Sustainability Business Reviews, to evaluate the effectiveness of the initiatives put in place by the companies of the Group in terms of energy efficiency and reduction of GHG emissions and to constantly verify the progress against the targets. As an example, in SBRs, operational modalities of energivorous assets management have been tested in order to optimize energy consumption; also, technologies performance – identified and developed by Innovation Committee – is tested to prove their effectiveness to the accomplishment of sustainability targets. SBR is a core example of Italgas commitment towards sustainability: in fact, such monthly meetings require participation of all Italgas Top Management, including Group CEO and subsidiaries CEOs, functions directors and data owners. Since June 2023, SBR has also been the focus of one Italgas digital room, with the aim to further optimize, enhance and coordinate sustainability data collection and analysis. The project output will be a

“Minimum Viable Product” platform that will interact with several corporate environmental data tools in order to automatize and ease data entering, processing, analysis and presentation.

### Carbon Disclosure Project

In December 2022, Italgas was recognised by CDP (formerly the Carbon Disclosure Project)<sup>73</sup> in the Climate Change Questionnaire for its efforts in the fight to climate change for the sixth year in a row. The Group was included in 2022 in the in the “A-list”, improving its score from “A-” to “A”. Among all 15,000 companies undergoing the questionnaire globally, only 283 reached “A” for climate change, of which only 5 in Italy. Also, this score ranked Italgas above the European regional average and the Energy Utilities Networks sector.

### 5.3.3 Scope 3 GHG emissions from supply chain

Scope 3 emissions linked to the supply chain and included in this KPI cover between 95.6% and 97.6% of the Italgas total applicable Scope 3 emissions (2020-2022 data<sup>74</sup>). From 2020 on, emissions decreased thanks to the effectiveness of suppliers’ engagement activities in which suppliers adopted some initiatives impacting since 2021 (for example the purchase of electricity from renewable energy).

2022 values are slightly lower than 2021 (-0.6%, corresponding to -0.9 10<sup>3</sup>tCO<sub>2</sub> eq), even though 2022 figure also includes Greek company value (8.8 10<sup>3</sup>tCO<sub>2</sub> eq). Following this approach, Italgas intends to develop an approach inspired by “Partnerships for the goals” (SDG 17), by promoting the best techniques and technologies available or, where possible, by identifying new solutions with its suppliers in the fight to climate change.

Scope 3 GHG emissions from supply chain <sup>75</sup>	U.o.m.	2020	2021	2022 <sup>76</sup>	Change 2021-2022
<b>Total</b>	10 <sup>3</sup> tCO <sub>2</sub> eq	<b>183.3</b>	<b>147.2</b>	<b>146.3</b>	<b>-0.6%</b>



<sup>73</sup> CDP is a not-for-profit charity that runs the global disclosure system for investors, companies, cities, states and regions to manage their environmental impacts. <https://www.cdp.net/en/info/about-us>

<sup>74</sup> Considering Scope 3 emissions from “energy” and “Business travel”; <https://www.italgas.it/wp-content/uploads/sites/2/2022/04/2021-Integrated-Annual-Report-format-PDF.pdf>

<sup>75</sup> Scope 3 emissions from supply chain data reported in the Integrated Annual Report 2021 on page 157 - “Scope 3 emissions” table - “Supply chain” (and in previous Reports) have been calculated with a different methodology, which took into consideration the same Scope 3 supply chain categories, associating specific CO<sub>2</sub> emission factors to the expenses for the outsourced activities, depending on the activity sector of each supplier.

<sup>76</sup> 2022 values include the contribution of Greek company for their consolidation period, i.e., September-December 2022

### 5.3.4 Sustainable Value Creation Plan metrics

Italgas also tracks its performance against Sustainability Value Creation Plan targets, among which there are some directly linked to the view of the Group of becoming an enabler of the energy transition – even though they are not specifically GHG emissions-related. This vision guides the Italgas commitment towards the repurposing and digitization of its infrastructures, the

promotion of integration of renewable gases and hydrogen in the network, the methanisation of the areas that currently use sources of higher emissions, the contribution to the diversification of energy supplies and internal and external training to foster digital skills and energy-related competences in the territories in which Italgas operates. Here below you can find performance related to Sustainability Value Creation Plan targets<sup>77</sup>.

Actions	TARGETS (Italian + Greek perimeter) <sup>78</sup>	2022 Performance (Italian perimeter) <sup>79</sup>
<b>Repurposing the network to increase its flexibility and ensure the necessary connections for the distribution of biomethane and hydrogen</b>	<ul style="list-style-type: none"> <li>100% network ready to accommodate hydrogen by 2028</li> <li>90% network digitised and monitorable by DANA by 2024 in Italy and by 2026 in Greece</li> </ul>	<ul style="list-style-type: none"> <li>95% of the network is already compatible with a 20% H2, in blend H2NG (plants currently compatible up to 2%)</li> <li>At the end of 2022, DANA operated 80 of the 767 plants in the Italgas Group's network. There are 2,091 digitised sub-networks, out of the Italgas Group's total of 5,550 sub-networks (total figure as of 31 December 2022)</li> </ul>
<b>Extending the network to non-methanised territories</b>	<ul style="list-style-type: none"> <li>360,000 new users connected to the Group natural gas distribution networks by 2029, thus replacing more polluting sources, allowing sector coupling and reducing costs for customers<sup>80</sup></li> </ul>	<ul style="list-style-type: none"> <li>6,000 new users connected to the Group's natural gas distribution network expansions in Italy</li> </ul>

Actions	TARGETS (Italian + Greek perimeter) <sup>78</sup>	2022 Performance (Italian perimeter) <sup>79</sup>
<b>Enhancing the activities of ESCo Geoside</b>	<ul style="list-style-type: none"> <li>280,000 MWh saved by ESCo customers, corresponding to about 62,000 tons of CO<sub>2</sub>, thanks to energy efficiency interventions implemented between 2022 and 2028</li> </ul>	<ul style="list-style-type: none"> <li>9,530 tons of CO<sub>2</sub>eq</li> </ul>
<b>Promote the diversification of national energy supply</b>	<ul style="list-style-type: none"> <li>400 biomethane production plants, built by third parties, connected to the distribution network by 2029</li> <li>200 tons of green hydrogen produced and distributed in the Group's P2G pilot plant in Sardinia by 2028, demonstrating the validity of the solution for industrial and residential transport and use</li> </ul>	<ul style="list-style-type: none"> <li>The first biomethane plant whose connection to the Italgas distribution network was completed in December 2022, guarantees maximum daily production of 10,000 m<sup>3</sup> for a maximum annual total of 2.5 million m<sup>3</sup></li> <li>Launch of P2G plant scheduled in 2024</li> </ul>
<b>Promoting the dissemination of digital skills for the energy sector outside the organization</b>	<ul style="list-style-type: none"> <li>30,000 persons engaged in external training activities dedicated to the energy transition by 2029</li> </ul>	<ul style="list-style-type: none"> <li>4,600 people involved in external training activities</li> </ul>
<b>Developing digital skills and repositioning skills towards higher value-added activities</b>	<ul style="list-style-type: none"> <li>45 hours of training per year per employee, with a focus on digital training, by 2029</li> </ul>	<ul style="list-style-type: none"> <li>35 hours training per employee per year (of which 8 regarding digital training)</li> </ul>

Further details can be found in the 2022 Integrated Annual Report<sup>81</sup>.

<sup>77</sup> Please note that targets refer to the most updated version of Strategic Plan and Sustainability Value Creation Plan 2023-2029, thus including both Italian and Greek perimeter, while 2022 performance here disclosed reflects the disclosure already presented in the 2022 Integrated Annual Report, thus referring only to Italian perimeter.

<sup>78</sup> The perimeter of the targets is the same as the scope of consolidation for financial data as of 31st of March 2023. Any changes following M&As, and ATEM (Minimum Territorial Area) tenders of gas distribution concessions, if relevant, will be considered in the review of the target.

<sup>79</sup> As disclosed in 2022 Integrated Annual Report.

<sup>80</sup> Organic growth of redelivery points (combination of new connections and cut-offs), without considering contribution of future tenders.

<sup>81</sup> [https://www.italgas.it/wp-content/uploads/sites/2/2023/03/Integrated-Annual-Report-2022\\_PDF-format-not-ESEF.pdf](https://www.italgas.it/wp-content/uploads/sites/2/2023/03/Integrated-Annual-Report-2022_PDF-format-not-ESEF.pdf)

# TCFD Recommendations disclosure table



## 5.4 Carbon pricing

Despite none of Italgas operations is subject to a carbon pricing, the Group has strategically integrated an internal carbon price (CP) into its planning process, enabling effective decision-making and addressing climate-related issues. The internal CP quantifies potential risks arising from regulatory changes and other climate change impacts. The use of a CP for strategic planning enforces the whole Group strategy.

By utilizing the CP, Italgas assesses the economic value of carbon reduction initiatives (impacting Scope 1 and 2 emissions) and evaluates their impact in terms of CO<sub>2</sub> reduction and return on investment, assuming that the cost of CO<sub>2</sub> is equal to the cost of avoided carbon emissions. The internal CP applies to the entire Group and its activities, supporting low-carbon investments, stress testing investments, identifying low-carbon opportunities, and driving energy efficiency.

The internal and external targets are built via a granular analysis of CO<sub>2</sub> emissions by activity. The result of the mentioned analysis is a CO<sub>2</sub> "P&L", which is converted into an economic P&L using the trading price for CO<sub>2</sub> from external resources referring to EU ETS Carbon Pricing (about 81 €/CO<sub>2</sub> ton for 2022 and ~86 €/CO<sub>2</sub> ton for 2023 in the 2023/2029 Strategic Plan projections), applying throughout

the Group, to all facilities and different activities. As a result of this assessment, Italgas Group can identify and seize opportunities to reduce CO<sub>2</sub> emissions (and improve the CO<sub>2</sub> P&L) over the 7 years strategic plan horizon.

CP helps assign value to CO<sub>2</sub> reductions and compare the economic value generated relative to the initiative's cost, going beyond a simple evaluation of capex. The use of the internal CP informs decision-making process and supports specific projects aligned with CO<sub>2</sub> reduction targets outlined in the Strategic Plan (e.g. purchasing electricity produced from certified renewable sources, as certified by the Guarantees of Origin management system, or the design, implementation and commissioning, at the main city gates, of turbo-expanders for energy recovery and cogeneration plants).

Additionally, the internal CP helps evaluate and navigate emerging risks associated with more stringent GHG regulations, informing the organization's risk disclosure and accelerating CO<sub>2</sub> reduction initiatives. It serves as a reminder and provides high attention to potential risks that may be overlooked in the absence of regulatory obligations. Overall, the internal carbon price has played a pivotal role in Italgas climate commitments and facilitated the implementation of their climate Transition plan by guiding strategic investments, assessing the economic value of initiatives, and addressing emerging risks.

TCFD Recommendations	Disclosure
<b>GOVERNANCE</b>	
Disclose the organization's governance around climate-related risks and opportunities.	
a) Describe the board's oversight of climate-related risks and opportunities.	4.2 Role of the Board and the Committees
b) Describe management's role in assessing and managing climate-related risks and opportunities.	4.1 Role of Management
<b>STRATEGY</b>	
Disclose the actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning where such information is material.	
a) Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term.	2.2 Strategy to deal with climate change: our transition plan 2.3 Strategy to deal with climate change: our adaptation plan 2.5 Main partnerships on climate change 3.1 Enterprise Risk Management Model 3.2 Climate change risks and opportunities
b) Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning.	2.2 Strategy to deal with climate change: our transition plan 2.3 Strategy to deal with climate change: our adaptation plan 2.5 Main partnerships on climate change 3.1 Enterprise Risk Management Model 3.2 Climate change risks and opportunities
c) Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.	2.1 Analysis and utilization of energy and climate scenarios to build a solid strategy 2.2 Strategy to deal with climate change: our transition plan 2.3 Strategy to deal with climate change: our adaptation plan 3.1 Enterprise Risk Management Model 3.2 Climate change risks and opportunities
<b>RISK MANAGEMENT</b>	
Disclose how the organization identifies, assesses, and manages climate-related risks.	
a) Describe the organization's processes for identifying and assessing climate related risk	3.1 Enterprise Risk Management Model
b) Describe the organization's processes for managing climate-related risks.	3.1 Enterprise Risk Management Model 3.2 Climate change risks and opportunities
c) Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management.	3.1 Enterprise Risk Management Model 3.2 Climate change risks and opportunities
<b>METRICS AND TARGETS</b>	
Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material.	
a) Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process.	5.3 Metrics 5.4 Carbon pricing
b) Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks.	5.3 Metrics 5.4 Carbon pricing
c) Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets.	5.1 Decarbonization targets 5.2 Sustainable Value Creation Plan targets

