

Snam for the future

Financial Disclosure
on Climate Change
2018



Company profile

Snam is Europe's leading gas utility. Founded in 1941 as "Società Nazionale Metanodotti", it has been building and managing sustainable and technologically advanced infrastructure to guarantee energy security for over 75 years. The company operates in Italy and, through subsidiaries, in Albania (AGSCo), Austria (TAG and GCA), France (Terēga), Greece (DESFA) and the United Kingdom (Interconnector UK). Snam is a principal partner in TAP (Trans Adriatic Pipeline) and is actively engaged in the creation of the Energy Union.

The company has the largest gas transport network (about 32,600 km in Italy, over 41,000 including its international subsidiaries) and storage capacity (16.9 billion cubic meters in Italy, over 20 bcm including its international subsidiaries) in Europe. Snam manages the first liquefied natural gas (LNG) plant ever built in Italy and is a shareholder in Adriatic LNG, the country's main terminal and one of the most strategically positioned in the Mediterranean, and – through DESFA – in the Greek Revithoussa terminal, for a total regasification capacity pro quota of about 6 bcm per year.

Snam's business model is based on sustainable growth, transparency, fostering talent, and strengthening relationships with local communities through the Snam Foundation. As part of the company's 2018-2022 industrial plan, the "Snamtec" project was launched with the aim of leading the energy transition. The project focuses on technology, innovation and R&D to support both the major Italian and international networks and green economy businesses, such as sustainable transport, renewable gas, hydrogen and energy efficiency.

www.snam.it

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on Climate Change 2018**

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Letter to shareholders and stakeholders



Carlo Malacarne
Chairman



Marco Alverà
Chief Executive Officer

To our shareholders

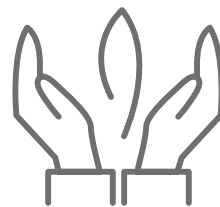
With the new Strategic Plan, Snam has confirmed and further strengthened its role as a major player in the implementation of a low carbon energy strategy. This document, created as the transposition of the recommendations made by the Task Force on Climate-related Financial Disclosures (TCFD) of the Financial Stability Board, to which Snam has adhered, is a commitment to transparency towards our stakeholders in dialogue on climate change: it is an important opportunity to present our business model and governance, focussed on long-term sustainable growth.

We have set ourselves some truly challenging objectives through to 2022 and 2025 to reduce the natural gas emissions of our business involving the transmission, storage and regasification of LNG, respectively by 15 and 25% with respect to the values recorded in 2016. We also focus on a series of initiatives involving our assets with a view to reducing the environmental impact, such as increasing the use of renewable energy sources, installing high-efficiency gas technologies to generate heat and new cogeneration/trigeneration plants, as well as improving the energy efficiency of buildings.

The new plan also clearly shows Snam's commitment to promoting the development of biomethane production, a renewable sustainable source that is also flexible and programmable and which can allow for high efficiency and

effectiveness thanks to the use of existing infrastructures, clearly benefiting the end consumers and energy system as a whole. Snam will contribute both through the development of plants for third parties with its subsidiary IES, and the development on its own, or as part of a partnership, of biomethane and biogas plants. As regards sustainable mobility, Snam continues its efforts in the development of CNG distribution infrastructures as well as the probable development of at least 4 micro liquefaction plants. Finally, Snam will be promoting initiatives in the field of energy efficiency, relying on the competences acquired in 2018. We firmly believe in the need for, and effectiveness of, a joint commitment made by all gas sector companies to the energy transition and decarbonisation. This is why for years now, Snam has taken an active role in various different national and international initiatives on these topics, in research, technical aspects and, last but by no means least, through the signing of protocols and position papers with reference chain players, together with international initiatives to reduce methane emissions and develop a low carbon gas market.

The emissions reduction objective is one of the main targets that the company has set itself within the four-year strategy, as evidence of its desire to play a leading role in the path towards a highly-sustainable, low-carbon economy. The adhesion, participation and support to the CDP, as well as to many other sustainability indexes of which the company is a part (Robeco sam, FTSE4good,



Vigeo), are a tangible sign of a form of sustainability that is no longer seen by the company as a virtuous aspect of its business, but rather as a mainstream topic that characterises all its decisions and initiatives.

In 2018, Snam was confirmed as amongst the world's leading companies in the CDP assessment, thanks to its inclusion in the CDP climate change A-list.

We trust that this document, at its first edition, will help clarify to all our stakeholders, Snam's commitment to the fight against climate change.

18 February 2019

for the Board of Directors

The Chairman

The Chief Executive Officer

**The adherence to the
Task Force on Climate-
related Financial
Disclosures (TCFD) is
our engagement to
transparency**

The evolution of the energy and climate scenario

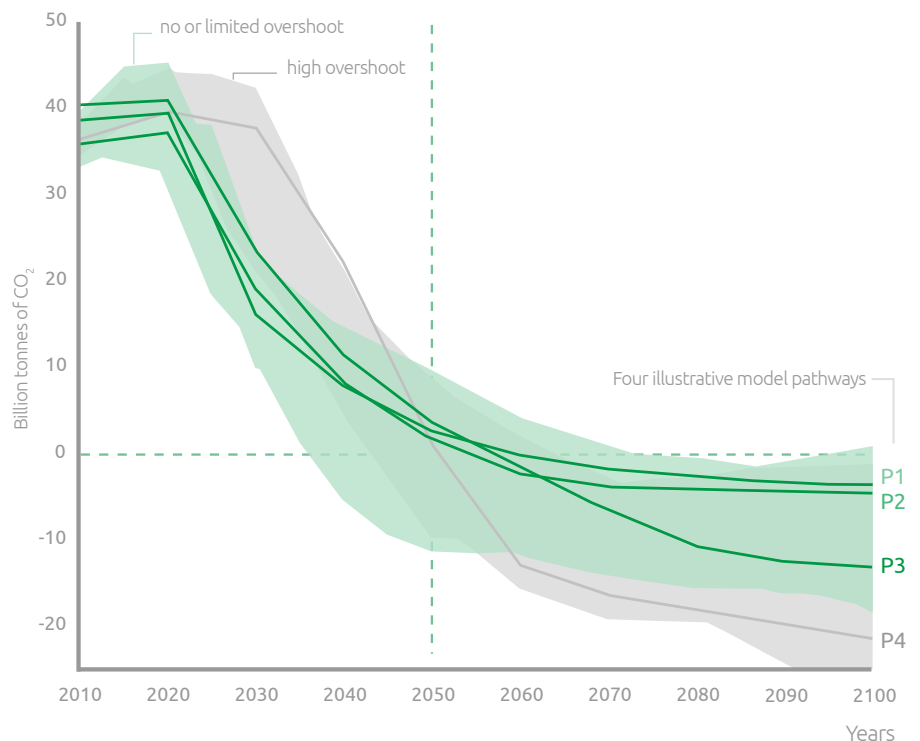


Intergovernmental Panel on Climate Change (IPCC)

Companies operating in the energy sector face the continuous challenge of guaranteeing the energy required by the market at accessible prices, using sources and processes that head towards decarbonisation. The growing awareness of the effects of climate change on the planet have led entities and authorities, on both a national and international level, to consider possible strategies by which to slow the rise in temperatures and limit the effects of global warming.

As confirmation of the importance of taking action to fight climate change, in 2018, the Intergovernmental Panel on Climate Change (IPCC) published its "Special Report on the impacts of Global Warming of 1.5°C", which highlights the effects of global warming on the planet and the importance of limiting the temperature rise to below the threshold of 2°C. Human activities have, in fact, already brought about a global warming of approximately 1°C with respect to the pre-industrial period, with visible effects such as the intensification of heatwaves and extreme weather events, the rising of the sea level and the reduction of the extension of the coral reef, the decline in biodiversity, the thinning of the Arctic marine ice and continental glaciers and a fall in the yield of agricultural harvests. At current production rates, greenhouse gas emissions will cause a temperature rise of +1.5°C in 2040, going on to then exceed +2°C in the following years, with catastrophic effects on the planet. In the scenario with a minimum increase, or increase limited to 1.5°C, global CO₂ emissions reduce by approximately 45% with respect to 2010 levels by 2030, reaching zero in around 2050.

Global total net CO₂ emissions



In pathways limiting global warming to 1.5°C with no or limited overshoot as well as in pathways with a high overshoot, CO₂ emissions are reduced to net zero globally around 2050.

Source: "Summary for policymakers" of the "Special Report on the impacts of Global Warming of 1.5°C" prepared by the IPCC

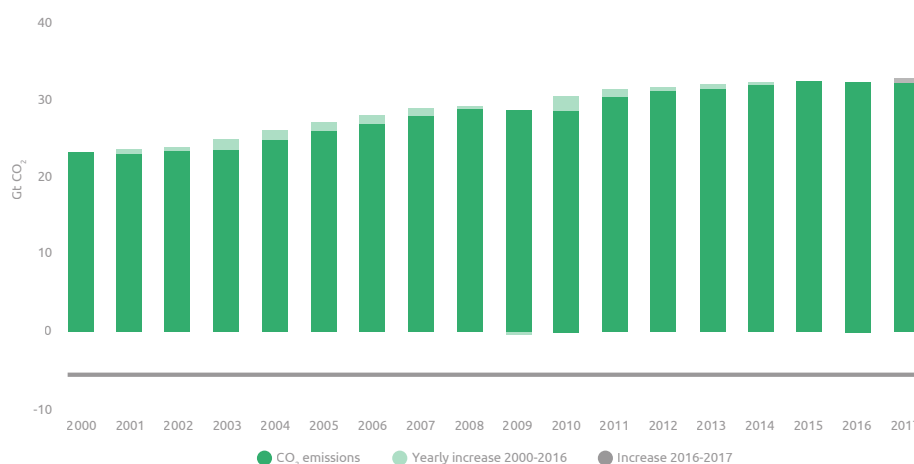
Global energy-related CO₂ emissions

To limit global warming to below 2°C, CO₂ emissions will need to reduce by around 25% by 2030 and reach zero in around 2070.

The path to be taken to reach this threshold requires global intervention in all sectors of the economy and industry, which will lead to rapid, long-term actions. In this context, the combination of energy-emissions is the key factor to guaranteeing the sustainability of the planet, insofar as energy consumption accounts for a significant portion of the origin of CO₂ emissions.

The “Global Energy & CO₂ Status Report” published by the International Energy Agency (IEA) shows how, in 2017, global CO₂ emissions connected with energy consumption grew by 1.4% on 2016, going against the trend recorded in the three-year period 2014-2016, when no significant increases were recorded and we reached an all-time high of 32.5 gigatonnes (Gt).

Global energy-related CO₂ emissions



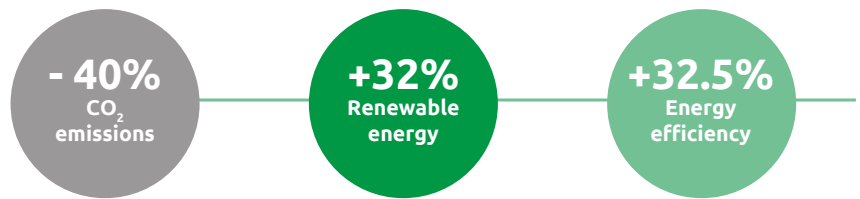
EUROPEAN OBJECTIVES AND THE NATIONAL ENERGY STRATEGY

“Clean energy for all Europeans”

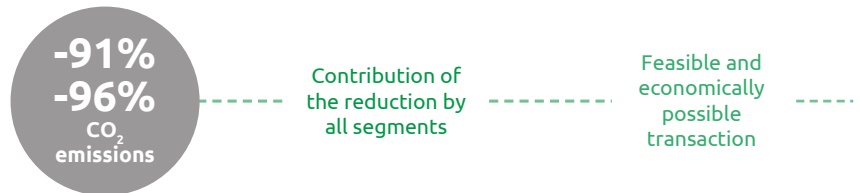
The European Union has set out its commitments in the 2030 “Clean energy for all Europeans” and “EU Climate Long-term Strategy 2050” programmes, which aim not only to reduce CO₂ emissions (-40% to 2030 and -91%/-96% to 2050), but also to increase the portion of energy produced from renewable sources (+32% to 2030) and increase energy efficiency (+32.5% to 2030).

In response to the direction taken by the European Union, the Italian Government, just like all European Union Member States, has committed to limit global warming. The National Energy Strategy published in 2017 and the new “PROPOSED INTEGRATED NATIONAL PLAN FOR ENERGY AND CLIMATE” published late 2018, aim, in fact, to trace a path that will make the national energy system more competitive, more secure and more sustainable, operating in line with the European-defined decarbonisation objectives.

European 2030 objectives



European 2050 objectives



European Network of Transmission System Operators for Gas

THE ROLE OF NATURAL GAS

With a view to achieving the ambitious European objectives and in light of those set out by national decarbonisation strategies already in place, natural gas, together with nuclear plants and renewable energies, can play a key role in guaranteeing a full response and coverage of the energy demand. Natural gas stands out, in fact, for its possible use in lieu of coal and oil, which are sources entailing higher CO₂ emissions, and in support of unprogrammable renewable sources, like wind power and photovoltaic.

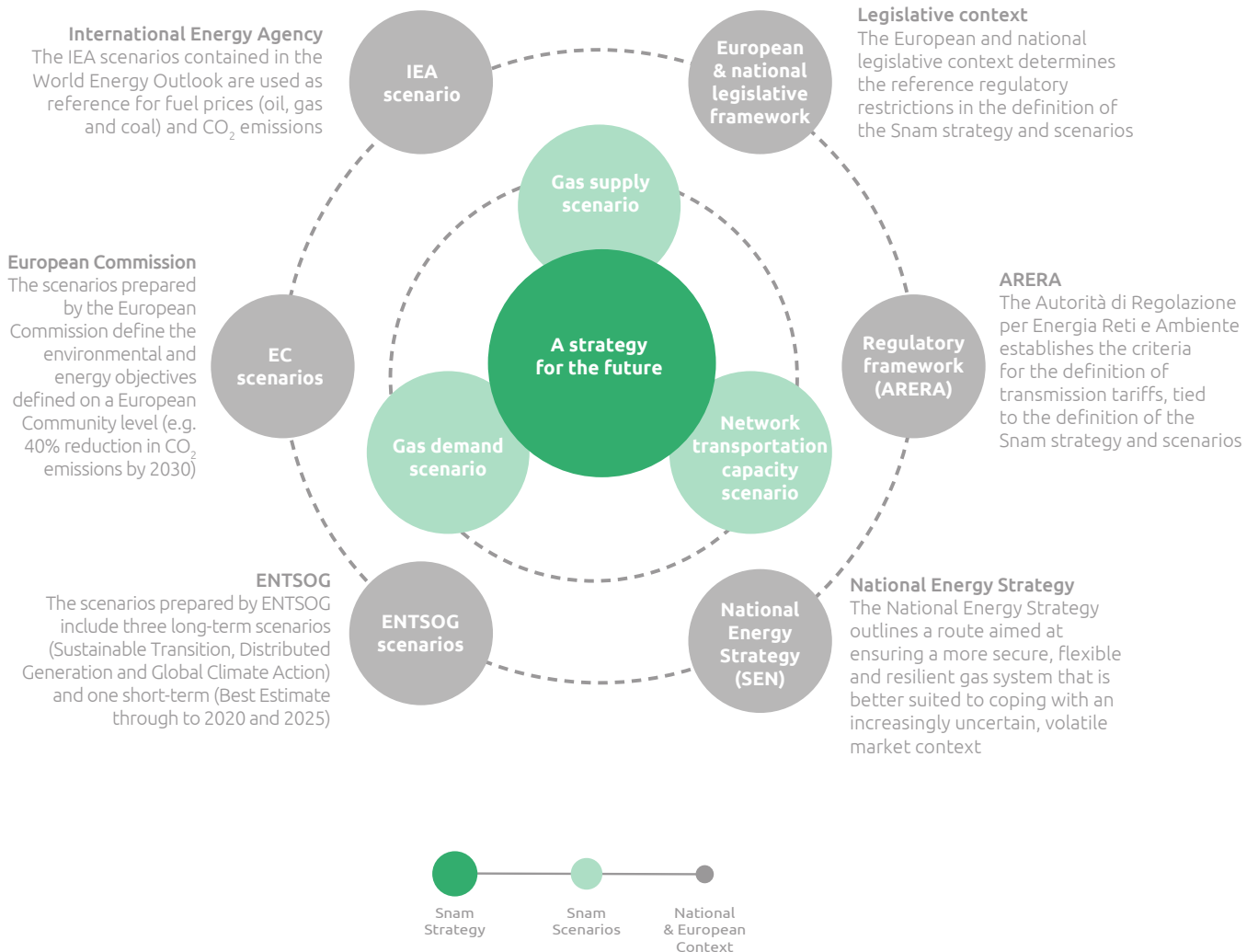
The whole of the gas sector and, in particular, all companies operating in natural gas transmission, embraces the vision and objectives set by the European Union, also through the commitment made by ENTSOG (European Network of Transmission System Operators for Gas)¹. ENTSOG is a European association of which Snam is a member, established in 2009 to improve cooperation between the national gas transmission system operators (TSOs) throughout Europe so as to guarantee development of a European transmission system in line with the EU climate and energy objectives. Every two years, ENTSOG drafts a Ten-Year Network Development Plan (TYNDP), the ten-year plan setting out the strategies and development plans for a European gas network and prepared on the basis of national development plans. The TYNDP is based on ENTSOG scenarios, which are in turn defined starting from the preparation of European Community level energy and environmental policy scenarios and objectives, and scenarios prepared by the International Energy Agency (IEA – World Energy Outlook), used as reference for fuel prices and CO₂ emissions. Three long-term scenarios are included in the TYNDP, in addition to one short-term scenario:

- **Best Estimate 2020 and 2025**, which is based on an analysis of the sensitivity of the demand for coal and that for gas;
- **Sustainable Transition**, which considers the maximisation of the existing energy infrastructure to achieve the environmental and energy objectives;
- **Distributed Generation**, which considers a decentralised development promoted by the technologies used by the end user (e.g. hybrid heat pumps);
- **Global Climate Action**, prepared for 2040 only, which estimates the demand for gas, considering a rapid development of the decarbonisation process worldwide.

The Snam scenarios



In order to define its business strategy, Snam prepares its own gas supply and demand scenarios based on those of the IEA, ENTSOG and the European Commission and taking into account the legislative context applicable to its business.



Scenarios of a strategy for the future

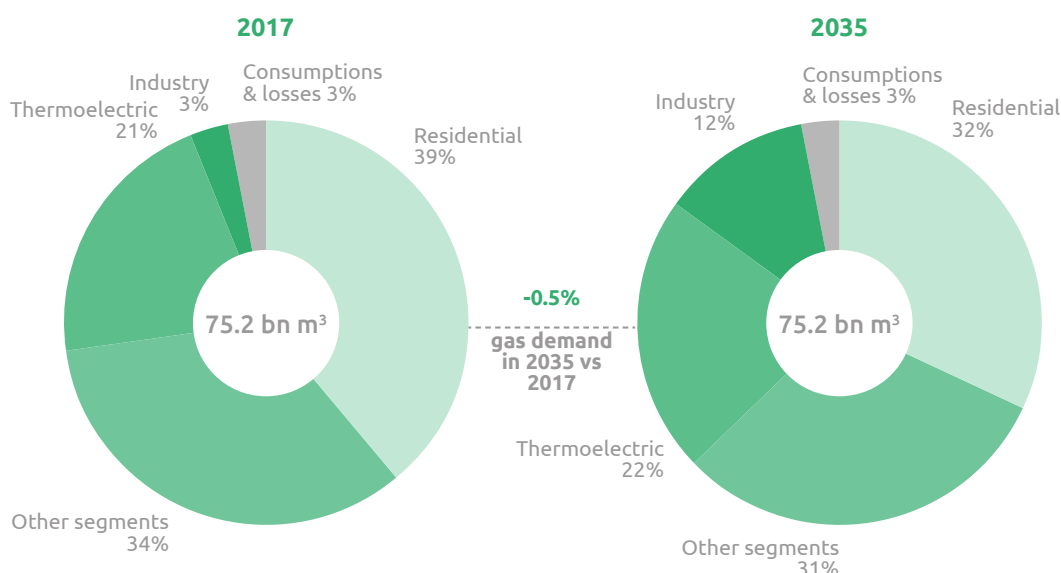
"Distributed Generation" scenario prepared by ENTSOG

THE GAS SUPPLY AND DEMAND SCENARIO THROUGH TO 2035

The forecast gas supply and demand scenarios are prepared by Snam taking into account the Italian energy and environmental policy guidelines (the 2017 National Energy Strategy), those prepared for Europe (ENTSOG scenarios and European Community scenarios through to 2030 and 2050) and those prepared worldwide (the IEA scenario).

The scenario prepared by Snam looks to a time frame of around 20 years (2017-2035) and is based on a recovery of the macroeconomic context and the demand for electricity, which would guarantee a demand for gas in Italy of more than 70 BCM through to 2030, and approximately 69 BCM in 2035 (-0.5% from now to 2035).

The forecasting model considers all the possible factors linked to climate change and the consequent decarbonisation process underway on a national and European Community level. More specifically, the scenario showing the evolution of demand as prepared by Snam is basically in line with the forecast demand for gas given in the ENTSOG "Distributed Generation" scenario.



1.5% decrease in consumption is expected by 2035

In 2017-2035, a reduction in consumption is estimated of 1-1.5% in the residential and tertiary sector and in the thermolectric industry, primarily due to increased building energy efficiency, heightened efficiency in heating systems (e.g. condensation boilers) and the penetration of renewable sources in both the heating sector, through biomass, thermal solar and the progressive spread of electrical heat pumps, and in the thermolectric industry, to offset the total exit of coal.

Within this scenario, Snam envisages a significant contribution by biomethane that can be used in all sectors (electricity generation, industrial/residential and for sustainable mobility as a biofuel) and produced starting from agricultural matrix and waste, with targeted actions to develop the agricultural and waste chain and allow biomethane to achieve its maximum potential as estimated by the National Energy Strategy of 8 bcm by 2030.

Gas imports will continue to be the primary source by which to cover demand and, together with the increase in national production, driven by biomethane, may support and offset peaks in demand in a low-carbon energy scene. In Europe, awareness is growing, in fact, of the role played by natural gas as an inexpensive, immediate solution by which to increase decarbonisation, particularly in an urban environment, replacing coal and diesel respectively in the production of electricity and transport and supporting the growth of renewable sources.

Snam also prepares a scenario showing the evolution of the network transmission capacity through to 2040, which reveals how the projects financed by Snam to reinforce the network guarantee that the Italian demand for natural gas is met. In an energy sector that is undergoing major changes, gas infrastructures will therefore continue to play a key role, considering the growth trends of imports in Europe and the new uses of natural gas and renewable gas in various sectors, also in support of more intermittent renewable sources (solar and wind power) as sector coupling initiatives. In the long term, gas is no longer considered as a transitional source but rather as a pillar of a decarbonised world, also thanks to the rapid development of biomethane over the next few years.



Natural gas is the **pillar**
of a decarbonised world

The risks and opportunities of climate change

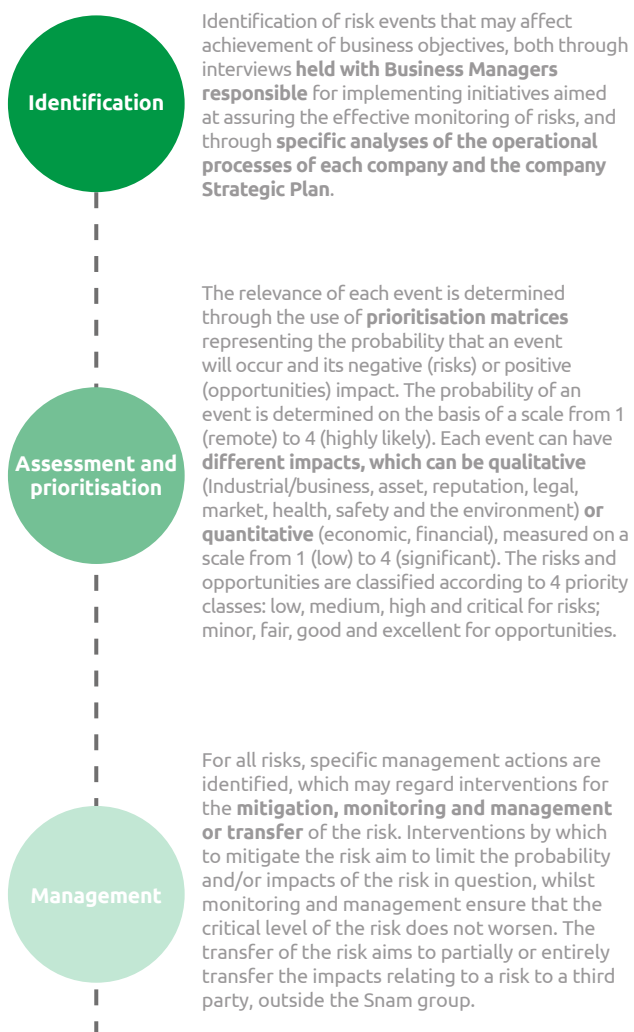


The energy and climate scenarios that offer a backdrop to Snam's business entail a series of risks and opportunities that must be carefully analysed and studied, so as to be managed or exploited. Indeed, the assessment of factors potentially able to impact the business is essential in order to continue operating sustainably in the long-term. The continuous assessment of risks and opportunities has the twofold aim of guiding strategies and monitoring changes to the surrounding conditions.

A CENTRALISED RISK MANAGEMENT MODEL

The current and prospective risks and opportunities connected with Snam's business strategy are **identified, assessed and managed** through the ERM (Enterprise Risk Management) model. The risk is defined as a result of the uncertainty over the Strategic Plan objectives, and may be negative or positive (opportunity). The process of the identification, assessment and management of the risks and opportunities connected with climate change is fully integrated into the ERM model.

ERM model



The Enterprise Risk Management process, repeated quarterly, aims to spread a business risk culture so as to make aware choices and includes an overall sharing of the results after each assessment cycle with the Leadership Team, the Control, Risk and Related Party Transactions Committee, the Board of Statutory Auditors and the Supervisory Body and, once a year, with the Board of Directors.

A MODEL THAT INTEGRATES CLIMATE CHANGE

The types of risk identified through the Enterprise Risk Management process include both **financial** and **non-financial risk**, comprising **operational risks, legal and non-compliance risks and strategic risks**, in turn including **risks associated with climate change**.

All the risks and opportunities are assessed and prioritised according to the probability and impact, set out according to different categories. Of these, the impact on health, safety and the environment (HSE) also considers the effects associated with climate change.

The HSE dimension in fact makes it possible to intercept the environmental impacts and those linked with climate change, associated with the risk and opportunities identified and thereby determine their relevance on the basis of the significance of the positive or negative contribution made in managing climate change and the environmental aspects connected with the territory in which Snam operates.

The time frames of the analysis of risks and opportunities occurring, are defined as follows:

- **Short-term:** in the short-term, Snam creates value by carrying out business activities in the manner envisaged by standards and procedures, with particular importance assigned to risk management and the efficiency of operations. The main point of reference is the annual budget.
- **Medium-term:** In the medium term, the ability to carry out investment programmes, thereby ensuring a flow of resources and that favourable economic conditions are maintained, is also important. The main point of reference is the Strategic Plan, which covers a period of up to 5 years.
- **Long-term:** In the long term, it is vital that the investment decisions and strategic choices made have interpreted trends in the best way possible. The main point of reference is the Ten-year transmission network development plan submitted to the Authority, which covers a period of 10 years.

RISKS ASSOCIATED WITH CLIMATE CHANGE

Under the scope of the ERM model, amongst others, Snam also identifies the risks associated with climate change. For each risk, an assessment is performed of the strategic or

business impacts and related financial impacts and suitable interventions are identified that make it possible to suitably manage the associated impacts.

Class	Description of risk	Description of impact	Type of impact strategic/business	Type of financial impact	Potential financial impacts	Management actions
TRANSITION RISKS	Political and legal risks					
	Reinforcement of the regulatory framework for greenhouse gas emissions	Review of the tariff framework for CO ₂ emissions (reduction of quotas freely assigned and, consequently, a further increase in prices) through the European greenhouse gas emissions trading scheme (European Emissions Trading Scheme - EU ETS), the main instrument used by the European Union to achieve the CO ₂ reduction objectives	Investments in R&D and operations	Operating costs Capital expenditure/capital allocation	Greater costs	Ongoing regulatory supervision with monitoring of the development of the greenhouse gas emissions authorisation system Recovery of 33% of potential emissions deriving from maintenance activities, each year from 2017 to 2022 Target of -25% of natural gas emissions from 2016 to 2025, for the same perimeter
		Review of the regulations regarding the natural gas business (e.g. discouraging of gas use, incentives for different energy sources) with the consequent reduction in the demand for gas	Products and services	Revenues (*)	Lesser revenues	Promotion of the use of gas as a support to renewables (Gas advocacy)
	Technological risks					
	Spread of new low GHG (greenhouse gas) emissions technologies	Reduction of the demand for natural gas by consumers and a potential lack of specialised technical competences in these areas	Products and services	Revenue (*)	Lesser revenues	Development of new business related to alternative uses of gas and implementation of the use of gas to support the energy transition (biomethane and other renewable gases, small scale LNG, CNG, gas heat-pumps and micro-cogeneration)

(*) With reference to the correlation of Snam's revenues with the volumes of gas carried, it should, however, be specified that the current regulatory and tariff framework defined by ARERA envisages a guarantee mechanism with respect to the portion of revenues correlated to the volumes carried. This mechanism provides for the reconciliation of major or minor revenues, exceeding $\pm 4\%$ of the reference revenues related to the volumes transported. Under this mechanism, approximately 99.5% of total revenue from transportation activities is guaranteed.

● Short term
 ● Medium term
 ● Long term

Class	Description of risk	Description of impact	Type of impact strategic/business	Type of financial impact	Potential financial impacts	Management actions
TRANSITION RISKS	Market risks					
	Change in consumer conduct and market uncertainty	Greater penetration of intermittent renewables to the detriment of biomethane and/or the failure to develop the CNG market, which are some of Snam's new green businesses	Products and services	Revenue	Lesser revenues from the new businesses	Development of new business related to alternative uses of gas and implementation of the use of gas to support the energy transition (biomethane and other renewable gases, small scale LNG, CNG, gas heat-pumps and micro-cogeneration)
	Reputation risks					
	Growth in the sensitivity of public opinion (e.g. institutions, consumers, etc.) on matters related to climate change	Establishment of structured dissent groups with regards to new works (e.g. natural gas storage plants), which could result in a delay or failure to authorise construction of the work by the institutions	The value chain	Late or failure to make the investment	Revenues	Adhesion to national and international initiatives aimed at strengthening the commitment to reduce methane emissions
				Capital expenditure/capital allocation	Reduction in revenues due to lack of production capacity	Adhesion to the TCFD "Task Force on Climate Related Financial Disclosure" and publication of a specific document
						Monitoring and disclosure of multi-year targets defined to fight climate change

Class	Description of risk	Description of impact	Type of impact strategic/business	Type of financial impact	Potential financial impacts	Management actions
PHYSICAL RISKS	Acute risks Increase in the severity of extreme atmospheric phenomena, with impacts on continuity and quality of service	Damages to pipe lines, gas leaks and fires along the transmission network, which runs for more than 32,500 km	Operations	Operating costs	More expensive insurance premiums	Adaptation of the recovery plan and business continuity management system to international best practices
			Mitigation actions	Capital expenditure/capital allocation	Lesser revenues	Technologically advanced tools for monitoring/controlling the status of infrastructure/plants and the areas affected
		Need for interventions and variants on operating pipelines. These interventions could generate a (positive or negative) change in the total cost with respect to the amount approved/2019-2022 plan	Operations	Operating costs	Higher project costs	Elaboration of corporate energy scenarios consistent with the national and European decarbonisation objectives developed for the containment of temperatures increase envisaged by the Paris agreements
		Inadequacy of insurance cover and therefore requiring a review of insurance premiums	Mitigation actions	Operating costs	More expensive insurance premiums	Ongoing, systematic maintenance and monitoring measures
			Revenues	Lesser revenues	Timely implementation of the Emergency Assistance Procedures	
	Damages to company property and generation of recurring peaks in the gas demand that affect the quality standards defined for the supply of the service and create concern by stakeholders (e.g. institutions, consumers, etc.)	Products and services	Operating costs	Sanctions		
	Chronic risks Extreme variability of meteorological models with an increase in average temperature	Reduction of the demand for gas (e.g. lesser demand for gas for heating buildings in the winter)	Products and services	Revenue (*)	Lesser revenues	Development of new business related to alternative uses of gas and implementation of the use of gas to support the energy transition (biomethane and other renewable gases, small scale LNG, CNG, gas heat-pumps and micro-cogeneration)

(*) With reference to the correlation of Snam's revenues with the volumes of gas carried, it should, however, be specified that the current regulatory and tariff framework defined by ARERA envisages a guarantee mechanism with respect to the portion of revenues correlated to the volumes carried. This mechanism provides for the reconciliation of major or minor revenues, exceeding $\pm 4\%$ of the reference revenues related to the volumes transported. Under this mechanism, approximately 99.5% of total revenue from transportation activities is guaranteed.

OPPORTUNITIES ASSOCIATED WITH CLIMATE CHANGE

The opportunities associated with climate change are identified with a similar method to that described for risks.

In this case too, there is an assessment of the strategic or business impacts and the financial impacts connected with each opportunity and specific action is identified to make the most of the advantages offered by such opportunities.

Class	Description of opportunity	Description of impact	Type of impact strategic/business	Type of financial impact	Potential financial impacts	Management actions
EFFICIENCY OF RESOURCES	Use of more efficient production and distribution processes	Reduction of own natural gas emissions into the atmosphere and/or own GHG emissions with consequent reduction of the cost linked to the acquisition of CO ₂ quotas	Investments in R&D Operations	Operating costs	Lesser costs	As part of the TEC project, measures to guarantee greater operating efficiency ("smart gas" project for network maintenance using new technologies, use of drones and satellites to monitor assets, real-time measurement of the territorial geological structure, energy efficiency) Also thanks to the TEC project, the new strategic plan envisages a 25% reduction on the 2016 natural gas emissions from now to 2025 (-15% in 2022) as compared with the previous target of 10% in 2021
	Use of low GHG emissions technologies and/or energy sources	Reduction in costs associated with the purchase of CO ₂ quotas and increased reputation	The value chain	Operating costs	Lesser costs	Objectives to increase energy production from renewable sources (e.g. installation of photovoltaic plants) and for the installation of low emissions technologies (e.g. highly-efficient heat generators, trigeneration plants, etc.)

● Short term ● Medium term ● Long term

Class	Description of opportunity	Description of impact	Type of impact strategic/business	Type of financial impact	Potential financial impacts	Management actions
PRODUCTS AND SERVICES	Development or expansion of low CO ₂ emissions products or services (expansion of the gas network and development of new green businesses)	Increase in reputation and consequent better perception of the business by stakeholders	Products and services	Revenues	Greater investments	Planning of investments of at least 100 million euro in the development of biomethane production infrastructures from waste or agricultural waste
			Operations	Capital expenditure/capital allocation	Greater revenues	Planning of investments of at least 50 million euro in the development of methane and biomethane refuelling stations for cars and buses through Cubogas, a subsidiary of Snam4Mobility and leaders in the compressed natural gas (CNG) sector
		Increased supply of natural gas in view of the increased demand brought about by the progressive reduction in coal and oil consumption or the increase in average temperatures in the summer season or as a result of extreme events in the winter season (demand peaks)	Investments in R&D	Revenues	Greater investments	Development of the interconnection with the TAP methane pipeline, aimed at importing gas from Azerbaijan
				Capital expenditure/capital allocation	Greater revenues	Development of new lines to increase the capacity to import from southern Italy
			capital allocation		Development of methanisation projects, with the aim of guaranteeing a flexible, secure supply to the new market	

 Short term
  Medium term
  Long term

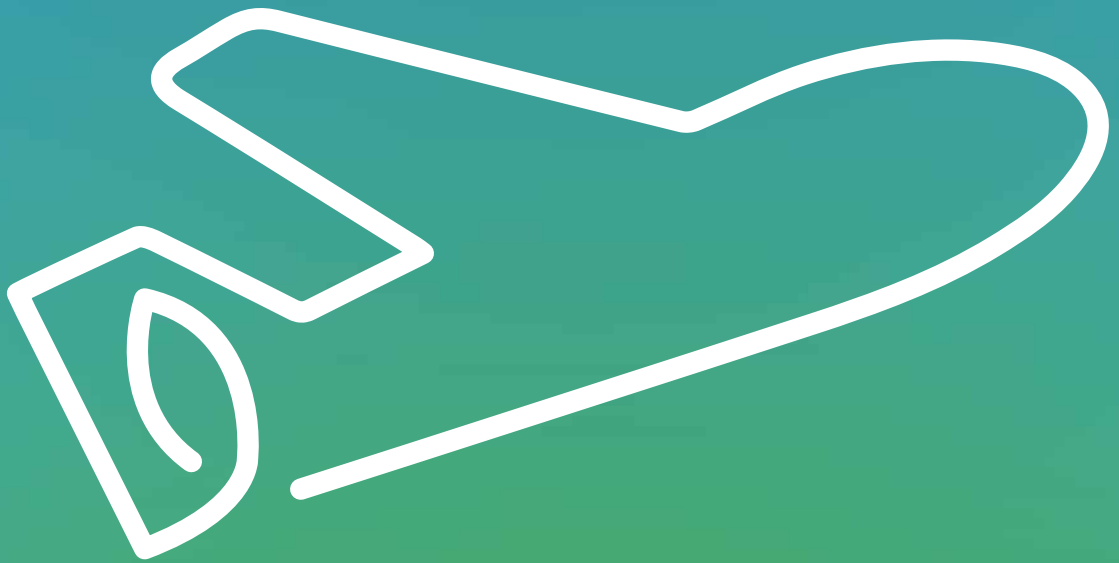
Class	Description of opportunity	Description of impact	Type of impact strategic/business	Type of financial impact	Potential financial impacts	Management actions
MARKETS	Access to new foreign markets	Increased supply of natural gas in view of the increased demand brought about by the progressive reduction in coal and oil consumption	Products and services	Revenues	Greater investments	The development of the interconnection to the TAP methane pipeline in order to develop its business in new markets
			Investments in R&D	Capital expenditure/capital allocation	Greater revenues	Growing contribution of the international associates (TAG and GCA in Austria, Téréga in France, TAP, Interconnector in the UK and DESFA in Greece)
RESILIENCE	Business diversification	Increased revenues due to the diversification of business through new products and services	Products and services	Revenue	Greater revenues from new businesses	Development of new business related to alternative uses of gas and implementation of the use of gas to support the energy transition (biomethane and other renewable gases, small scale LNG, CNG, gas heat-pumps and micro-cogeneration)

● Short term
● Medium term
● Long term



A **ERM** model that integrates climate change

A strategy for the future



A business model for a sustainable growth

In all its activities, in Italy and abroad, Snam pursues a sustainable, socially responsible growth model that can create value for the company and the communities in which it operates.

This is why the Snam strategy is developed considering the forecasts of its energy scenarios, in line with the European and national legislative framework, the regulatory framework set by ARERA, the National Energy Strategy and the ENTSOG scenarios. The definition of the strategy also takes into account the results of the analysis of risks and opportunities, including those associated with climate change.

It is on this solid basis that the new 2019-2022 Strategic Plan was prepared, as unveiled in November 2018, which will allow Snam to continue growing and creating value for all its stakeholders, making the most of and staying one step ahead of market evolutions.

SNAM'S STRATEGY

In the new **2019-2022 Strategic Plan**, Snam actively promotes the use of natural gas as an energy source that is flexible and programmable and has low environmental impact. These characteristics make gas the best candidate to flank renewable sources, such as wind power and photovoltaic, which are, by nature, unable to be stored and non-programmable, in the country's decarbonisation. Moreover, in the coming years Snam intends to launch several different projects aimed at promoting the use of compressed natural gas, biomethane, and liquefied natural gas (LNG) in the transport sector.

Core business improvement

- Snam has envisaged an increase in investments for the period 2018-2022, taking them to **€5.7 billion**, approximately 10% more than the €5.2 billion of the 2017-2021 plan. In particular, €4.8 billion of investments will regard the transmission network, €0.7 billion storage and regasification and €0.2 billion the new businesses linked to the energy transition.
- A quarter of the investments indicated in the new Strategic Plan regard **infrastructure development initiatives**.
- The main projects to be developed over the next few years are the development of the interconnection with the **TAP methane pipeline**, aimed at importing gas from Azerbaijan and the **methanisation projects** aimed at guaranteeing the flexible, secure supply of the new market.

The development of the Green Economy

- In a parallel fashion to the growth of the regulated core business, the new Snam Strategic Plan envisages at least **€200 million (*) of investments in the development of the new businesses** for the energy transition.
- In 2018, through the subsidiary Snam4Mobility, Snam acquired control over IES Biogas, a leading Italian company in the development of **biogas and biomethane** plants and has plans to invest at least €100 million in the development of infrastructures producing biomethane from waste or agricultural waste.
- Investments in the biomethane sector are in addition to those envisaged in sustainable mobility. The new Plan in fact includes €50 million in the development of methane and biomethane refuelling stations for cars and buses through Cubogas, a subsidiary of Snam4Mobility and leader in the **compressed natural gas (CNG)** sector and a further €50 million to develop at least four small scale **liquefaction plants (SSLNG)** for heavy goods transport, industry and residential markets.

(*) As part of the TEC project.

The commitment towards sustainability, the energy transition and innovation

- As part of the investments plan, €850 million will go towards the **TEC (Tomorrow's Energy Company)** project, the aim of which will be to speed up Snam's capacity to innovate and its assets to make the most of the opportunities offered by the evolution of the energy system. The TEC project will focus in particular on four main strategic lines: guaranteeing greater operative effectiveness, reducing methane emissions, investing in the energy transition and promoting growing attention to innovation and the strengthening of distinctive competences.
- Also thanks to the TEC project, the new strategic plan envisages a **25% reduction in methane emissions** from now to 2025 (-15% in 2022) as compared with the previous target of 10% in 2021.

Snam for energy transition

Core business improvement

With the adoption of the new Strategic Plan, Snam prepares to face up to the challenges set by the new international energy structure and sets itself as a point of reference in the Italian and European strive towards decarbonisation. The objectives included in the Strategic Plan will also be achieved thanks to the **increase in investments for the years 2018-2022 for a total of 5.7 billion euro**. Of this, approximately 4.8 billion euro will go towards modernising the transmission network, 0.7 billion euro to storage and regasification sites and 0.2 billion euro will be reserved to the development of new businesses connected with the energy transition.

The development of infrastructures forms the heart of the initiatives indicated by the new Strategic Plan, which devotes approximately one quarter of all investments to development initiatives: from the TAP interconnection to the connections in the north-west serving the local market and cross-border flows, from the metanisation projects to strengthening the Fiume Treste storage plant. The interventions indicated in the Strategic Plan and which relate to the modernisation of the Italian infrastructures are also consistent with the **priority objectives identified in the National Energy Scenario**, according to which the next few years will see the need to make new investments in order to guarantee the flexibility, suitability and resilience of the networks and improve integration with the European infrastructures and diversification of sources and routes of procurement.

The development of the green economy

In the current context of change to energy balances and growing awareness of the impact of actions on the climate, the new Strategic Plan through to 2022 launched by Snam marks out the way by which the Company can help reduce emissions and minimise the increase in the global temperature. The new plan in fact envisages, in a parallel fashion to the growth of the regulated core business, at least **200 million euro of investments in the development of the new businesses linked with decarbonisation and the energy transition**. Of these, 100 million euro will be dedicated to the development of the biomethane sector and an equal amount will be invested in sustainable mobility projects. As regards the biomethane market, the investments envisaged will allow Snam to become a point of reference for integration in the Italian energy mix of a renewable, programmable, carbon-neutral energy source produced from agricultural biomass or using the organic fraction of municipal solid waste (and thereby helping reduce waste and greenhouse gas emissions in the Italian agricultural-food sector). The development of the biomethane sector will therefore help increase national production and reduce Italian energy dependency.

With a view to increasing its capacity to integrate **biomethane** into the national energy mix, in 2018 Snam acquired, through its subsidiary Snam4Mobility, the Italian company **IES Biogas**, already leaders in the development of biogas and biomethane plants. During the year, the company **Enersi Sicilia** also joined the Snam Group, again acquired by the subsidiary Snam4Mobility. Enersi Sicilia - a company authorised to develop a biomethane production infrastructure from the organic fraction of municipal solid waste - will allow Snam to develop its first renewable gas plant. Once it is complete, the infrastructure will be able to dispose of approximately 36,000 tonnes of municipal waste per year, offering the surrounding municipalities assistance with managing the waste produced.

Parallel to the development of low-emissions fuels, the commitments outlined in the new Strategic Plan envisage the expansion of the **sustainable mobility business** and the strengthening of the existing infrastructure, so as to **extend the network of natural gas refuelling stations**. Indeed, the new Strategic Plan expects to invest 50 million euro in developing methane and biomethane refuelling stations for motor vehicles. Equal investments will then be dedicated to developing small scale liquefied natural gas (SSLNG) plants for the production of liquefied natural gas for heavy goods vehicles and the residential and industrial sectors.

Snam's desire to expand its business and know-how relative to the sustainable mobility sector has led the Company to acquire, through the newly-incorporated company **Cubogas**, the MTM business unit dedicated to compressors for sustainable mobility powered by natural gas, conferred into the newly-incorporated company Cubogas.

In addition to this, during the year, Snam defined partnerships with important players in the transport sector, with the aim of exploiting the potential of the infrastructure necessary **to develop the Italian compressed natural gas (CNG) and liquefied natural gas (LNG) markets** and to expand the network of natural gas refuelling stations. In total, as at 31 December 2018, in sustainable mobility 50 contracts were stipulated (34 contracts in 2018 with Eni) for the development of CNG/L-CNG, biomethane and bio LNG refuelling stations. A framework agreement has been stipulated with the API Group, for the development of around 200 new natural gas and biomethane refuelling plants. The promotion of natural gas and renewable sources in the automotive segment also underlies the strategic agreement stipulated with SEAT in November.

As further confirmation of the priority assigned by Snam to sustainable mobility and the development of low-emissions fuels, in 2018 the Company stipulated a strategic agreement with the Spanish vehicle manufacturers, **SEAT**. The partnership envisages Snam's commitment to strengthening the network of infrastructures and refuelling stations, and SEAT's development of new methane-powered cars.



An investment **Plan** for the climate



Snam's central role with the **TEC - Tomorrow's Energy Company** project

The commitment towards sustainability, the energy transition and innovation

850 million euro in investments are expected in the Strategic Plan for the development of the innovative **TEC - Tomorrow's Energy Company** project.

The activities linked to TEC will be focussed on the implementation of technologies to improve real-time metering capacities of natural gas, on a more adequate maintenance of the transmission network and the progressive reduction of natural gas emissions caused by Snam's businesses.

In addition to this, the activities included in the TEC project will also regard the analysis of impacts on the natural gas network of the introduction into the national energy mix of hydrogen and methane produced from renewable sources using power-to-gas technologies.

Within the new Strategic Plan, close attention is paid to minimising environmental impacts and **reducing the emissions** caused by Snam's operations. More specifically, the Company has decided **to update its target reduction in natural gas emissions**, raising the objective already included in the previous Strategic Plan (which envisaged, by 2021, a 10% reduction in emissions with respect to 2016 levels). With this ambitious new target, Snam undertakes to achieve the 25% reduction of its natural gas emissions by 2025, also setting an interim target of -15% by 2022.

As confirmation of the importance assigned to environmental sustainability by the Snam Group, 2018 saw the Company also subscribe to the **"Reducing methane emissions across the natural gas value chain" guidelines**. In ratifying this document, Snam undertakes to reduce the methane emissions deriving from the construction and management of its infrastructures and to guide its suppliers and companies of its value chain in the same direction.

Snam has integrated two types of **sustainable finance** products into its investments plan: sustainable loans (syndicated facilities linked to sustainability indexes, ESG performance and business ethics), and Climate Action Bonds (bonds whose issue is linked to projects with a positive impact on the environment, such as, for example, energy efficiency, the production of energy from renewable sources and sustainable land use). In 2018, Snam stipulated amending agreements for the transformation of syndicate credit facilities stipulated by 19 banks, worth a nominal 3.2 billion euro, into sustainable loans, with bonus/malus mechanisms on the margins paid linked to the achievement of specific ESG (Environment, Social and Governance) KPIs. This is the third largest sustainable loan stipulated in the world and the first by a gas utility company.

Snam has also published the framework setting the rules for the future issue of bond loans aimed at financing investments in environmental sustainability. The proceeds obtained from Snam's **Climate Action Bond** will be used to finance existing or future projects to reduce carbon emissions, for renewable energy, energy efficiency, interventions for the development of new green buildings and the conservation of the natural capital in the areas involved by the Company's activities.



INTERNATIONAL ACTIVITIES: SNAM & CLIMATE CHANGE

For years now, Snam has been involved in various international climate change initiatives. Below is a brief report on the activities carried out in the various areas.

Gas Naturally	Partnership, chaired by Snam, of 6 associations representing the EU gas chain: Eurogas (European association comprising 44 companies operating in the gas chain), GERG (Groupe Europeen de Recherches Gazières), GIE (Gas Infrastructure Europe), IOGP (International Association of Oil and Gas Producers), Marcogaz (technical gas industry association) and NGVA (an association promoting the use of natural gas for transport). Snam is a direct member of GIE and NGVA Europe. In 2017, the "Exploring Methane Emissions in Europe" factsheet was published.
Methane Guiding Principles	Initiative that brings together O&G companies with the aim of reducing methane emissions along the Oil & Gas chain, through the involvement of the main stakeholders. In 2018, Snam subscribed to the guidelines whereby the company commits to reduce the methane emissions deriving from its business.
Climate Related Financial Disclosures	Task Force launched by the Financial Stability Board with the aim of establishing recommendations and guidelines to improve the companies' disclosure on financial aspects associated with climate change.
GERG	The European gas research group which includes an international cooperation on methane emissions. Snam played an active part in joint research carried out by some European gas companies in which a methodological comparison was drawn of the various protocols, with real measures of leaks simulated at laboratories; part of the results were presented at the International Gas Research Conference. The continuation of the activities is now being defined and Snam will also be involved in this.
IGU	International Gas Union. In 2017, a Group of Expert on Methane Emissions was established, which has produced various documents including "Understanding Methane's impact on Climate Change" and "The Natural Gas Industry - Methane Emissions Challenge". This latter document lists several real case studies applied by gas companies, including Snam.
Marcogaz	This is the European technical association for the gas industry, in which Snam plays an active part, particularly as regards the main environmental topics and climate change. Numerous reference documents have been developed, including the method for estimating natural gas emissions and benchmarking for the midstream sector, in which emissions models have been analysed and implemented on methane emissions for the gas transmission, storage and LNG terminal sectors.
GIE	Organisation representing the gas infrastructure operators with regards to the European institutions, in which a working party is active on methane emissions, in which Snam is involved.
TF GIE/Marcogaz	Following the decisions made by the European Gas Regulatory Forum, a task force has been established, in which Snam took on a leading role, defining various proposals whereby the gas industry seeks to highlight its contribution to the reduction of methane emissions. In 2019, specific workshops will be held, both in the presence of the European Commission and of the United National Economic Commission for Europe (UN-ECE) in Geneva.
Gas for Climate	Consortium that began operating in 2017 to raise awareness of the role played by renewable gas and low carbon in the future energy system. In addition to Snam, another six European transmission operators take part (Enagás, Fluxys, Gasunie, GRTgaz, Open Grid Europe and TIGF) and two renewable energy sector associations (EBA and CIB).
Hydrogen Initiative	Declaration signed in September 2018 by Snam together with other European energy companies, aimed at supporting hydrogen and its potential expansion as sustainable technology for decarbonisation and the long-term energy security of the European Union.
Other activities	During the Specialised Master Programme on the Gas Market and Future Perspectives, held in 2018 at the Luiss University of Rome, Snam held a specific study day on "Climate Change & Paris Agreement: the role and the environmental case for natural gas".

The roles and liabilities in managing climate change

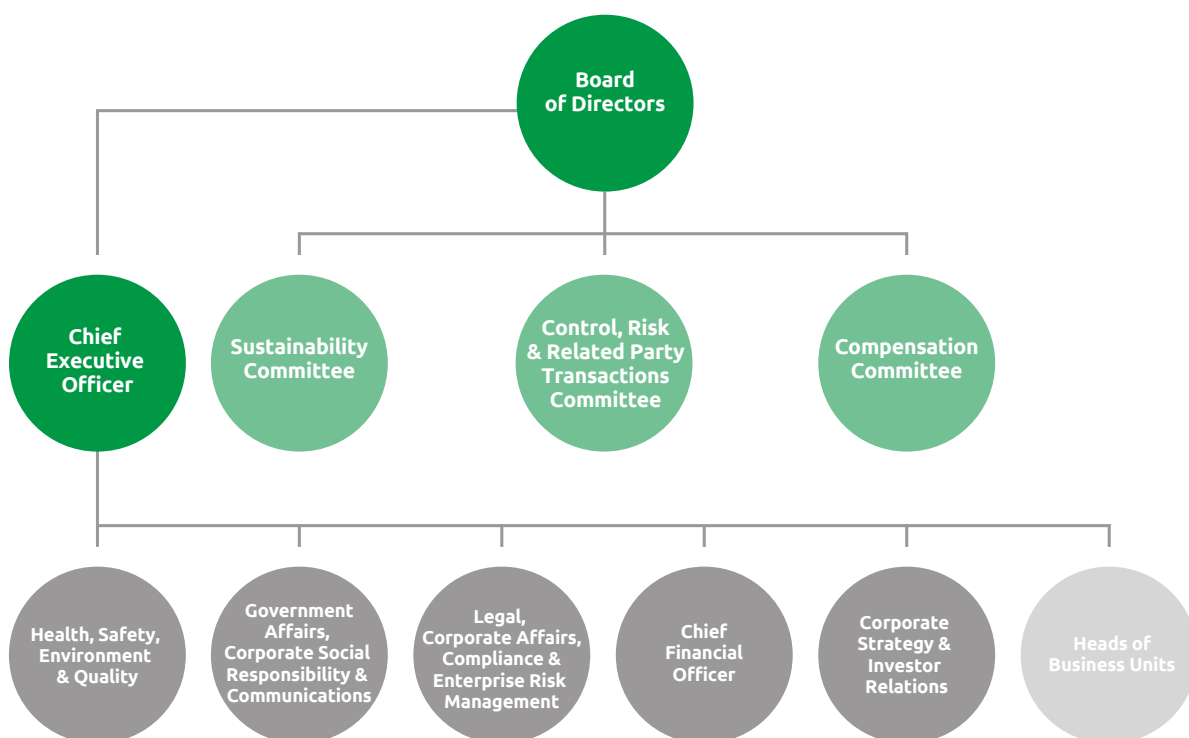


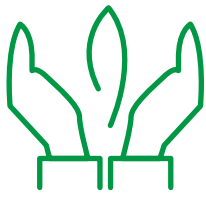
Snam is constantly committed to maintaining and strengthening its governance system in support of the Company's initiatives to fight the negative effects of climate change in accordance with the recommendations given by the Task Force on Climate-related Financial Disclosures. It is in this context that the activities fall aimed at guaranteeing the complete supervision by the Board of Directors (BoD) of the risks and opportunities associated with climate change, as well as those aimed at ensuring the correct management of such aspects by the management in going about its business.

Snam's Board of Directors, appointed for three years by the Shareholders' Meeting held on 27 April 2016, has established four committees, all with independent chairmen, since the start of the three-year period

(spring 2016). In this context, Snam was the first listed Italian company to institute a committee dedicated entirely to sustainability. Of the other three committees (appointments, compensation, control and risks and related party transactions), the latter two in any case play a supporting role in some aspects linked to sustainability topics. The BoD and committees are informed as to the risks and opportunities associated with climate change by managerial figures, with specific competences in climate change and/or who are directly responsible for assessing and managing the risks and opportunities associated with climate change in the everyday running of its business. These departments support the Chief Executive Officer (CEO) in the integration of topics linked to climate change into the business strategy.

GOVERNANCE FOR MANAGING CLIMATE CHANGE





A governance model to support the climate strategy

THE ROLE AND CHAIRING OF THE BOARD

The **BoD** regularly examines and approves:

- the objectives linked to climate change and the energy transition, an integral part of the business strategies included in the Strategic Plan approved annually;
- the strategic risks of Snam, including risks relating to climate change, examined annually
- the long-term share-based incentive plan with objectives linked to the reduction of gas emissions in line with the strategic plan guidelines for the Chief Executive Officer and holders of managerial roles with the greatest impact on the annually-approved business results
- the annual sustainability results, including climate change performance
- the institutional report that includes the half-year and annual financial reports (including the Consolidated Non-Financial Statement - the NFS), the Sustainability Report and the Financial Disclosures on Climate Change
- the information supplied by committees and, in particular, the Sustainability Committee, in accordance with the related Regulations as part of the information to the Board envisaged after each Committee meeting

THE BOARD INDUCTION

The Snam BoD and Board of Statutory Auditors, after appointment and for the entire mandate, are also informed of climate change aspects and initiatives through “*board induction*” sessions held during in-depth analyses of topics relating to sustainability and the integration into the company strategy of such aspects. In particular, the first 2018 *Board Induction* session involved experts from the *Sustainable Gas Institute of the Imperial College* of London and was dedicated to climate change and the future role of gas in global energy trends.

Committees

In 2018, the Sustainability Committee in particular met 10 times and on several (three) occasions discussed topics relating to climate change, analysing the relevant results and strategies.



Sustainability Committee

- examines the **sustainability policies** aimed at creating value for the shareholders and stakeholders in the medium/long-term;
- examines the **sustainability objectives and processes**;
- monitors the positioning of the Company with respect to the financial markets on sustainability topics,
- reviews the **sustainability initiatives** as may be included in agreements submitted to the Board of Directors, also in relation to the matter of climate change;
- examines the **reporting of the non-financial disclosure** submitted to the BoD;
- assesses the sustainability risks in the medium/long-term.



Control, Risk and Related Party Transactions Committee

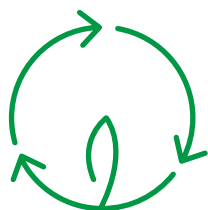
- periodically examines the **main risks and opportunities**, including those deriving from climate change;
- supports the BoD in defining the guidelines for the internal control and **risk management system also in the medium and long-term**, so that the main risks are correctly identified, measured, managed and monitored (including risks that may be relevant to sustainability)
- supports the BoD in determining the degree of compatibility of such risks with a management consistent with the **strategic objectives** identified;



Compensation Committee

- proposes the general criteria for the compensation of Executives with strategic responsibilities; the annual and long-term incentive plans, including share-based plans and the general guidelines for the compensation of the management team
- defines the **sustainability performance targets and those linked with climate change** (e.g. emissions reduction) included in the short- and long-term management incentives

THE ROLE AND AWARENESS OF THE MANAGEMENT



The fight against climate change is a major, concrete problem for Snam. Technological innovation, research and good practices are the tools chosen to deal with it. Snam intends to develop ambitious projects to strengthen its operative excellence and thereby contribute towards minimising greenhouse gas emissions. To do so, it has equipped itself with management departments with specific competences in climate change, which report directly to the Chief Executive Officer (CEO).

Collaboration and goals sharing between the Company departments

The **management** team develops its activities through periodic meetings and the sharing of information flows, also with a view to identifying new initiatives connected with climate change and implementing and monitoring the strategies identified:

- business reviews, quarterly meetings of the Chairman with the CEO and first-report persons to monitor progress made on objectives and strategic guidelines
- HSE review, half-yearly and annual meetings during which HSE informs the Chief Executive Officer about the results obtained in environmental matters and health and safety
- Review of risks, quarterly meetings during which the ERM Department presents an update on the disclosure linked to risks and opportunities

With a view to collaboration, the harmonisation of actions and sharing of objectives linked to climate change, different company departments, including *ERM, Health, Safety, Environment and Quality, CSR & Communications, Corporate Strategy and Business Asset Italy*, started to meet periodically as of 2018.

Management



- The **CEO** identified by the Board of Directors as being responsible for the internal control and risk management system, with the task of planning, implementing and managing this system, has prepared an organisational structure that integrates the topics and risks associated with climate change into all phases of the business cycle.



- **Energy management & climate change** (which is part of the HSE Department) aims to continuously improve correct management of natural gas emissions, including through the participation in various working parties and international task forces (IGU, Marcogaz, GIE, GERG, etc.), also ensuring the incorporation of the Energy Efficiency Directive requirements into Italian legislation.



- The **Chief Financial Officer** oversees the strategic planning process, the economic assessment process of investments and mergers and acquisitions, as well as financial planning. Amongst others, it carries out feasibility studies, including through the analyses of national and international best practices, in connection with potential sustainable finance initiatives.



- The **Head of Sustainability**, in answering to the Executive Vice President Institutional Affairs, Corporate Social Responsibility & Communications, contributes towards the identification of processes and projects in connection with the matters relating to climate change and is responsible for internal and external reporting in relation to these topics (six-monthly).



- The **General Counsel** not only oversees, together with the **Governance & Corporate Affairs** Department and the **Compliance** Department, respectively the definition of the rules of governance and compliance processes and programmes, but it also oversees the **Enterprise Risk Management (ERM)** Department, which defines a risk management model that makes it possible to identify and assess risks, using standardised policies on a group level, in order to identify actions by which to mitigate the risks and prepare a reporting system (quarterly). The problems connected with climate are integrated into the general Enterprise Risk Management process.



- The **Head of Market Analysis and Strategy Definition** answers to the Executive Vice President Corporate Strategy and Investor Relations and oversees the monitoring of the evolution of the reference markets and competitors for Snam on a global level and the preparation of long-term strategic scenarios and the assessment of the appeal of the reference markets, ensuring the preparation of the reference scenario for Snam. He is also responsible for the inclusion of the company on sustainability indexes and relations with socially responsible investors (SRIs)



- The **heads of the Business Units** are directly responsible for assessing and managing risks relating to climate, as identified in the Internal Control and Risk Management System and for implementing the related controls as part of their standard processes (quarterly).

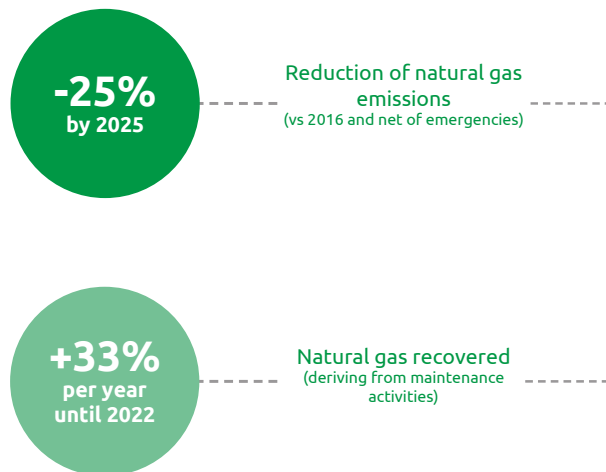
Act for tomorrow



SNAM'S COMMITMENT

Snam has defined a decarbonisation strategy that develops within two main areas: the reduction of GHG (greenhouse gas) emissions and increased energy efficiency. According to its sustainable growth model, the company has set targets by which to reduce its natural gas emissions through to 2022 and 2025, reducing emissions from the transmission, storage and regasification of LNG, respectively by 15% and 25% with respect to the values recorded in 2016. In order to achieve these objectives, an investment plan has been implemented that makes it possible to maintain and develop programmes involving, amongst other, a 33% recovery of natural gas each year, through to at least 2022, with respect to all potential emissions deriving from maintenance activities.

Snam is introducing energy efficiency programmes and programmes to reduce its environmental impact, planning to invest around 360 million euro in energy efficiency, best practices for methane leakage and the adoption of innovative solutions by 2021.



COMMITMENT TO ENERGY EFFICIENCY

Use of natural gas as a main source of energy allows Snam to limit emissions of pollutants and greenhouse gases into the atmosphere. Snam's main energy consumption is due to the gas turbines used in the compressor stations that supply the pressure necessary to gas transmission (driven consumption) and to storage concessions (storage consumption). This consumption accounts for 88% of total consumption.

Snam implements energy management initiatives in order to lower consumption

In order to further reduce these consumptions, Snam is implementing a series of energy management initiatives, including:

- Installation of photovoltaic plants at the main offices and production of green electricity;
- acquisition of green electricity by means of specific supply contracts;
- installation of highly-efficient heat generators, specifically at the gas reduction and regulation plants;
- installation of new trigeneration plants;
- installation of turboexpanders;
- improved energy efficiency of buildings.

As regards the production of energy from renewable sources, Snam has installed photovoltaic plants in various buildings it owns (territorial offices and maintenance centres) and at some gas storage plants.

In 2018 the total number of plants reached 1,535 units (+12% compared to 2017) and the installed power increased by 68 kW compared to 2017, passing from 986 kW to 1,054 kW (+7%).

Total energy produced by the plants using renewable sources has increased by 8% on 2017, going from 1,044,300 kWh to 1,128,400 kWh in 2018. This increase is due to the connection of plants installed in previous years that had not yet been connected to the network.

Snam has envisaged specific KPIs on energy efficiency, through to 2022. In May 2018, it acquired a controlling

stake of 82% of the capital of TEP Energy Solution (TEP), one of the most important Italian companies operating in the energy efficiency sector. The acquisition of TEP comes under the scope of Snam's strategic plans aimed at fostering decarbonisation and a better use of energy in the territories in which it operates. The aim is to speed up the TEP growth process, with the support of the company's management team, facilitating the transfer of energy efficiency competences and technologies from major industry to small and medium enterprises and local entities.

Key Performance indicators (KPI)

KPI name	KPI date	Set target	Target achieved in 2018	Sector	Activity
Increase production of electricity from photovoltaic plants	2017	Produce at least 860 MWh annually (up to 2022)	1,128	Snam	●
High-efficiency heat generators	2017	Install power of 100 MW in 2022	20.7	Transportation	●
Trigeneration plants	2017	Produce 5,200 MWh in 2022	under construction	Transportation	●
Installation of LED lighting systems	2017	Replace 534 kW in 2022 with a saving of 1,860 MWh	209 kW installed 44 MWh saved (*)	Transportation Storage	●
Improved energy efficiency of buildings	2017	To restructure buildings saving an annual 25,000 m3 in gas and 65 MWh of electricity by 2022	under construction	Transportation	●

● Target achieved ● Annual target achieved (KPI with targets for more than a year) ● Activity in progress ● Target not achieved

THE REDUCTION OF GHG EMISSIONS

GHG emissions can be divided into three categories:

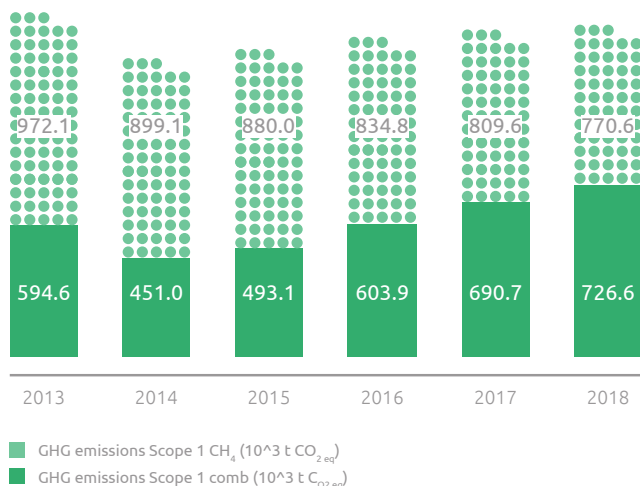
- direct emissions (Scope 1): emissions deriving from direct combustion processes, i.e. regarding fuels that are burnt or direct emissions into the atmosphere of GHGs (e.g. methane leaks);
- indirect energy emissions (Scope 2): emissions deriving from the consumption of electricity, heat and steam;
- other indirect emissions (Scope 3): all other types of emissions that do not come under the previous two classes.

Direct emissions (Scope 1)

Direct emissions of greenhouse gases into the atmosphere by Snam's business include methane (CH₄), the main component of natural gas and carbon dioxide (CO₂). Methane emissions arise from the release of natural gas into the atmosphere and are generated by the normal plant operation, by operations to connect new gas pipelines and the maintenance thereof, or by accidental events occurring on infrastructure, whereas the CO₂ produced is directly correlated with fuel consumption. In 2018, the contribution deriving from the use of hydrofluorocarbons

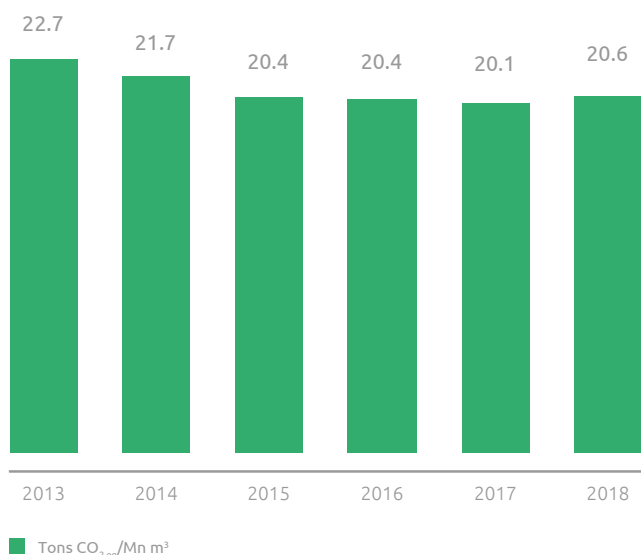
(HFCs) in cooling plants was also assessed, which, however, is insignificant (equal to approximately 0.02% of the total). Snam's direct emissions in 2018 come to approximately 1.5 million tonnes of CO₂eq, with a reduction of 4.4% on 2013, despite the increased volumes in natural gas transmitted on the gas pipeline network having risen by 5.5%.

GHG emissions 2013-2018



Total avoided CO₂eq emissions in 2018 deriving from the various initiatives adopted by the company (lack of natural gas emissions, electricity production by photovoltaic plants, purchase of green electricity, installation of LED lamps in lieu of other lighting bodies, smart working) have made it possible, globally, to avoid the release into the atmosphere of a total of 154,800 tonnes of CO₂eq. At present, more than half Snam's direct GHG emissions, equal to 0.77 million tonnes of CO₂eq are covered by a GHG reduction target. In actual fact, 52% of GHG Scope 1 emissions in 2018 come from methane emissions, with regard to which Snam has committed to reduce its absolute emissions by 15% by 2022 and by 25% by 2025, with respect to the 2016 values. As regards these targets, in 2018, the emission of natural gas dropped by 7.9% on 2016, in line with the trajectories that meet the objectives set.

GHG intensity index (tons CO₂ / Gas transported)



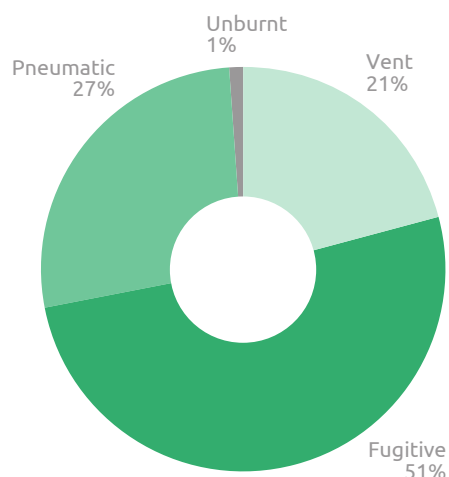
The CO₂eq measurement has been taken in accordance with the indications of the latest scientific study released by the Intergovernmental Panel on Climate Change (IPCC) "Fifth Assessment Report IPCC", which assigned methane a Global Warming Potential (GWP) of 28.

As compared with 2013, emissions intensity (GHG Scope 1 emissions/gas released to the network) have dropped by -9% due to the initiatives taken to reduce the natural gas emissions, implemented during the period, thereby showing the effectiveness of the decarbonisation strategy adopted by Snam over time. A slight increase can be seen, however, on 2017, due to greater natural gas consumptions brought about by the increase in the quantity of gas stored in deposits (+9%) and the commissioning of 2 new compression plants (Minerbio and Sergnano), which have required significant fuel consumptions to commission the plants.

Emissions deriving from the combustion process

Snam contributes towards the fight against climate change, starting from its energy choices: the energy mix in fact comprises almost entirely natural gas, which in 2018 covered 96.4% of the Company's total needs. Snam's main energy consumption is attributable to gas turbines used in compression plants that provide the pressure needed to transport gas (boost consumption) and storage concessions (storage consumption), which globally represent 88% of total consumption. In addition to natural gas, the other energy sources are electricity (2.8%) and other fuels (diesel fuel, gasoline, LPG and heat), which together amount to 0.8% of the total consumption.

Snam natural gas emissions - 2018



Emissions down by 9% vs 2013

The increase in consumptions, not only due to the increase in gas stored and the commissioning of two new compression plants, is also due to a series of specific elements of the gas infrastructure, namely:

- consumption of the compression plants is not directly related only to the volumes carried but rather depends significantly on the points where the gas is input (user backbones), a factor that cannot be controlled by the transmitter insofar as it is determined by users' own commercial decisions, which may, moreover, vary at different times of the gas day, making optimisation of the transmission system more complex in terms of the choice of the number of compression plants and the number of turbo compressors to be used in the individual plants;
- the operation of the compression plants suffers the use of storage by users (consequently impacting network use) and how full the deposits are during the injection campaign;
- the introduction of new settlement rules starting 2020 may further hinder the optimisation of the use of plants, as they will be more tied to the decisions and reaction times of the market by Users.

In any case, Snam has already, where possible, taken steps to limit fuel consumption in compression plants, for example through the implementation of an integrated management system of the plants fleet, based on the acquisition of real-time data and launching a programme to replace gas turbines with electric motors. A plan is also in progress to replace heaters with more recent models offering better performance.

Direct fuel emissions, for most of Snam's plants like the compression and storage plants and the LNG plant, come under the scope of application of the Emission Trading Scheme (EU-ETS), which have a significant impact on the operations, economic results and investment plans of Snam. The first of January 2013 marked the start of the third EU-ETS regulatory period (2013-2020). In 2018, the quotas allocated free of charge numbered approximately 200,000, 21% less than 2017. The reduction is mainly due to the progressive decrease in the allocation of quotas free of charge by the competent national authority, decided for the third regulatory period by Article 10-bis of Directive 2009/29/EC. For the next regulatory period too (2021-2030), a progressive reduction is expected, until the complete zeroing, of the quotas allocated free of charge and, consequently, a further increase in their prices. This is why, if Snam should continue to issue according to current trends, the Group would be increasingly exposed to the price of CO₂ emissions allowances. In 2018, the financial impact of purchasing CO₂ quotas was approximately 4,521,000 euro.

Natural gas and methane emissions

Snam is committed to reducing natural gas emissions and, consequently, methane, in absolute terms for all its businesses that are essentially focussed on the transmission, storage and regasification of gas.

In order to calculate the natural gas and methane emissions, Snam uses the GRI-US EPA (Gas Research Institute – US Environmental Protection Agency) method, integrated with a series of personalised emissions factors following field measures implemented with the US company Radian, on plants and representative portions of network.

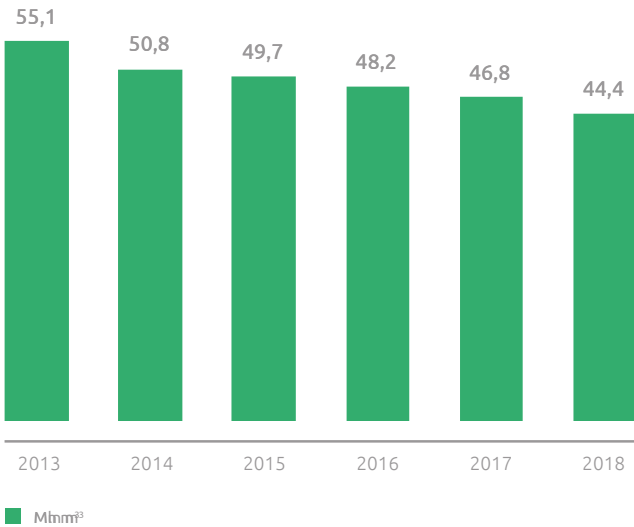
On-site measurement campaigns are in progress, which make it possible to improve the reporting methodology and related maintenance interventions. In particular, the activity is carried out by an external company in accordance with the standard UNI EN 15446, through FID (flame Ionisation Detector) instruments and, in the event of overflow, by means of Hi-Flow instruments, offering high added value insofar as, by combining the two methods, the effective global emissions are determined.

The Snam natural gas emissions are divided up, in accordance with international methods, into four different types: punctual, fugitive, pneumatic and for unburned material and for each of these, limitation actions are planned, with the exception of emissions for unburned materials that are entirely negligible (0.7%). This extremely low value is due to the use of gas turbines to carry the gas, as an alternative to other, higher-impacting equipment (e.g. gas engines).

For the various emissions components, different action is taken to limit such, including:

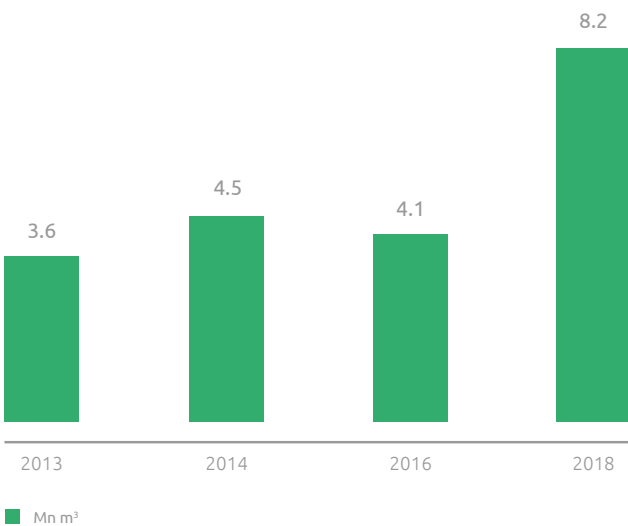
- For punctual emissions, line gas recompression systems are used that make it possible, during major works on the transmission network, to return the gas to the gas pipeline network, avoiding its release into the atmosphere. In some compression plants, a similar gas recovery system is also permanently installed.
- Pneumatic emissions are minimised through the adoption of new low-emission components or the replacement of existing models with new low-emission or even emission-free equipment. Some plants also have air-, rather than gas-powered systems.
- For fugitive emissions, a Leak Detection And Repair (LDAR) approach is being taken. LDAR programmes consist of monitoring campaigns run on plant components to identify methane leaks and plan maintenance works. Through these programmes, fugitive emissions can be controlled, obtaining benefits not only in terms of the fight against climate change but also as regards savings and the safety of operations. Plant changes have also been started to reduce fugitive emissions from the plant vents.

Natural gas emissions

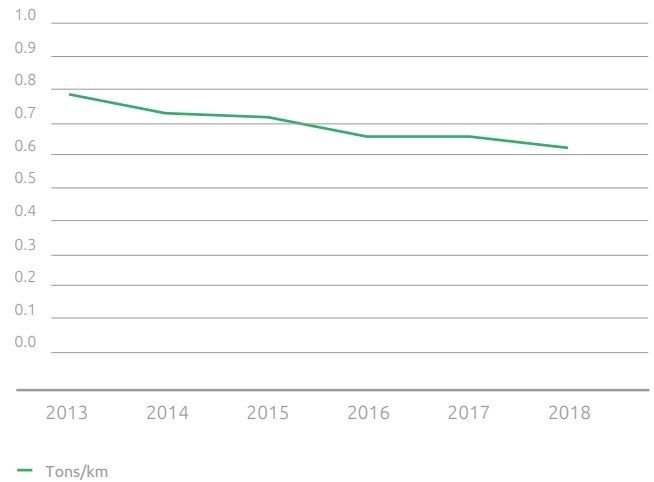


In 2018, natural gas emissions totalled 44.4 Mm³, down 5.1% on the 2017 values and 19% on 2013. Thanks to the progressive implementation of best practices that regarded both the technological aspect and maintenance, in 2018 the release to the atmosphere was avoided of 8.2 million cubic metres of natural gas, making for approximately 142,200 tonnes of CO_{2eq}, showing a major rise (+98%) on 2017, when 4.1 million cubic metres of natural gas were recovered, as a consequent of the mitigation actions taken.

Transmission network - natural gas emissions avoided



Methane emix vs. length of the transport network



Moreover, methane emissions per kilometre of network of the transmission activity reduced further by 4.3% on 2017, making for a reduction of 20% on 2013.

Indirect energy emissions (Scope 2)

Snam determines its indirect emissions in accordance with best practices, which envisage a calculation using two different approaches: Market Based (MB), which assigns a CO_{2eq} emissions factor that is null for energy consumption deriving from renewable sources, and Location Based (LB), which instead considers an average emissions factor of the national electricity grid. More specifically, the MB approach highlights the commitment to reduce the scope emissions, deriving from the use of energy produced from renewable sources. Emissions deriving from purchases of electricity, steam and heat produced by third parties are of negligible quantities for Snam (approximately 0.03 Mt CO_{2eq} MB approach, or less than 2% of the total GHG).

In 2018, an increase is seen in total electricity consumption of +12% on 2017; this was due to the commissioning of two new compression plants (Minerbio and Sergnano), to greater use of the storage plants as a consequences of the large quantities of gas stored (+9%) and larger ICT consumptions (+18%) due to the installation of new equipment. A further increase is also due to the acquisition of the new companies and the calculation, in the scope emissions, of the emissions associated with the use of heat starting 2014.

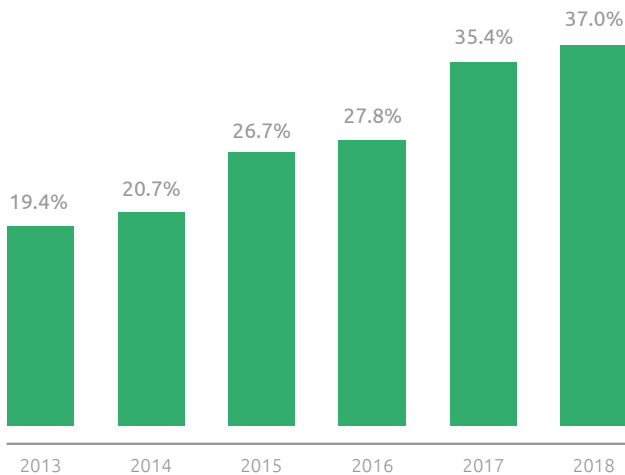
The emissions (MB approach) totalled 31,887 tonnes (+10.9% on 2017), showing a rise that fell below the energy price. In 2018, Snam in fact increased consumption of electricity produced from renewable sources, going from 35.4% in 2017 to 37% in 2018, thereby avoiding the release into the atmosphere of approximately 12,100 tonnes of CO_{2eq} (11,040 tonnes of CO_{2eq} in 2017). The emissions avoided correspond to approximately 39% of total indirect Scope 2 emissions.

GHG Scope 2 emissions 2013-2018



For the future, various activities have been planned, starting 2019, such as the gradual move towards green electricity of a compressor station per year, whilst Snam4Mobility, in a bid to limit Scope 2 emissions, has envisaged using only electricity produced from renewable sources in the CNG plants envisaged in the development plan. These actions will result in a progressive reduction of Scope 2 emissions in the next few years.

Percentage distribution of green electricity



Other indirect emissions (Scope 3)

In 2018, Scope 3 emissions totalled approximately 438,000 tonnes, showing strong growth on the 2017 emissions, of 217,000 and 99% of which are correlated with the procurement of the supply chain and the residual part to employee business travel and transfers. The emissions related to the supply chain were calculated by applying a method developed by a leading international company in the field of the Carbon Footprint analysis.

The significant increase in emissions as compared with 2017 is due to various factors, including a substantial increase in the core companies' procurement (+81%) and a simultaneous increase in the Snam scope due to the acquisitions of new companies.

Further initiatives are in progress aiming to promote a culture hinged on energy savings and the minimisation of indirect emissions associated with Snam's business: the adoption of green procurement criteria for the procurement of goods and services, sustainable mobility initiatives and the implementation of initiatives focussed on energy savings with regards to employees (company shuttles, special rates for public transport, smart working and the use of video conferencing systems for meetings) and the launch of the CDP supply chain programme are just some of the initiatives in progress that will help reduce this type of emissions.

Performance Indicators and Annex



Performance Indicators

Below are Snam's main target metrics relating to the decarbonisation strategy.

	2015	2016	2017	2018	
Energy consumption (TJ)	9,087	10,957	12,582	13,281	
Scope 1+2+3 GHG emissions (Mtonnes CO _{2eq})	1.70	1.80	1.75	1.97	
Scope 1 GHG emissions (Mtonnes CO _{2eq})	1.37	1.44	1.50	1.50	
- of which: CO ₂ from combustion	0.49	0.60	0.69	0.73	
- of which: CO eq from methane	0.88	0.83	0.81	0.77	
- of which: CO eq from methane punctual	0.24	0.22	0.18	0.16	
- of which: CO eq from methane fugitive	0.42	0.39	0.40	0.39	
- of which: CO eq from methane pneumatic	0.22	0.22	0.22	0.21	
- of which: CO eq from methane for unburned materials	0.004	0.005	0.006	0.006	
- of which: CO eq from HFC				0.0001	
Scope 2 MB GHG emissions (Mtonnes CO _{2eq})	0.027	0.028	0.029	0.032	
Scope 3 GHG emissions (Mtonnes CO _{2eq})	0.30	0.33	0.22	0.44	
Total natural gas emissions (Mm ³)	49.74	48.24	46.76	44.37	KPI: avoid 33% punctual emissions (net of emergencies)
% reduction on 2016 (net of emergencies)			-3.2%	-7.9%	KPI 2022 (-15%) and 2025 (-25%) vs. 2016 net of emergencies
Gas injected into the network (Mm3)	67,253	70,627	74,590	72,821	
Emissions GHG Sc. 1 / Gas released (tonnes CO _{2eq} /Mm3)	20.42	20.37	20.11	20.56	

Annex

TCFD CORRESPONDENCE TABLE

TCFD RECOMMENDATIONS		DISCLOSURE
GOVERNANCE		
Declare the organisation's governance model in connection with the risks and opportunities associated with climate change.		
a)	Describe the supervision of the Board of Directors on the risks and opportunities associated with climate change.	"The role and chairing of the Board"
b)	Describe the role played by the management in assessing and managing the risks and opportunities associated with climate change.	"The role and awareness of the management"
STRATEGY		
Declare the current or potential impacts of the risks and opportunities associated with climate change on the organisation's business, strategy and financial planning.		
a)	Describe the risks and opportunities associated with climate change that the organisation has identified in the short-, medium- and long-term.	"Risks associated with climate change" "Opportunities associated with climate change"
b)	Describe the impacts of the risks and opportunities associated with climate change on the organisation's business, strategy and financial planning.	"Risks associated with climate change" "Opportunities associated with climate change"
c)	Describe the resilience of the strategy of the organisation, taking into account different climate-related scenarios, including a scenario of 2°C or less.	"The evolution of the energy and climate scenario" "The Snam scenarios" "A strategy for the future" "Risks associated with climate change" "Opportunities associated with climate change"
RISK MANAGEMENT		
Declare how the organisation identifies, assesses and manages risks associated with climate change.		
a)	Describe the organisation's processes to identify and assess risks associated with climate change.	"A centralised risk management model"
b)	Describe the organisation's processes to manage risks associated with climate change.	"A centralised risk management model"
c)	Describe how the processes of identifying, assessing and managing the risks associated with climate are integrated into the organisation's overall risk management.	"A centralised risk management model"
METRICS AND TARGETS		
Declare the metrics and targets used by the organisation to assess and manage the relevant risks and opportunities associated with climate change.		
a)	Declare the metrics used by the organisation to assess the risks and opportunities associated with climate change in line with its risk management process and strategy.	"Performance Indicators"
b)	Declare the Scope 1, 2 and 3 greenhouse gas (GHG) emissions and related risks.	"Performance Indicators"
c)	Describe the targets used by the organisation to manage the risks and opportunities associated with climate change and performance with respect to the targets.	"Act for tomorrow"

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