# Natural gas for decarbonisation

2016 Sustainability Report





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# Values and Mission

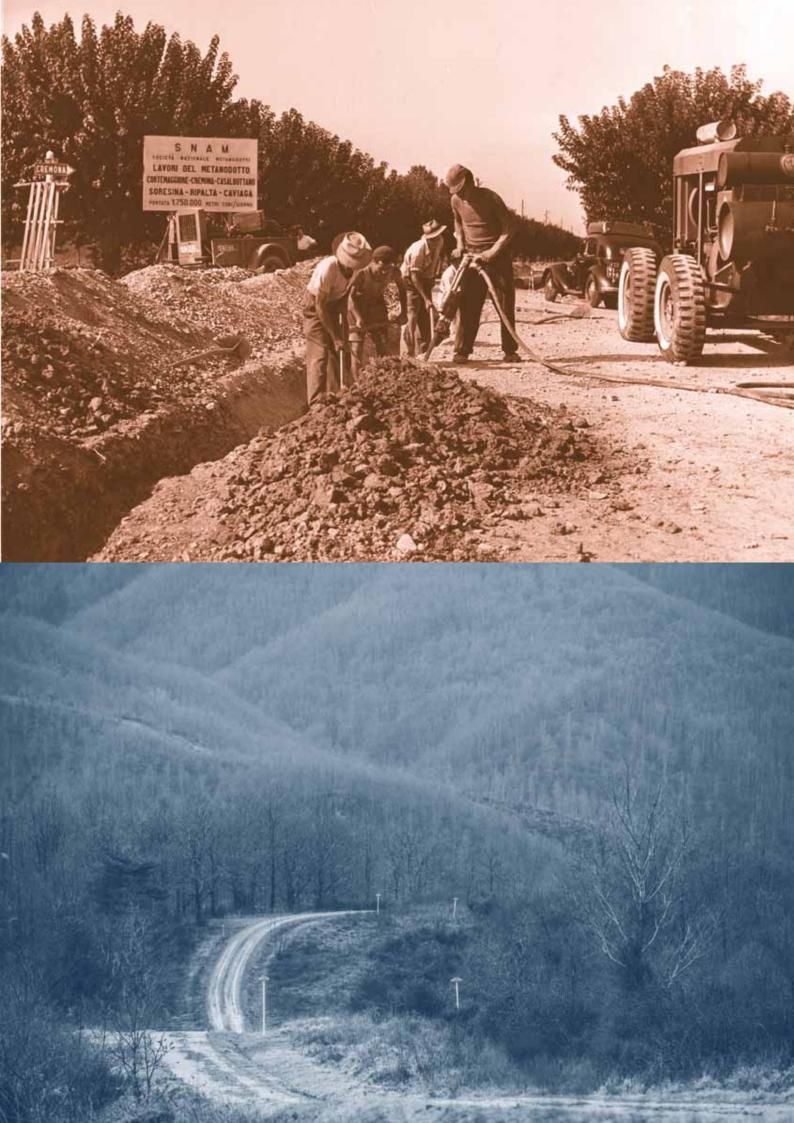
Snam is a European leader in the construction and integrated management of natural gas infrastructure. It fosters the right conditions for fair energy costs by managing the gas system efficiently, developing infrastructure and providing integrated services for the market. It promotes the integration of the European networks, including through strategic partnerships with the biggest operators in the sector, along the main continental energy corridors.

Snam follows an ethical and socially responsible business model that can create value for the Company and for the communities in which it operates, with acknowledged professionalism and transparent dialogue with all its stakeholders, while respecting the environment and the regions. A clear and sustainable long-term development strategy, based on one of the most substantial investment programmes in Italian industry, has enabled the Company to attract Italian and foreign capital, boosting growth and employment.

With around 3,000 employees, Snam is active in natural gas transportation, storage and regasification. It manages a national transportation network covering over 32,000 kilometres, 9 storage sites and 1 regasification plant.

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Natural gas and climate change



# Snam's contribution to sustainable development



20% of the world's population does not have access to electricity and an even greater percentage has to contend with repeated interruptions in supply.

2.7 billion people, around 40% of the global population, still uses traditional biomass fuels for cooking.

Over the next 25 years around 90% of requirements for more energy will come from non-OECD members or other countries not counted as western economies.

At global level, 40% of electricity still comes from coal and around the same percentage of CO2 is due to its use.

# **ENERGY AND INFRASTRUCTURES**

To ensure everyone has access to reliable, sustainable and modern energy systems is a challenge for all countries worldwide with impacts on the life of every individual and which directly involves companies too. It is also one of the main objectives (Sustainable Development Goals) defined by the U.N. whereby Snam has declared its commitment to sustainable development of the economy and society in the future.

To guarantee access to energy the economic and physical barriers influencing the possibilities of satisfying requirements in a globalised world, where there are serious imbalances between different areas, need to be broken down. If the level of development of a country continues to remain low while the cost of energy is high, the population will continue to be denied access to energy, irrespective of the stock of its resources and the energy diversification of the country.

Accessibility is therefore not a sufficient condition to guarantee the development of economic and social activities, which rather also depend on regular supplies, managed through efficient and stable distribution networks.

Looking ahead, the extent of the reliability and modernity of energy systems will be influenced by population growth and per capita expenditure in India, in Sub-Saharan Africa and in other developing countries, following the ever increasing demand for fundamental services for modern societies, such as electricity, transportation and information technology.

All of this leads to the need to create quality, reliable, sustainable and resilient infrastructures, including regional and cross-border infrastructures, which is not by chance another of the most significant Sustainable Development Goals (SDG) promoted by the U.N.

Satisfying this increasing demand for energy poses another equally important question: environmental stability. In many areas of the world they still use low-quality fuels, which are a primary source of domestic pollution, such as coal, an historically vital material for industrialisation and the improvement of human well-being, or biomass, the cause of the deforestation of vast green areas of the planet.

In an era of increasing demographics and environmental decline, every type of sustainable energy should be modern, but not all forms of modern energy are sustainable.

# Sustainable Development Goals (SDG)

In September 2015, more than 150 international leaders met at the United Nations to discuss global development, promote human well-being and protect the environment. The community of nations approved the 2030 Agenda for sustainable development, which includes 17 essential goals (Sustainable Development Goals), aimed at putting an end to poverty, fighting inequality and social and economic development.



End poverty in all its forms everywhere



End hunger, achieve food security and improved nutrition and promote sustainable agriculture



Ensure healthy lives and promote well-being for all at all ages



Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all



Achieve gender equality and empower all women and girls



Ensure availability and sustainable management of water and sanitation for all



Ensure access to affordable, reliable, sustainable and modern energy for all



Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all



Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation



Reduce inequality within and among countries



Make cities and human settlements inclusive, safe, resilient and sustainable



Ensure sustainable consumption and production patterns



Take urgent action to combat climate change and its impacts



Conserve and sustainably use the oceans, seas and marine resources for sustainable development



Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss



Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels



Strengthen the means of implementation and revitalize the global partnership for sustainable development



NASA and the NOAA (National Oceanic and Atmospheric Administration) have certified 2016 as the warmest year on record globally since 1880, when record keeping began. The earth's surface temperature was 0.94 degrees centigrade higher than the average for the 20th century. This is the highest figure ever recorded, overtaking previous records for 2014 and 2015.

# **DECARBONISATION AND CLIMATE CHANGE**

2016 was the year that the strategy undertaken internationally for creating and developing a carbon free economy was confirmed. Snam is committed to promoting the use of natural gas in various business segments with the aim of fighting climate change.

The conclusion of COP 22 held in Marrakesh from 7 to 18 November 2016, under the scope of the United Nations Framework Convention on Climate Change, reflected the wave of optimism created by the simultaneous entry into force of the Paris Agreement within less than a year of its adoption.

This journey, if compared with the entry into force of the Kyoto protocol (2005),

# GLOBAL MEAN SURFACE TEMPERATURE (GISS) JANUARY-JUNE 2016



twelve years after it became effective, demonstrates a different level of reaction by the international community and reflects the extent of the level of awareness and concern about the increase in global warming. This prompted the 196 countries that took part in COP 22, through the "Marrakesh Proclamation", to strengthen the commitments undertaken in the Paris Agreement (COP21) and support their irreversibility.

With Paris first and later Marrakesh, the era of carbonisation has finally begun, changing outlooks especially in adopting production and consumption models that prioritise the efficient use of resources and should be organised to ensure the ending of the entire usage cycle with their eventual recovery, in compliance with the principles of a circular economy.



There are two processes which involve energy sustainability at European level:

- the implementation of the 2030 Climate and Energy Package, to reduce environmental pollution by at least 40% compared with the 1990 figures;
- the gradual construction of the Energy Union, a structured journey which, in addition to the decarbonisation of the economy, also includes four dimensions aligned with the Sustainable Development Goals:
- 1 energy security;
- 2 market integration;
- 3 energy efficiency;
- 4 research, innovation and competitiveness.

The 21st century features emerging economies, millions of middle class consumers and interconnected markets still using linear economic systems which start with raw materials and end up with waste. The circular economy is a model which counters the linear economy and is centred on the sustainability of the system in which there are no waste products and activities are organised in such a way that everyone's waste becomes a resource for someone else.

The drive towards decarbonisation is already influencing energy production methods and its use, accelerating the route to carbon neutrality which the Paris Agreement set as the goal to be reached by the second half of this century. The path mapped out does not involve changes of direction and the efforts required must come from all sections of society and the economy with global action at all levels and needs to take place through all means to ensure development aimed at protecting the environment, social equality and economic sustainability.

#### THE PARIS AND MARRAKESH CLIMATE AGREEMENTS

# **Urgent commitments**

The increase in the global temperature should be contained within  $2^{\circ}$  compared with the figures of the pre-industrial era, striving to remain at  $+1.5^{\circ}$ . To achieve the objective, emissions must start to fall from 2020.

#### Global consensus

As well as Europe, China, India and the United States, the other countries which produce the most pollution on earth, are also committed to cutting emissions.

# Five-yearly checks

In 2018, member countries will already be asked to improve cuts in emissions in order to be ready for 2020. The first five-year check will therefore be in 2023 and from then onwards

# Funds for clean energy

These should be made available by 2020 to promote green technologies and the decarbonisation of the economy worldwide. A new financial target will be set in 2025 at the latest. Private investors and funds can also contribute.

# Compensation for the most vulnerable countries

The agreement launches a compensation mechanism for losses caused by climate change in the most geographically vulnerable countries, which are often also the poorest







For the same amount of energy produced, the combustion of methane gas produces between 25% and 40% less carbon dioxide compared with fossil fuels and it does not contain particulates.

World gas reserves should be sufficient to satisfy global energy demand for the next 260 years.

# NATURAL GAS AND INNOVATION

Natural gas is the only fuel which, together with nonprogrammable renewable resources such as wind and photovoltaic power, can guarantee an efficient decarbonisation route, effective at national and European level.

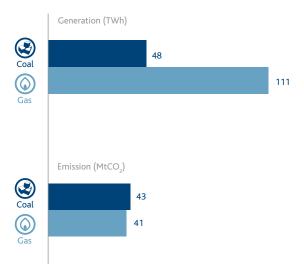
This is because gas is a versatile product which can be used as an energy source for domestic uses, for generating electricity, for industrial uses and as a fuel for transportation by road and by sea.

Greater use of gas in its various forms would translate into less emissions of sulphur dioxide, nitrogen oxides and particulate matter, with a decisive impact on fighting air pollution in cities, and would contribute to decreasing the role of oil and its derivatives.

Gas is accessible, given the presence of considerable reserves near Europe and the development of the liquefied natural gas global market which has increased availability at low prices.

Lastly, the gas system can count on existing transportation, storage and distribution systems and is capable of supporting Italian and European decarbonisation guaranteeing the energy system flexibility, programmability and cost effectiveness. This is also thanks to a gas-based electricity generation capacity that is already widely available and extremely efficient.

# CO, GENERAL AND EMISSIONS IN 2015





As well as its multiple uses, natural gas is the element enabling advanced technologies for decarbonisation.

#### THE GAS INFRASTRUCTURE SYSTEM IS

# Widely developed

Very limited investments can support energy production and user technologies with a low or zero carbon content (gas-powered, biomethane, microcogeneration, turbo-expansion, power-to-gas heat pumps).

# Flexible to respond to fluctuations in demand and supply

Energy masses can be moved in economical and efficient times and spaces and production and consumption technologies based on renewable gases can be integrated immediately

# Efficient and fair in allocating costs

In any event, decentralised energy generation/consumption systems require network structures where the cost must be borne by all possible users.

# GAS AND TECHNOLOGICAL INNOVATION FOR FIGHTING CLIMATE CHANGE

The natural gas network can play an essential part in managing the ever-increasing volumes obtained from renewable sources.

The excess electricity produced by solar power stations or wind farms can actually be converted into hydrogen through an electrolysis process and then enriched with CO<sub>2</sub>, making it possible to produce a syngas to be injected into the network.

This avoids investment costs in new infrastructures for the transmission, distribution and storage of electricity.

In **Italy**, for over 70 years so-called town gas, made up of mixtures with 50% hydrogen content has been distributed in cities without problems.

**Europe** is keeping a careful eye on the new technology, which has already been included in the German national energy programme.

# Gas-powered Heat Pumps

This is a technology that makes it possible to combine the many advantages of natural gas with the operating principle of heat pumps.

Thanks to the exploitation of ambient heat, which is renewable and free, it is actually possible to improve output compared with normal condenser gas boilers.

Output indicates the useful energy produced with the gas energy used.

The optimum output of a condenser boiler is equal to approximately 110%, but with gas-powered heat pumps it is possible to achieve a figure of up to 170%.



# A WORLD RUNNING ON GAS

- 1 LNG liquefaction plant
- 2 Gas compression plant
- 3 LNG carriers
- 4 LNG regasification
- 5 Cryo LNG tanker
- 6 Compression plant
- 7 LNG station
- 8 Industrial purpose
- 9 Dispatch Snam

- 10 Gas methane station
- 11 Reduction cabin
- 12 Storage stations
- 13 Snam Rete Gas Headquarters
- 14 Urban utilities
- 15 Tertiary use
- 16 Biogas plant
- 17 Thermoelectric Power plant

Gas pipelines



# Natural gas

Natural gas is produced from the anaerobic decomposition of organic material. It is found in nature in its fossil state on its own or together with oil and other hydrocarbons.

The main component of natural gas is methane (CH4). During combustion, most of the methane gas is converted into water vapour and carbon dioxide (CO<sub>2</sub>).

# Liquefied natural gas

Liquefied Natural Gas is obtained by subjecting natural gas to a cooling (-160°) and condensation process which reduces its specific volume by around 600 times compared with normal atmospheric pressure.

# Compressed natural gas

Compressed Natural Gas is obtained by compressing natural gas to less than 1% of the volume it occupies at normal atmospheric pressure. It is conserved in tanks at a pressure of 200-248 bar.



Investing in natural gas as a fuel for the automotive industry will result in important economic impacts on the national CNG system, equal to €1.5 billion for the technology and approximately €1.3 billion for the dedicated infrastructures produced in Italy.

**NEW USES OF GAS** 

Snam is making a decisive contribution to the development of "production gas" through the development of infrastructures to promote the use of compressed natural gas in the transportation sector, the use of liquefied natural gas and that of biomethane.

# More vehicles running on compressed natural gas

Buoyed by a well-established technology and at the cutting edge globally, Italy is the leading European market for the consumption of methane in the automotive industry, with over 1 billion cubic metres consumed in 2015 and approximately 1 million vehicles currently in circulation.

This number could be tripled, with an overall penetration of 7-8% on the total vehicles in circulation, specifically medium-small vehicles, light commercial vehicles and public service vehicles, with an estimated increase in gas consumption of approximately 4-5 billion cubic metres. This consistent expansion would have positive repercussions on the Italian gas system in the transportation sector, which is internationally renowned for its excellence.

An essential factor for achieving growth in a short space of time, in addition to the impetus of methane vehicle manufacturers, will be the doubling of the road and motorway distribution network from the current 1,100 refuelling stations to more than 2,000 over the next ten years.

From an environmental aspect, the realistic goal of replacing the current vehicles in circulation with CNG vehicles (equal to approximately 6% of the total) would generate a reduction in annual CO2 emissions of approximately 40%, nitrogen oxides of approximately 94%, and particulate matter of approximately 95%.

The use of vehicles running on CNG could generate savings for families and businesses, with an estimated potential impact of up to €800 million over 5 years

# A new partnership for sustainable mobility

Snam will contribute to increasing the use of methane in the automotive industry by making its well-established experience in the industry available and by investing around €200 million over the next 5 years to promote the development of refuelling stations and ensuring they are more evenly distributed throughout Italy. Snam's commitment comes under the scope of a joint initiative with FCA and IVECO who intend to expand their range of natural gas vehicles. The memorandum of understanding was signed in October 2016 in the presence of the Minister of Economic Development Carlo Calenda and the Minister of Infrastructure and Transport Graziano Delrio.

Snam and the Api Group signed a letter of intent in December 2016 for the development of up to 150 new methane refuelling stations in Italy within the network of Api Group IP points of sale.



Snam sees in the new uses of LNG positive aspects for protecting the environment and reducing costs for end users.

### New uses of LNG

Liquefied Natural Gas, in addition to being a key element for guaranteeing greater energy security and diversification of supply, is an economical and efficient solution for reducing emissions produced by land and sea transportation. These benefits are, however, linked to upgrading existing infrastructures, with special attention to adapting terminals and constructing depots on the coast. The regasification capacity currently available in Italy is not sufficient to attract new flows of LNG and this is preventing the exploitation of resources coming, for example, from the United States, Africa and the Middle East. Upgrading infrastructures in this area would therefore make it possible to fully exploit the role of alternative fuel instead of conventional fuels.

#### Small scale LNG

A definition that represents the new frontier for the procurement of Liquefied Natural Gas (LNG). Small gas tankers known as "lighters" can take the product from regasification terminals and directly refuel ships that run on LNG or take the product to coastal depots, to then be sorted by specially equipped lorries. These lorries can be directly refuelled with LNG from a regasification plant and the liquid gas then transported to the refuelling stations. The stations then refuel heavy land vehicles, lorries and coaches.

To enable the effective launch of this new way of using liquefied natural gas in Italy too, Snam has prepared an action plan initiating a feasibility study aimed at validating possible options for adapting the Panigaglia terminal located in the province of La Spezia. In addition to the traditional regasification service, the upgrading of new Small Scale LNG services is also envisaged, in conjunction with the relevant institutions. Specifically, the feasibility study is aimed at identifying the investments that would allow the loading of LNG onto tankers or lighters, guaranteeing transportation to the consumption points and estimating the costs and times.

# Locally-produced LNG

Liquefied Natural Gas can also be produced locally through "refining" biomethane derived from agricultural and livestock residues which is then liquefied, collected and transported like "traditional" LNG.

This has been made possible through the use of "micro-liquefaction" plants which, in terms not yet fully developed from an economic point of view, can also be located along the network to directly use the gas transported in pipelines.



Italy, with 1,500 anaerobic digestion plants in operation is currently the third largest producer in the world of biogas from agricultural sources with approximately 2.4 billion cubic metres produced per year.

# Biomethane: an opportunity for the future

Biomethane is a renewable and programmable source in addition to solar and wind power. It is obtained from anaerobic digestion, in special plants, of agricultural and agro-industrial by-products through a biogas upgrading process. It can already be injected into the network and used in all the sectors where gas is present and can also be used as a fuel for road haulage. The increase in its use could make it possible to meet decarbonisation targets, exploiting existing networks and promoting a significant increase in domestic production.

The contribution of biomethane to the goals of decarbonisation is not limited to the energy consumption phase only. The production process can make a contribution to significantly reducing emissions in the agricultural industry and restoring soil organic matter: the digestate (what remains after the anaerobic digestion of the agricultural matter) is actually an excellent natural fertiliser. Farm businesses could substantially reduce their production costs and increase their competitiveness. A circular economy model capable of not only relaunching agriculture, but more generally the Italian economic and industrial system.





# SUPPORTING THE NATIONAL SUPPLY OF BIOMETHANE

Snam, together with the Consorzio Italiano Biogas and Confagricoltura, has developed and presented a manifesto to the public in support of the Italian biomethane supply chain.

The document, directed at the government and the European Commission and circulated on the occasion of the 2016 edition of Biogas Italy, an event in the sector sponsored by the Ministry of the Environment and the Protection of Land and Sea, highlights the strategic role of biomethane in the energy transition to an economy based on sustainability and the circular use of resources.

The first Snam workshop entirely dedicated to biomethane was held in December 2016 at San Donato Milanese. The event, which was attended by around one hundred people, representing over 50 gas transport system operators and associations, helped to take stock of the situation in view of the injection of the first flows of biomethane into the Snam network expected at the start of 2017.



Gas is a vital energy source for Italy, on average satisfying 36% of requirements, and for Europe this figure is 23%.

# **ENERGY UNION: AN OPPORTUNITY**

Snam is supporting the construction of new infrastructures that exploit our country's strategic position to diversify the procurement of gas and guarantee the security of supplies and greater system flexibility.

# The development of the energy scenario

The demand for energy will grow over the next fifteen years, thanks, above all, to the momentum from emerging countries, which will offset the anticipated fall in demand from countries with more developed economies.

The pillars of the global energy system continue to be fossil fuels, but their weighting in the mix will gradually be reduced (81% in 2014 compared with a projected figure of 76% for 2030). Demand for gas, on the other hand, will rise to 790 Mega Tonnes of Oil Equivalent in 2030.

This trend is even more marked at European level, where there has been a decisive fall in demand for oil and coal and a rise in demand for gas (approximately 50 MTOE) and renewable fuels, taking into consideration the development of the industrial footprint and, especially, the energy efficiency policies and reduction of carbon dioxide promoted by the European Union.

# THE DEVELOPMENT OF THE ENERGY MIX: THE END OF THE ERA OF OIL AND GROWING RECOURSE TO GAS

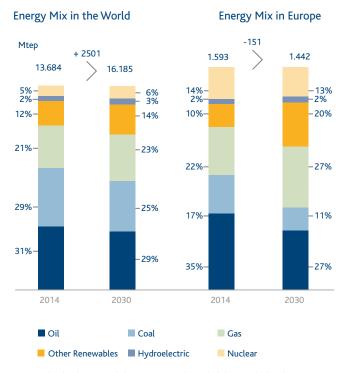


Figure - The development of the energy mix. The end of the era of oil and growing recourse to gas (source: World Energy Outlook 2016)



Italy depends greatly on gas imports: over 90% of its needs is covered by supplies from Russia, Algeria, Libya and other countries.

The increased development of the gas market in Italy and its full integration with European markets will, according to forecasts, have a positive impact on energy prices, cutting costs for Italian businesses and enabling important savings for households.

Our country is included in 3 of the 4 priority energy corridors under the projects of common interest defined by the European Commission.

# The security of gas supplies

If gas, like every energy resource, follows the route of demand, then Europe has a lot to do: accounting for 13% of global consumption it actually only possesses 1% of reserves, and has to make up the difference through imports. These figures give rise to the vital need to guarantee procurement security through long-term strategies and policies, promoting greater market liquidity and facilitating integration through the development of network connections.

In this situation opening up new routes and connecting Italy with strategic areas of the Eastern Mediterranean and Caspian Sea where the countries involved bring their gas to Europe becomes vital.

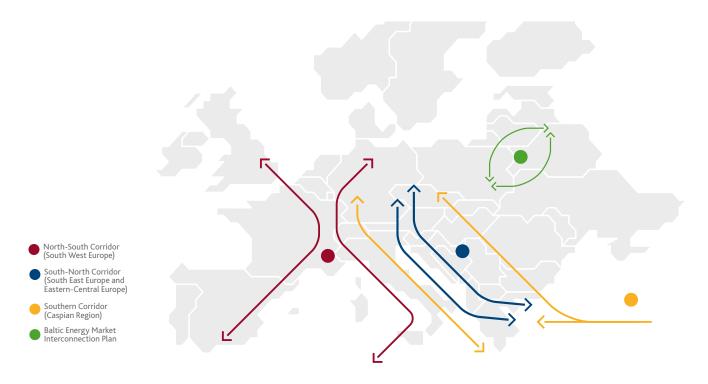
The domestic electrical system power plants would also benefit, with around 40% of production linked to gas, penalised by the subsidised development of renewable energy sources and maintaining the weighting of coal in the electricity generation mix

In years to come it will also be vital to upgrade current transmission systems and develop new LNG storage plants and terminals, in efficient locations connected with the existing network to deal with changes in demand for energy and guarantee an adequate response to consumer needs.

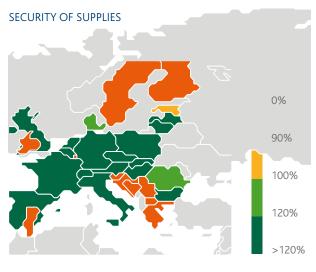
# Energy corridors and Italy's key role

Thanks to the interconnectivity of the Snam network, Italy is already the country in Europe that can count on the largest number of sources of supply. As well as from domestic production, the Italian system can also receive gas through 4 imports via gas pipelines and 3 regasification terminals.

In 2020, it is projected that gas will also be imported from the Caspian Sea region through the construction of the Trans Adriatic Pipeline, the terminal pipeline of the projects for the Southern Gas Corridor, one of the European Union's strategic priorities. The development of the two-way capacity in the north of Italy along the South-North corridor (reverse flow), which is expected to be completed in 2018, may make Italian sources of supply accessible to other European countries.



# DIVERSIFICATION OF SOURCES OF SUPPLY 1 2 3 4 5



Number of sources with a significant impact on prices (situation as at 2017)



Indicator N-1 (situation to 2020)

(source ENTSOG TYNDP 2017)

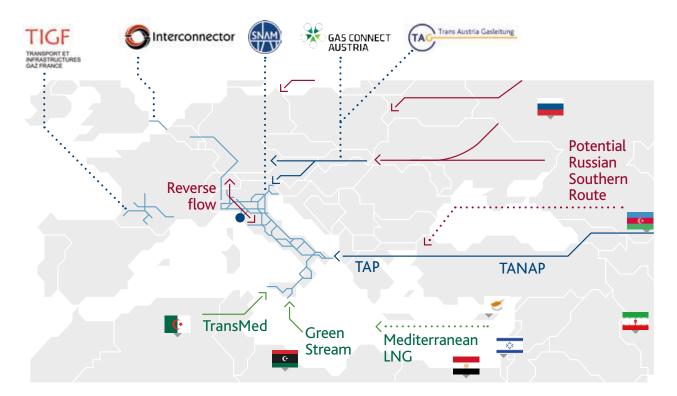


Despite its high dependency on imports, Italy has the greatest degree of diversification in Europe of procurement routes and sources. Indicator N-1 is a system infrastructure flexibility indicator: at the time when the largest source of procurement starts to fail it indicates how the country is capable of replacing it by using other available sources. As far as Italy is concerned, if one of the procurement sources fails, the remaining infrastructures are capable of satisfying over 120% of the area's total demand for gas, calculated during a day when demand for gas is particularly high.

# GAS ROUTES AND ENERGY SECURITY

Snam's international growth aims to consolidate the European infrastructure system facilitating the alignment between the interests of consumers and producers, promoting greater liquidity in the South European gas market also through the development of new routes, and preserving the connection between the United Kingdom and continental Europe.

# NEW GAS ROUTES AND SNAM'S ROLE





The reverse flow is the largest infrastructure project realised by Snam in the last 50 years.

It marks a watershed in the history of Snam and that of the country because it transforms Italy from a consumer country to a gas transit country, at the heart of the European corridors.

# The development of the South-North corridor

Snam is involved in the construction of the two-way connection between Italy and continental Europe, in cooperation with the Belgian operator Fluxys, through the creation of a reverse-flow capacity in the pipelines connecting Italy, via Switzerland, to Germany (Trans Europa Naturgas Pipeline, TENPP) and France (GRTgaz network). Snam's presence (with a 31.5% stake in a joint venture with Fluxys) in Interconnector UK, the operator of the two-way pipeline connecting the United Kingdom and continental Europe, has given this project a further boost. Narrowing the field down to Italy, the main project along the South-North corridor involves connecting Italy, via Switzerland, to France and Germany. Snam already completed the first phase of the project in 2015, which made the reverse-flow capacity available at the connection point with Switzerland (Gries Pass) 5 million cubic metres per day, equal to approximately 2 billion cubic metres per



As the central hub of the European gas networks, Gas Connect Austria makes a significant contribution to the procurement of natural gas in Austria and other countries such as Germany, France, Slovenia, Croatia and Hungary.

year. The second phase will allow the expansion in 2018 of the reverse-flow capacity to up to 40 million cubic metres per day, giving a total annual export capacity of 13 billion cubic metres, distributed among the connecting points with Switzerland (Gries Pass) and Austria (Tarvisio).

# The development of the West-East corridor

Through the acquisition in 2013 of the French company TIGF (with a 40.5% stake), Snam oversees an important strategically-located energy hub along the route connecting France and the Iberian Peninsula

Through TIGF, Snam can contribute to the integration of the Spanish market with the French market and, looking ahead, also the markets of other European countries located along the West-East axis.

Snam also controls 84.47% of the Austrian TAG (Trans Austria Gas Pipeline) through which gas from Russia is sent to the Italian border (Tarvisio). The TAG is the most important gas importation infrastructure for the Italian market and can potentially be used in reverse-flow in the direction of Eastern Europe and southern Germany.

In December 2016 Snam, in a consortium with Allianz, also completed the acquisition from OMV, the main Austrian oil & gas company, of 49% of Gas Connect Austria GmbH (CGA). GCA is the company that manages a network of high-pressure gas pipelines in Austria, which cover approximately 900 km and it is involved in the marketing and supply of transportation capacities to border points and the transportation capacities required by domestic demand for natural gas.

# The connection with the Caspian Sea region

In September 2015, Snam signed a memorandum of understanding with Socar, the Azerbaijan state-owned oil & gas company, for the joint evaluation of initiatives aimed at developing the Southern Gas Corridor.

At the end of 2015 Snam became a shareholder in TAP (with a 20% stake purchased from Statoil), the company constructing the Trans Adriatic Pipeline, the pipeline that will enable the gas produced from the Shah Deniz II field in Azerbaijan to be transported to Turkey, Greece and Southern Italy.

STORAGE FOR THE DIVERSIFICATION OF PROCUREMENT AND THE CREATION OF THE EUROPEAN GAS MARKET

With 9 active fields, Stogit is the major Italian and European operator in the storage of natural gas.

Stogit re-uses exhausted fields for gas storage. In this way, without altering the status of places and prioritising the protection of the area, the gas is conserved in the same security conditions as it was kept in by nature for millions of years. Snam – with TIGF – also has a presence in the storage segment in France, where it manages 2 gas storage facilities in aquifer reservoirs, with the same safeguards and security for the area as for operations in Italy.



Snam's regional transportation network, made up of the remaining section of pipelines, makes it possible to move natural gas in defined territorial areas, usually on a regional scale, to supply gas to industrial and thermoelectric consumers and urban distribution networks.

# SNAM AND THE NATIONAL GAS INFRASTRUCTURE

Snam's domestic network of pipelines moves gas from the system entry points and domestic production areas to points connected to the regional transportation network and storage facilities.



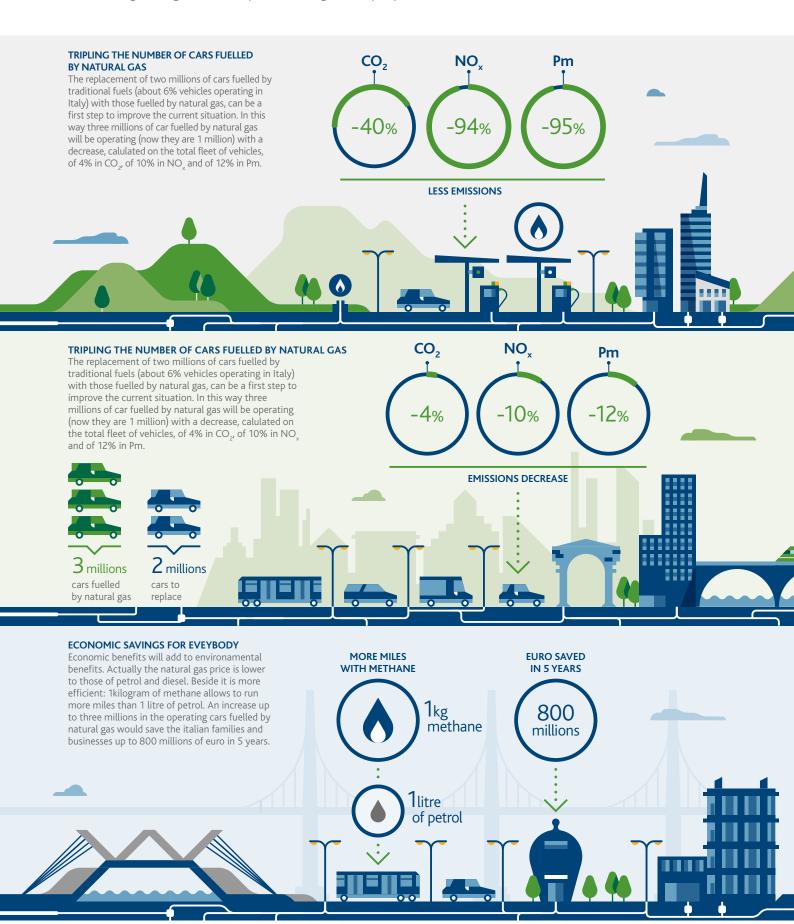


In Italy, Snam is responsible for the natural gas transportation, dispatching and storage business segments and the regasification of liquefied natural gas, making the necessary capacity to deal with market demand available and satisfy the requests submitted by shippers (network users) through the use and development of its own transportation network.

Snam makes use of an integrated infrastructure system made up of 32,508 km of methane pipelines, 11 compression stations, 9 storage fields and a regasification plant, as well as a dispatch centre for transportation and one for storage. The natural gas introduced into the national network originates from imports and, to a lesser extent, national production. The gas from abroad is injected into the national network via eight entry points where the network joins up with the import methane pipelines (Tarvisio, Gorizia, Gries Pass, Mazara del Vallo and Gela) and with the LNG regasification terminals (Panigaglia, Cavarzere and Livorno). Domestically produced gas is introduced into the Network through 53 entry points from the production fields or their collection and treatment centres; the gas storage fields are also connected to the network.

# LET'S MAKE THE AIR CLEANER

The air pollution is a releveant problem also in Italy. The EU legislation sets emissions reduction targets which are going to require a greater development of alternative fules and the replacement of the older and more polluting car fleet. Using natural gas or CNG compressed natural gas is a simple, quick and cost-effective solution.



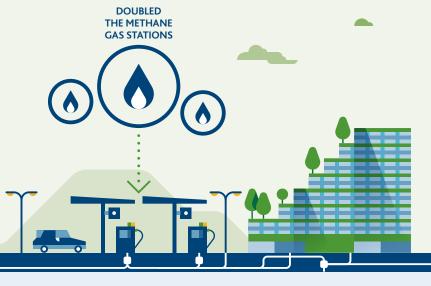
# A SAFE TECHNOLOGY, RELIABLE AND ALREADY AVAILABLE

The timing for a greater spread of methane use can be short since the dissemination of gas network infrastructures and the high level of technological kmow how reached in Italy. The technology is safe and extremely reliable. Beside, a development of this technology would have beneficial effect both on occupation and economy at a national level (1.5 billions of euro for the natural gas technology and more than 1 billion of euro for the methane distribution infrastructures in Italy).



# SNAM'S COMMITTMENT

To increase the number of cars fuelled by natural gas it is necessary to take action on the number of natural gas stations, which currently are about 1,100 in Italy, with an uneven distribution in the several regions. Snam is going to invest about 200 millions of euro in the next five years in order to promote the development of natural gas stations. The goal is to double the natural gas stations within 10 years with a more balanced diffusion on the land. This action will promote the development of the car fleet both light and heavy-duty.

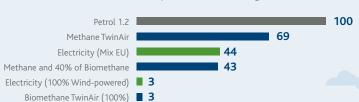


# A CHOICE RUNNING INTO THE FUTURE

Giving our Country infrastructures and technologies to use natural gas can provide even greater benefits in a next future. Our infrastructure can represent a platform for development of renewable sources as biomethane, a fuel with an environmental footprint comparable to electricity. Our infastructures could also promote an increase in the gas national production with beneficial effects on the agribusiness, because biomethane come also from transformation of agricultural co-products and agro-industrial products.

# COMPARISON $CO_2$ EMISSIONS WELL TO WHEEL

100 equals to the fuel with the greatest emission.







CSR and performance



# **2016 HIGHLIGHTS**

The demerger of the natural gas distribution business segment was completed

49% of Gas Connect Austria was purchased in a consortium with Allianz (to strengthen international growth, GCA

Established a Sustainability Committee within the Board of Directors

The shares were included on the major SRI international stock exchanges. Confirmed for the 8th consecutive year on the World DJSI €1,917 million of added value distributed to stakeholders

Memorandum of understanding signed with FIAT, IVECO and API to increase the use of natural gas in the automotive industry

All accident indices kept low and those of contractors reduced still further (frequency -34%, severity -29%)

Memorandum of understanding signe with Transparency International on anti-corruption and governance Around **1,200**reputational checks
carried out on suppliers
and sub-contractors

Employee survey conducted, with an **82%** participation rate

Customer satisfaction surveys conducted for all network and storage users

First place in Webranking KWD, in Italy and Europe for online communication

Over **85,000** tonnes of CO<sub>2eq</sub> prevented thanks to specific CO<sub>2</sub> saving measures

Natural gas emissions reduced by **3%** 

Two DLE turbines installed and nitrogen oxide emission indicator for energy used reduced by **10%** 

# The Snam stock in sustainability indices

In 2016 too, Snam shares were included in the main SRI international stock exchanges based on the performance of the businesses in terms of economic, social and environmental sustainability. This result increases the visibility of the company with regard to socially-responsible investors, and the entire financial market.

As at 31.12.2016 the total percentage of institutional investors that included corporate social responsibility in their investment decision criteria was 9.4% of total institutional investors.





Dow Jones
Sustainability Indices
In Collaboration with RobecaSAM ell





Snam stock was confirmed for the eighth consecutive year in the Dow Jones Sustainability World Index, the most important global stock exchange index and a benchmark of corporate social responsibility. It improved its global position (from 85 to 89 points), also thanks to progress in all three of the macro-areas evaluated, specifically the environmental area (from 92 to 95 points).

For the third consecutive year,
RobecoSAM placed Snam in the
Silver Class of the Sustainability
Yearbook, a distinguished group of
companies, which in the industrial
sector concerned includes companies
which distinguish themselves through
corporate social responsibility
activities and commitment.

Snam was confirmed again in the FTSE4Good in 2016, where it has been included since 2002, an index created by the FTSE Group to promot investments in companies which meet globally recognised standards in terms of social responsibility and an important point of reference for the creation of ethical portfolios and benchmarks. It improved its score from 4.1 to 4.7 out of 5





It was included for the fourth consecutive year among the highest scorers of CDP, a non-profit organisation which is one of the most important internationally for climate change, and was also included on the

It received recognition in December as a carbon industry leader, thanks to its position at the top of the SICS (Sustainability Industry Classification System) of the Oil & Gas (Midstream) industry, from the ET index Research, an independent research body that monitors the greenhouse gas emissions of the most important global companies as well as their performance in terms of disclosure.









Snam was confirmed for the second year running in the two MSCI World ESG and MSCI ACWI ESG indices. MSCI is a leading international company which provides information support tools for investment decisions taken by global investors. The MSCI Global Sustainability indices include the companies with the highest sustainability ratings in their sectors.

Snam was also present in 2016 for the third consecutive year in the United Nations Global Compact 100 (GC 100) index, developed by the United Nations Global Compact with the research firm Sustainalytics, which includes the 100 companies that have distinguished themselves at the global level both for attention to sustainability issues as well as for performance in the financial sector, and that adhere to the ten fundamental principles of the United Nations on the topics of human rights, labour, environment and anti-corruption

Snam is in the (Europe, Eurozone, World) NYSE Euronext Vigeo 120 indices, managed by Vigeo, a leading European company in CSR evaluation.







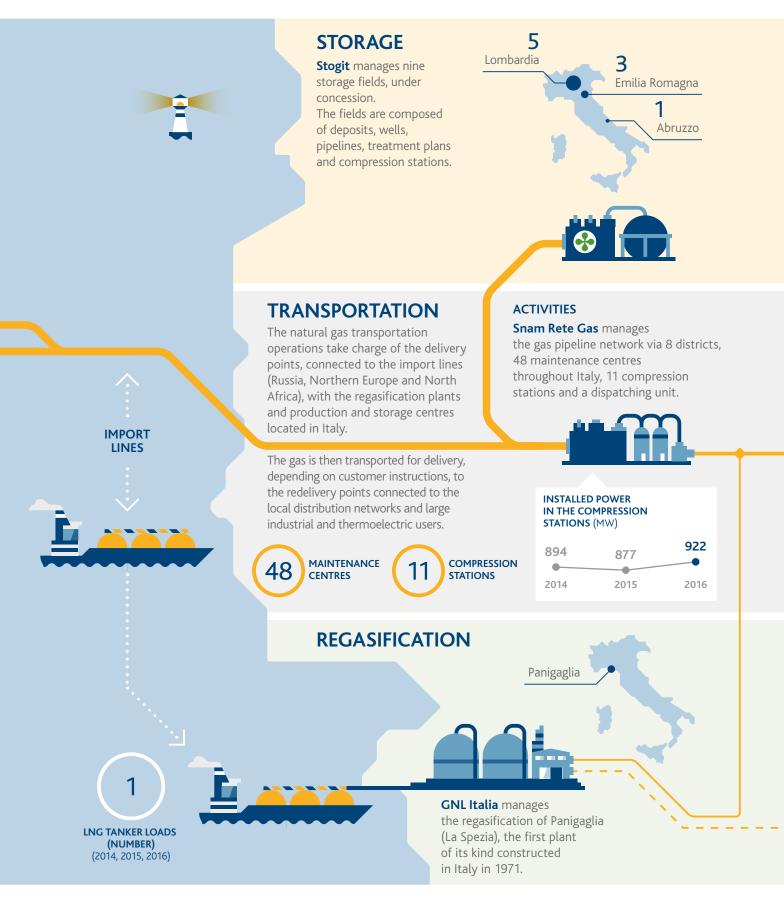
For the seventh consecutive year, the Snam stock came to form part of the STOXX Global ESG Leaders Indices, a group of indices based on a transparent process of selection of the performance, in terms of sustainability, of 1,800 companies listed worldwide

Snam was confirmed in 2016 as "PRIME" (with a rating of B-) by Oekom research, a leading international ratings agency for socially responsible investments, which operates on behalf of institutional investors and financial services companies.

Snam features on five of the main ECPI sustainability indexes. Snam stock was first included in ECPI indexes in 2008. ECPI procedures consist of a screening based on the testing of over 100 ESG indicators (Environmental, Social, Governance).



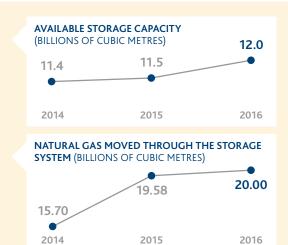
#### **BUSINESS ACTIVITIES**

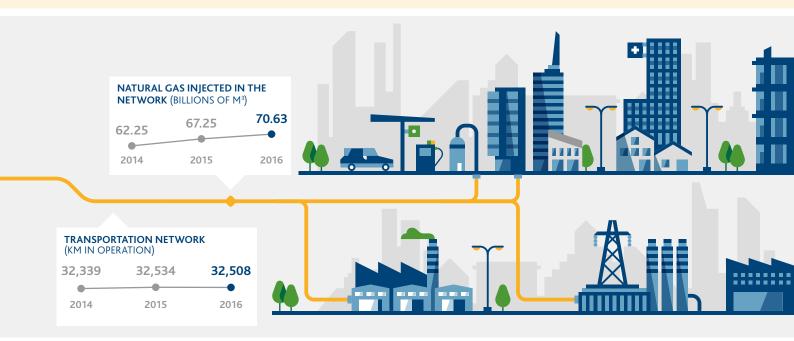


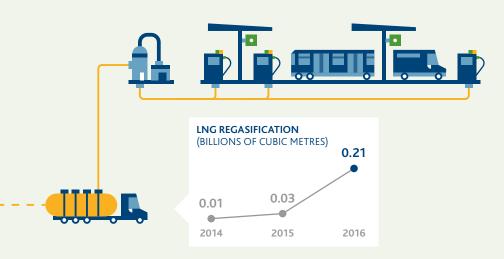


Natural gas storage consists of injecting gas into the porous rocks of an exhausted deposit where it was once contained, restoring the deposit, to a certain extent, to its original state. Once the gas is stored it can be reinjected into the transportation system and delivered according to market requests. Within the gas system, storage makes it possible to compensate for the differences between gas supply and demand and therefore guarantee continuity of supply.











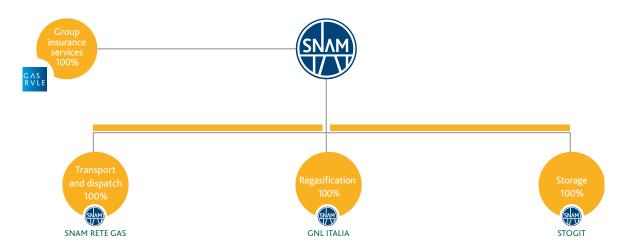
Regasification is the last activity in the liquefied natural gas (LNG) chain and consists of restoring the gas extracted from fields to its original state then liquefying it at -160°C to enable it to be transported on dedicated ships. Within the gas system the LNG chain therefore makes it possible to diversify procurement sources.

## **Snam today**

#### THE NEW CORPORATE PROFILE

The main changes to the structure of the Snam group at 31 December 2016 compared with 31 December 2015 involved the exit of Italgas S.p.A. and its subsidiaries.

#### **CONSOLIDATION LIMIT**



#### Two businesses with distinct characteristics focusing on different markets

The separation of Italgas from Snam was completed on 7 November 2016 with the listing of the new Italgas company on the stock exchange: the activities relating to the gas urban distribution sector in Italy, in which Italgas and its subsidiaries and associates are operational, were therefore separated from those of the transportation, regasification and storage of gas in Italy and abroad.

The transaction was implemented for a mainly industrial purpose, starting from the consideration that the business profile of the gas urban distribution segment has essentially different characteristics from the other activities that Snam is involved in in terms of organisational operation, the competitive and regulatory contexts, and investment requirements.

Both companies can therefore focus on their own core business through clearly identified objectives that can be perceived by the market and an ideal operating and financial structure which best accommodates the respective strategic development opportunities, generating benefits for all stakeholders.

Specifically, Snam can concentrate its energies on the development of transportation, storage and regasification activities in Italy and abroad in order to maximise the value of the existing asset portfolio and offer new services aimed at satisfying a constantly evolving market. A strategy that will be pursued while maintaining a rigorous financial policy, as always, a solid budget structure and a low risk profile to ensure the profitable and sustainable growth that shareholders have come to enjoy over the course of time.

#### The reorganisation of the business

With the distribution business leaving the company's scope, Snam undertook a reorganisation process to facilitate the development of the Company from a group to one company, in order to improve the oversight of the strategic plan guidelines and allow a more efficient and effective operational management also through simplifying the decision-making processes. In this context, management created a new organisational structure designed to facilitate interfunctional collaboration and capable of ensuring effective process management.

The above reorganisation breaks down into:

- a) the creation of three business units (BU) respectively focused on: development activities, the management of the Italian subsidiaries and the management of foreign investments. Specifically:
- Commercial, Regulation and Development BU: to ensure the management and coordination of the company's development levers (including new businesses);
- 2. Italian Assets BU: to ensure the management, coordination and development of company assets (transportation, storage and regasification) throughout Italy;
- 3. Foreign BU: to ensure the consolidation of the Company's position as a European market leader and to maximise the value of assets abroad;
- b) the redesigning of staff functions with a view to simplifying processes, efficiency and continuous improvement.

#### FINANCIAL REVIEW

The financial results(\*) achieved in 2016 were in line with expectations, taking into account the revision of the Weighted Average Cost of Capital (WACC) for regulatory purposes prepared by the AEEGSI for 2016.

The period ended with a net profit, which includes the contribution from distribution sector activities of €861 million, down €377 million (-30.5% compared with 2015). Taking into consideration the discontinuity featured in the period (separation of gas distribution activities), it was felt that the results should be represented in the adjusted configuration of continuing operations (with regard to the transportation, regasification, storage and corporate activities) to allow a better evaluation of performance and greater comparability with the data from previous years. Adjusted net profit stood at €826 million, down €37 million (-4.3% compared with 2015).

Adjusted EBIT stood at  $\leq$ 1,336 million, down  $\leq$ 145 million (-9.8% compared with 2015). The reduction is mainly affected by the revenues from the revision of the WACC (- $\leq$ 114 million), partly offset by the improvement in financial management (+ $\leq$ 69 million) and lower income tax (+ $\leq$ 29 million).

In 2016, a free cash flow of €1.7 billion was generated thanks also to the fee cashed for the sale of 38.87% of the equity investment in Italgas Reti S.p.A. The net financial debt fell by €2.7 billion, standing at €11.1 billion.

(\*) For more details, see the Financial Report



#### ADDED VALUE PRODUCED AND DISTRIBUTED

The Company produces wealth by contributing to the economic growth of the society and environment in which it operates, and it measures this wealth in terms of added value produced and distributed to its key stakeholders. The representation below takes its inspiration from the standard prepared by the Gruppo di Studio per il Bilancio Sociale (GBS) and the guidelines of the Global reporting initiative (GRI-G4). The values represented, consistent with the values for the period, refer to assets from continuing operations.

The added value produced in the year was equal to €2,518 million, an increase of €89 million compared with 2015, despite the reduction in the net invested capital remuneration rate - WACC which affected the operational profitability of natural gas transportation activities.

#### **BREAKDOWN OF ADDED VALUE**

(€ million)	2014	2015	2016
Added value produced (A)	2,445	2,429	2,518
Added value distributed (B)	1,907	1,831	1,917
Employees	241	238	260
Local community	3	2	2
Donations and sponsorship	1	1	1
Regulatory environmental compensation	2	1	1
Lenders (Bondholders and Banks)	377	347	610
Shareholders	875	875	722
Government	411	369	323
Direct taxes	394	357	308
Indirect taxes	17	12	15
Added value retained within the Company (A) - (B)	538	598	601

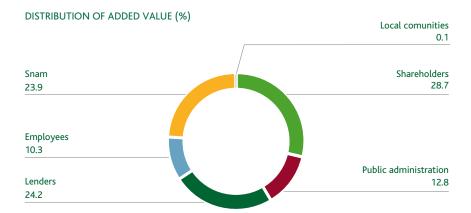
GRI-G4:EC1 Snam today

With regard to the main stakeholders, the added value breaks down as follows:

- Employees 10.3% through direct remuneration made up of salaries and severance pay and indirect remuneration comprising social security contributions and staff-related service costs (canteen services, reimbursement of travel expenses);
- Public Administration 12.8% through the payment of direct and indirect taxes;
- Shareholders 28.7% through dividends distributed. The reduction compared
  with the previous year is also due to the lower number of outstanding shares
  following the buyback of treasury shares (share buyback programmes);
- Lenders 24.2% (+9.9% compared with 2015). The increase over the previous year is due to the effect of the bond buyback transaction.

23.9% of the added value produced was also reinvested within the Company, the value intended for the amortisation and depreciation of tangible and intangible fixed assets used in the production process.

An amount of approximately €2 million was also allocated to local communities (equal to 0.1% of the value generated) through donations, sponsorships and environmental compensation pursuant to the law.



#### Relations with the financial community

Snam considers maintaining constant relations with investors and the entire financial community as strategic for its reputation. In this regard, it strives to disclose exhaustive and timely information, capable of most effectively representing the business strategy of the Group and its performance, specifically developing the dynamics that ensure the creation of value over time. To complement the constant meetings and initiatives, many economic-financial publications are produced on the performance of the business and the sustainability projects and initiatives developed by the Company.

#### **KEY PERFORMANCE INDICATORS (KPI)**

Description of KPI	KPI data	Pre-set target	Target reached in 2016	Activity status
Meetings with SRI investors out of SRI investors recorded in the ownership structure (%)	2010	Reach a value of 33 in 2016	35	
Number of meetings with institutional investors (no.)	2010	Reach a value of 264 in 2016	287	
Number of investor days/site visits with institutional investors (no.)	2010	Reach a value of 1 in the year	1	

■ Annual target reached (KPI with multi-year target)



## Our responsibility

#### THE MANAGEMENT OF MATERIAL ISSUES

The areas of responsibility in conducting business and the definition of sustainable development goals for corporate activities are linked to material issues.

Snam periodically conducts a materiality analysis, cross-referencing the evaluations of company management with the point of view of stakeholders and, in this way, it keeps an up-to-date map of the most important issues that could have an impact on the sustainable development of the business.

The pursuit of the objectives of sustainability, connected with material issues, takes place through the implementation of projects included in the operating plans of each corporate function according to its area of responsibility. This ensures that sustainability is effectively an integral part of Snam's business model. The Corporate Social Responsibility (CSR) function acts as a bridge between management and the board both in identifying actions and projects and in reporting the results achieved.

#### MATERIALITY MATRIX



Importance for the company

#### IMPORTANT ISSUES

- Diversity and egual opportunities
- Healthy work/life balance
- Human rights
- Reputation and brand
- Soil, subsoil and stratum protection
- Water management
- Waste management
- Sound emission



the involvement of stakeholders is aimed at:

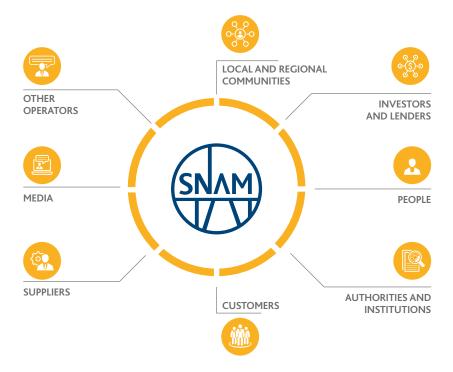
- identifying the different categories of stakeholders with which the Company interacts following the development of strategies and corporate activities;
- analysing and understanding the profile of stakeholders and the position of the Company with regard to them;
- taking an in-depth look at the interests and issues that are important for each category of stakeholder, through the periodic updating of the materiality analysis;
- periodically reporting and notifying stakeholders of the results regarding material issues of mutual interest through the reporting and communication tools developed by the Company.

The materiality analysis was updated in 2016 in the light of distribution activities leaving the scope of the company. The analysis confirmed the materiality issues identified last year with some of them in a different position within the matrix.

#### The involvement of stakeholders

Snam engages in proactive communication and seeks constant dialogue with its target audience. Over time it has developed and implemented a collection of specific instruments and channels to manage relations with various counterparties, an activity to which all company structures contribute, each within the scope of its remit, roles and responsibilities.

Among the issues at the centre of interactions with stakeholders in 2016 were the corporate changes that took place during the year, with special reference to the separation of Italgas which led Snam to have a new ownership structure and to concentrate growth strategies in Italy and abroad on the transportation, storage and LNG businesses.



GRI-G4:24,25,26 Our responsibility



Snam is present on Twitter, YouTube, LinkedIn, Google+, Flickr, Instagram, SlideShare, Facebook.

With 93.6 points out of 100, its highest ever score, Snam is in first place in the Italian and European Webranking KWD classification, which has been ranking companies which communicate most efficiently online for the past 15 years.

#### A strong web identity to strengthen relational capital

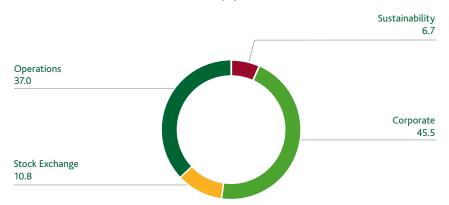
In 2016, Snam continued with further improvements to its web identity, creating a responsive version of the corporate website, optimised for use on all types of desktops and mobile devices. The action, developed through the most innovative technologies on the market, also included a complete graphic restyling helpful in promoting a user-friendly experience to take full advantage of the contents, also thanks to a greater in-depth integration with all the major social platforms where Snam has a presence.

As regard publishing, the history of the company and its activities on digital channels has been enriched through even more frequent recourse to infographic, interactive and multimedia contents with the intention of reaching an increasingly wider and diverse public.

In printed media, on the other hand, 541 articles featured Snam (with 446 dedicated to it), nationally and internationally, an increase of 73% compared with 2015 (312 of which 275 were dedicated to it).

The content and tone of these articles was judged positive or neutral in almost all cases (99.3%), while the proportion of positive articles rose from 151 in 2015 to 196. The main subjects dealt with were Corporate, Operations, Finance and Sustainability.

#### BREAKDOWN PRESS ARTICLES BY TOPIC (%)





In this context Snam is constantly committed to maintain and reinforce a corporate governance system in line with national and international best practices.

#### CORPORATE GOVERNANCE AND CONDUCTING BUSINESS

Snam operates in the reference framework of the United Nations Universal Declaration of Human Rights, the International Labour Organization Fundamental Conventions and the OCED Guidelines for Multinational Enterprises and the principles sanctioned by the United Nations Global Compact.

#### The new Board of Directors

In 2016 Snam renewed its Board of Directors, which is the central body within its corporate governance system vested with the broadest powers for the ordinary and extraordinary administration of the Company.

The new Board, appointed by the Shareholders' Meeting of 27 April 2016 is composed of nine members, who will remain in office for a period of three years. The Board of Directors plays a central role in overseeing the company's commitment to sustainable development along the chain of value which is later presented to the Shareholders' Meeting. It is assisted with these tasks by the Sustainability Committee, established on 11 May 2016, which makes proposals and provides advice and is made up of three non-executive directors, of which two are independent including the Chairman.

#### **CHANGES FROM PREVIOUS TERM OF OFFICE**

	Prior Term of Office	Current Term of Office	FTSE MIB Average
Number of Directors	9	9	12,3
Directors elected by minority shareholders	3 (33.3%)	3 (33.3%)	2
Gender less represented on the Board of Directors	33%	44.4%	29.4%
Indipendent Directors	56%	56%	57%
Average Age of Directors	56	53	57
Status of the Chairman	Non-executive	Non-executive	Non-executive 89.9%
Lead Independent Director Present	no	no	27.8%

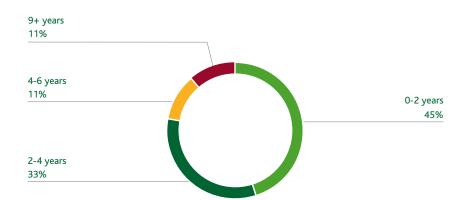
GRI-G4:15 Our responsibility



The new Board of Directors is of a high level in terms of:

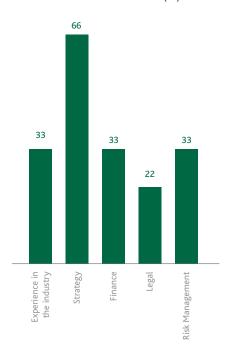
- independence with 5 out of 9 directors classified as independent pursuant to the TUF and Code of Corporate Governance;
- representation, with one third of directors elected from the lists submitted by minority shareholders;
- and, above all, gender diversity: 44% of directors are female, one of the highest figures in companies listed on the stock exchange.

#### LENGTH OF SERVICE OF DIRECTORS ON THE BOARD OF DIRECTORS

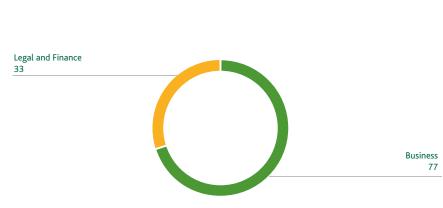


Detailed information regarding the Corporate Governance system can be found in the "Report on Corporate Governance and the Ownership Structure 2016", published on the website (http://www.snam.it/repository/file/Governance/relazione\_governo\_societario/Relazione\_sul\_Governo\_Societario\_e\_gli\_Assetti\_Proprietari\_2016.pdf).

#### MEMBERS RESPONSIBILITIES (%)



#### BUSINESS EXPERTISE COMPARED WITH LEGAL AND FINANCE EXPERTISE (%)





Snam and Transparency International signed an agreement on anti-corruption and governance.

This agreement aims at developing a partnership under the scope of the Global Corporate Supporters

Forum promoted by Transparency International. Snam is the first Italian company to become one of the Forum's international partners.

#### The commitment to fighting corruption and illegality

The agreement signed with Transparency International under the scope of the Global Corporate Supporters Forum is a significant step in the journey Snam has been undertaking for some time in preventing and opposing any form of corruption and illegality. Snam and Transparency International will actually launch an effective partnership for the management of anti-corruption programmes and policies for opposing fraud and irregularities, conflicts of interest and whistleblowing, among other measures directed at consolidating the highest possible anti-corruption standards.

This new initiative sits alongside Snam's firm commitment set out in the Code of Ethics, and translated, over a period of time, into an internal regulatory system with more stringent rules and practices than the legally-required ones. This system includes the Anti-corruption Compliance Programme, a programme in line with internationally accepted best practices and principles (Adequate Procedures - Guidance to the UK Bribery Act 2010 and ISO 37001 Anti-bribery management system).

With regard to business ethics, legality and anti-corruption, in 2016 Snam also delivered more than 2,600 hours of training to around 1,600 people.

#### ETHICAL PRINCIPLES AND BUSINESS VALUES

- transparency, honesty, correctness good faith in full compliance with the rules to protect competition;
- involvement of stakeholders, fostering dialogue on sustainability and corporate responsibility;
- creation of competitive value for the company, stakeholders and the area in which it operates;
- protection and promotion of human rights;
- protection of individual liberty in all forms and renouncing any sort of discrimination, violence, corruption (in any form with regard to any public or private individual) and forced labour or child labour;
- recognising and safeguarding the dignity, liberty and equality of human beings;
- safeguarding jobs and the freedom of trade unions, health, safety, the environment and biodiversity.

#### Management system in conducting business

Snam's commitment also involves expanding and maintaining the management systems that oversee several specific areas such as workplace health and safety, the environment and the quality of services delivered.

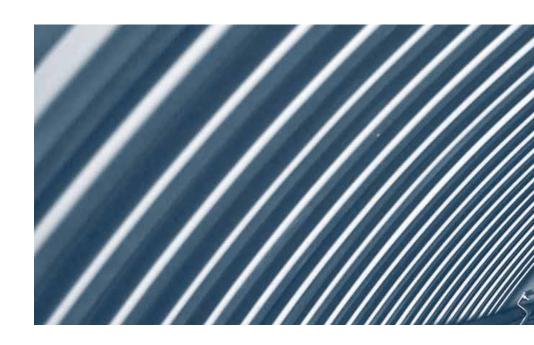
During the year Snam Rete Gas obtained ISO 9001 Certification for the entire Company, bringing the project launched in 2014 to a conclusion. The new management system included the four previous certifications relating to specific processes (Gas processing systems, Infrastructure programming units, Metering units, Dispatching centre).

In order to maintain the certifications already in place, Snam implemented all necessary activities, including checks by both internal and external parties. 28 auditors, also able to carry out external audits, work at Snam.

212 audits were conducted in 2016 (46 of which involved an external team). In order to check the effectiveness of the management systems adopted, 81 health, safety and environment audits were also carried out on contractors working on Snam sites.

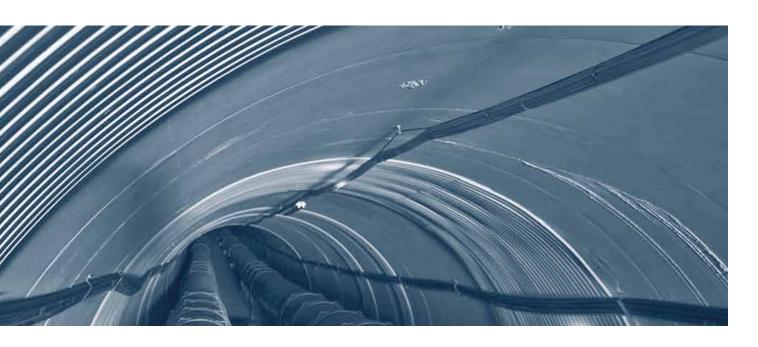
#### **AUDITS (NO)**

	2014	2015	2016
Internal	176	146	166
External	41	57	46
Total	217	203	212



#### MANAGEMENT SYSTEMS

Company	Coverage certification	Type of certification and accreditation	Year of first certification
Snam	Company	ISO 14001	2015
Snam	Company —	BS OHSAS 18001	2012
	Company	ISO 9001	2016
	Gas process systems	ISO 22301	2015
	Dispatching centre	ISO 22301	2015
Snam Rete Gas	Information security management for natural gas dispatching and metering	ISO 27001	2014
	Company	ISO 14001	2013
	Company	BS OHSAS 18001	2010
	Testing laboratory (LAB 764 conveyed gas flows)	ISO 17025	2007
	Calibration laboratory (LAT 155 mixtures of natural gas)	ISO 17025	2002
	Company		
GNL Italia	Company	BS OHSAS 18001	2012
GINL Italia	Company	ISO 14001	2000
	Company	BS OHSAS 18001	2012
Stogit	Design and delivery of natural gas metering and accounting	ISO 9001	2008
	Company	ISO 14001	2002





In addition to using natural gas as the main fuel, Snam is introducing energy management programmes and reducing the carbon footprint.

#### Targets for 2021:

- to reduce natural gas emissions by 10%, like for like, compared with 2016 figures;
- to improve the energy efficiency of the gas preheating systems by 10% in 58 pressure reduction stations:
- to increase the energy efficiency of the lighting systems of 16 compression stations by 40%.

#### INNOVATION AND CLIMATE CHANGE

# The fight against climate change is a material issue for Snam. Technological innovation, research and good practices are the tools for achieving environmental sustainability.

Snam intends to develop ambitious projects to strengthen its operational excellence and thereby contribute to containing climate altering emissions. The Company has set itself the target, by 2021, of reducing its natural gas emissions by 10% compared with 2016 figures and of increasing energy efficiency in various plants.

To achieve these goals there is an investment plan that allows to maintain and develop programmes which involve, among other things: recompression of the gas in the transportation network and at the compression stations; replacing natural gas operated pneumatic actuators in the transportation and storage infrastructures and system innovations.

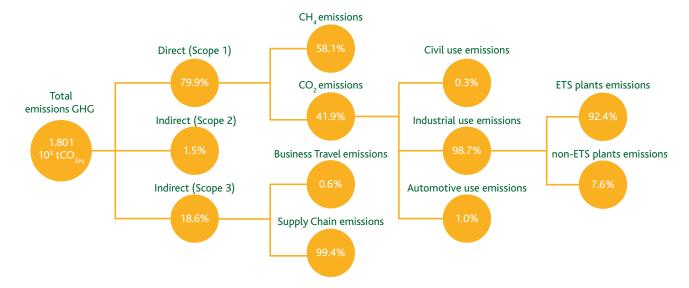
The Company has also made investments in new technologies aimed at enhancing operating performance, such as, for example, experimental research into real time leak detection which, in addition to making the transportation system more efficient, can also help with controlling and reducing natural gas emissions.

#### Climate protection

Greenhouse gases (GHG) emitted into the atmosphere by Snam operations are carbon dioxide  $CO_2$  and methane ( $CH_4$ ), a primary component of natural gas. The  $CO_2$  produced is directly related to fuel consumption, while methane emissions are triggered by the release of natural gas into the atmosphere resulting from the regular operation of systems, the connection of new pipelines and maintenance works on them or accidental events involving infrastructures. In 2016, total GHG emissions (direct Scope 1, indirect Scope 2 and Scope 3) stood at 1.80 million tonnes of  $CO_{2eq}$  (1.70 million tonnes in 2015). The increase in emissions (+5.9% compared with 2015) is mainly due to gas transportation activities which saw a rise in the gas injected into the network from 67.25 billion cubic metres in 2015 to 70.63 billion in 2016.

Thanks to the actions implemented during the year, the emission into the atmosphere of 85,770 tonnes of  $CO_{2eo}$  has been prevented.

#### **GREENHOUSE GAS EMISSIONS**

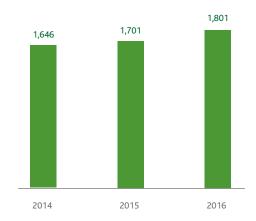




The 2016 initiatives to reduce natural gas emissions involve

- recompression of the gas in the transportation system and at the compression stations;
- Replacement of natural gas powered pneumatic actuators in the transportation and storage infrastructures.

#### TOTAL DIRECT GHG EMISSIONS - SCOPE 1-2-3 (kt $CO_{2Eq}$ )





The measurement of CO<sub>2eq</sub> was carried out in accordance with the latest scientific study of the Intergovernmental Panel on Climate Change (IPCC) "Fifth Assessment Report IPCC" which gave methane a Global Warming Potential (GWP) score of 28.

#### Direct emissions of CO<sub>2eq</sub> (Scope 1)

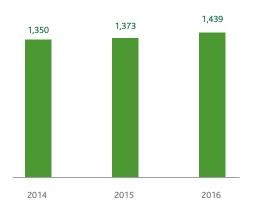
In 2016, direct  $CO_{2eq}$  emissions were equal to approximately 1.44 million tonnes (+4.8% compared with 2015). Direct  $CO_2$  emissions from combustion were equal to approximately 0.6 million tonnes (+22.5% compared with 2015), while  $CO_{2eq}$  emissions from methane stood at approximately 0.84 million tonnes.

Specifically, natural gas emissions were reduced in 2015, (-3%), going from 49.7  $Mm^3$  to 48.2  $Mm^3$  as a result of both the lower emissions from emergencies and the greater recovery of gas in the transportation system (4.5 million cubic metres of natural gas recovered, equal to 77,780 tonnes of  $CO_{2n}$ ).

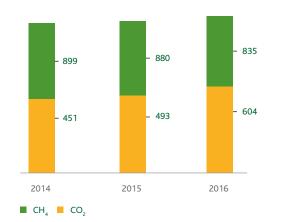
In transportation activities, methane emissions per kilometre of the network fell from 0.72 tonnes in 2015 to 0.66 tonnes per kilometre (-9%).

GRI-G4:EN19 Our responsibility

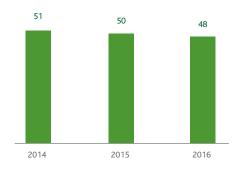
#### TOTAL DIRECT GHG EMISSIONS - SCOPE 1-2-3 (kt $CO_{2eq}$ )



#### TOTAL DIRECT GHG EMISSIONS - SCOPE 1 (kt $CO_{2eq}$ )



#### NATURAL GAS EMISSIONS (106m³)



#### METHANE EMISSIONS/KM OF NETWORK



#### **KEY PERFORMANCE INDICATORS (KPI)**

Description of KPI	KPI data	Pre-set target	Target reached in 2016	Sector	Activity status
Natural gas recovered over total potential emissions from maintenance activities	2015	Recover 30% every year (until 2018)	37	Transportation	
Contain natural gas emissions in the transportation network	2014	Keep annual natural gas emissions below 1,240 m3/km until 2017	1,066	Transportation	

■ Annual target reached (KPI with multi-year target)



In 2016 Snam increased its consumption of electricity from renewable sources still further: four energy-intensive plants use electricity procured from renewable sources and various transportation and storage system sites use electricity produced from locally installed photovoltaic panels.



Indirect emissions of  ${\rm CO_{2eq}}$  come from the production of electricity by third-parties and which Snam uses for its operations.

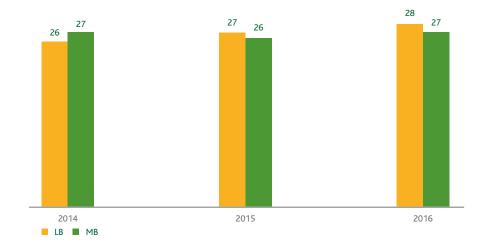
In 2016, these emissions were recalculated and compared, for previous years as well, according to the most recent best practices, adopting two approaches called Market Base (MB) and Location Base (LB).

In 2016 indirect emissions of  $CO_{2eq}$  calculated using the MB approach were equal to 27,390 tonnes (+3.6% compared with 2015), while the same emissions measured using the LB approach stood at 28,280 tonnes, a 5.1% increase compared with the previous year.



The market based approach (MB) allocates a zero emission factor for energy consumption from renewable sources and the so-called residual mix for other electrical consumption. The location based approach (LB) on the other hand, gives the national electricity grid an average emission factor.

#### INDIRECT GHG EMISSIONS - SCOPE 2 (ktCO<sub>200</sub>)



The comparison between these two values highlights the impact on emissions of using energy produced from renewable sources. Snam has increased its consumption of the latter in 2016 as well, therefore preventing the emission into the atmosphere of approximately 7,630 tonnes of CO2eq. equal to approximately 27% of the company's total indirect emissions (scope 2).

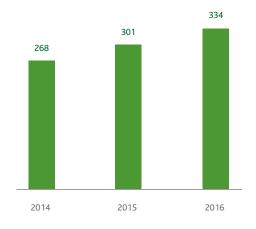
GRI-G4:EN16 Our responsibility

#### Indirect emissions of CO<sub>2eq</sub> (Scope 3)

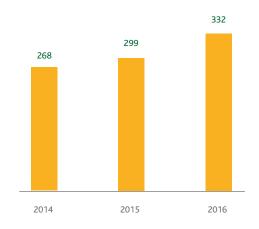
Scope 3 indirect emissions totalled approximately 334,000 tonnes and refer, for 99%, to  $\mathrm{CO}_{\mathrm{2eq}}$  emissions related to supply chain logistics with the residual part related to business travel. They are calculated by applying a method developed by a leading international company which analyses the carbon footprint.

The 11% increase in emissions compared with 2015 is due to the greater amount of procurement activated by the supply chain.

#### INDIRECT GHG EMISSIONS - SCOPE 3 (ktco<sub>2e0</sub>)

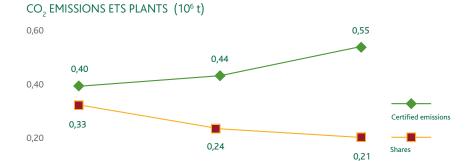


#### INDIRECT GHG EMISSIONS - SCOPE 3-SUPPLY CHAIN (ktco<sub>2e0</sub>)



#### **Emissions trading**

In 2016, Snam's ETS plants total CO2 emissions, certified by an accredited body according to the provisions of the competent national authority, amounted to approximately 0.55 million tonnes, out of total annual allowances of approximately 0.207 million issued by the Ministry for the Environment, Land and Sea (negative balance of 0.343 million allowances). This deficit is offset by the allowances already present in the national register of emissions for Snam Group plants, accumulated thanks to the surplus from previous years.



2015

2016

#### **SNAM EMISSIONS TRADING SYSTEMS**

Activities	Number of plants	Name of plants
Transportation	11	Gas compression stations in Enna, Gallese, Istrana, Malborghetto, Masera, Melizzano, Messina, Montesano, Poggio Renatico, Tarsia, Terranuova Bracciolini
Storage	8	Storage gas compression stations in Cortemaggiore, Fiume Treste, Minerbio, Ripalta, Sabbioncello, Sergnano, Settala and Bordolano
Regasification	1	Liquefied natural gas plant in Panigaglia



2016 energy management initiatives:

- Installation of high energy efficiency turbines
- installation of more efficient heat generators (new skids for gas preheating);
- installation and connection to the photovoltaic system grid;
- replacement of traditional bulbs with LEDs;
- renovation of buildings with consequent improvement of the energy rating;
- reduction in the use of air conditioning in the summer.

#### **Energy consumption**

0,00

2014

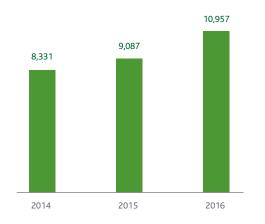
Snam's main energy consumers are the gas turbines used at the compression stations which supply the necessary pressure for transporting the gas (thrust consumption) and in the storage concessions (storage consumption) which, globally, account for 88% of total consumption.

In 2016 energy consumption totalled around 10,957 TJ (+20.6% compared with 2015). This increase is due to the greater quantity of gas transported (+5% compared with 2015), but particularly to the increase in the amounts of gas coming from North Africa (+65% compared with 2015) and the simultaneous reduction in imports from Northern Europe (-37%) and Russia (-5.6%), conditions that resulted in the increase of the average journey of the gas (average journey of a cubic metre from injection into the system until withdrawal) which, in 2016, reached 582 km compared with 419 km in 2015 (+39%).

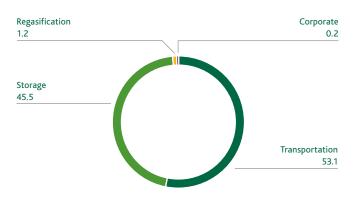
Natural gas covers 96.2% of Snam's energy requirements. Other sources used are electricity (2.9%) and other fuels (diesel fuel, gasoline, LPG and heat), which together are equivalent to 0.9%.

GRI-G4:EN3 Our responsibility

#### **ENERGY CONSUMPTION (TJ)**



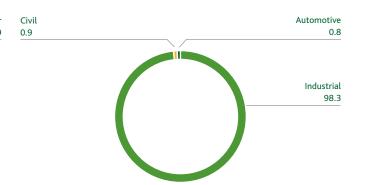
#### **ENERGY CONSUMPTION BY ACTIVITY (%)**



#### ENERGY CONSUMPTION BY SOURCE (%)

# Electricity 2.9 Other 0.9 Natural gas 96.2

#### **ENERGY CONSUMPTION BY USE (%)**





Performance indicators, involving photovoltaic plants and high-efficiency heat generators for the transportation sector, have reached and exceeded set targets a year early.

#### Production of energy from renewable sources

Snam has installed photovoltaic plants in various properties that it owns (regional offices and maintenance centres) and at several gas storage facilities. In 2016, the total number of systems reached 1,154 units (+13% compared with 2015). This increase mainly involves the installation of 135 new back-up systems. In 2016, the installed power rose by 154 kW compared with 2015, from 786 kW to 940 kW (+20%).

The total energy produced by renewable source plants increased by 14% compared with 2015 rising from 711,700 kWh to 844,600 kWh in 2016. This increase is due to both the new systems installed in 2016 and to the connection of systems installed in previous years which had not yet been connected to the grid.

#### **RENEWABLE ENERGY PLANTS**

Туре			2014			2015			2016
	(no)	Total power (kW)	Energy generated (kWh)	(no)	Total power (kW)	Energy generated (kWh)	(no)	Total power (kW)	Energy generated (kWh)
Wind power generators	1	1.7		1	1.7		1	1.7	
Photovoltaic plants	924	577.1	477,213	1,016	784	711,678	1,153 (*)	938.3	844,608
Total	925	578.6	_	1,017	785.7	-	1,154 (*)	940	_

<sup>\*</sup>Including 1,117 back-up plants

#### PERFORMANCE INDICATORS

Description of KPI	KPI data	Pre-set target	Target reached in 2016	Sector	Stato attività
Photovoltaic plants	2014	Install a power of 40 kW by 2015	150		
		produce 40,000 kWh/year from 2016	69,634	Storage	
Photovoltaic plants	2014	Install a power of 370 kW by 2016	385		
		produce 260,000 kWh/year from 2017	438,246	Transportation	
High-efficiency heat generators at R&R stations	2014	Install a power of 30 MW by 2017	41	Transportation	
B Energy rated buildings	2014	Renovate 8 buildings upgrading them from energy rating E to B by 2017	4	Storage	
		save 50,000 m³/ year of natural gas by 2018	30,000 m <sup>3.</sup>		

#### ■ Target reached ■ Activity in progress

GRI-G4:EN6,EN7 Our responsibility



In 2016 two low-emissions turbines came into service, one new one at the Poggio Renatico Plant (TC4) and one converted one at the Messina Plant (TC3).



The use of natural gas as a major energy source allows us to minimise sulphur oxide and particle emissions.

Emissions of nitrogen oxide  $(NO_x)$ , the only significant pollutant emissions, are mainly as a result of the combustion of natural gas in the turbines installed at the compression stations (thrust and storage).

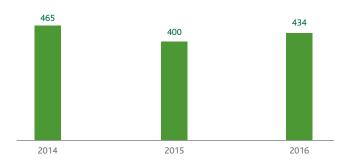
Total emissions of nitrogen oxides in 2016 stood at 434 tonnes (+8.4% compared with 2015), while the indicator that establishes the parameters for emissions of energy used fell by 10% thanks to the ever-increasing use of DLE turbines, which were used for 88% of operational hours in storage and 94% in gas transportation. The increase in emissions of NOx in absolute terms is attributable to the increase in activities in all three sectors (transportation, storage and regasification). There has been a programme in place for many years to reduce these emissions

There has been a programme in place for many years to reduce these emissions which involves altering some of the existing turbines and installing new units with low emission combustion systems (DLE).

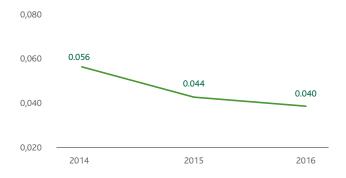


Emissions of NO<sub>x</sub> into the atmosphere were calculated based on direct measurements or, if not available, through emission factors in literature (EMEP/EEA "Air pollutant emission inventory guidebook" European Monitoring and Evaluation Programme/European Environment Agency).

#### TOTAL NO, EMISSIONS (t)



#### NO, EMISSIONS /ENERGY CONSUMPTION Kg NO /GI





When creating new infrastructures and managing existing ones, Snam adopts a rigorous, transparent, collaborative and constructive approach to ensure the environmental compatibility of the sites and encourage acceptance by stakeholders.

#### LAND AND ENVIRONMENT

Protecting the environment and biodiversity are integral parts of the definition of company policies and investment decisions for all Snam's activities, which are fully identified in an approach to the land and communities with a view to integrating the environment and economic development.

Snam is present, through its infrastructure, in almost all the country's regions, in areas and communities that are varied in terms of culture, traditions and economic, social and environmental conditions.

Over time, Snam has established a network of relations with regional branches of Confindustria and other local associations to discuss issues of energy, economic and environmental policy affecting the territory. At local and national level, the Company cooperates with the authorities and takes part in the work of numerous associations and committees making its expertise and commitment available and participating in social innovation and sustainable development initiatives. All of Snam's activities are overseen by certified environmental management systems (ISO 14001).

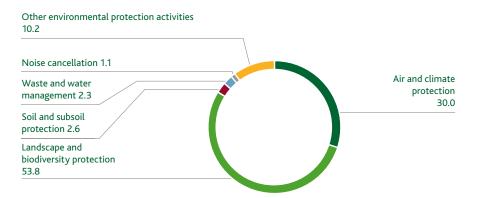
The relationship between businesses and society has increasingly become the focus of more attention and interest. In recent years, the continuing economic uncertainty and concurrent increase in social emergencies has created serious hardship, especially in the weaker bands of the population. Businesses, which have always played a fundamental role in the economic and social development of a country, have reacted by implementing policies and tools to try and respond to these emergencies.

Snam intends to make its contribution and increase its corporate social responsibility. This is why the Snam Foundation has been established with a view to developing and adopting innovative and sound practices capable of encouraging civil, cultural and economic development in priority areas of public interest. The Foundation intends to play a part in creating tangible and intangible infrastructures, also leveraging the know-how, networks, technical and technological means to develop partnerships, projects and initiatives of social value.



In 2016, around €851 thousand was dedicated to donations and sponsorships and over €1.26 million went on environmental compensation. Snam's expenditure on protecting the environment runs to approximately €139.8 million (€129.3 million on investments and €10.5 million on management costs).

#### **ENVIRONMENTAL EXPENSES BY TYPE (%)**



#### PROJECTS IN THE AREA

#### **Sustainable Paths - Ticino Park**

Presented at the Turin International Book Exhibition, the fourth volume in the Sustainable Paths series, sponsored by the Ministry of the Environment and published by 24ore Cultura-Gruppo Sole 24ore, dedicated to the Ticino Park. The series, aimed at development and restoration works carried out by Snam in protected areas such as parks and nature reserves, is a testament to the company's commitment to safeguard and enhance the environment in a context of using gas as a strategic energy resource.

#### 2015-2016 Schools Project

For the third consecutive year Snam has been involved in the educational project "Stories that tell of the future" dedicated to the second stage of primary schools. The objective of the initiative is to raise awareness of fundamental issues to strengthen sustainable development. The edition for the 2015-2016 academic year entitled "The Network of Confidence and Respect" focused on the theme of legality, understood as respect and civic duty. The project, produced in conjunction with Federparchi, involved approximately 220 Italian primary schools with around 500 classes and more than 10,000 students.

#### Tour of Italy in 80 bookshops

A cycling, cultural and environmental race took place following the entire course of the Ticino River, visiting significant and evocative centres of cultural importance. The third edition of the initiative, launched in partnership with the Associazione Letteratura Rinnovabile, has made it possible to promote and consolidate Snam's presence in areas in which the company has had a strong presence for some time. It provided an opportunity to present Sustainable Paths - Ticino Park at various meetings.

#### **Seasonal Paths**

It is an information and multimedia support created by Snam in conjunction with Federparchi and three Italian parks (Nebrodi, Prealpi Giulie, Ticino), the main protagonists of the project. The initiative began with the intention of giving visitors to these parks the opportunity of enjoying the beauty and services of the area in a way that was easily accessible and for planning itineraries and discovering the economic, social and cultural fabric.

The digital platform is composed of a website that houses the history of the region of the park and a mobile app so that you can always have your itinerary with you, even when there is no signal.

#### SNAM AND THE MUSEO NAZIONALE DELLA SCIENZA E DELLA TECNOLOGIA

The project was launched for the endowment of the Italian gas transportation network synoptic panel to the Museo Nazionale della Scienza e della Tecnologia "Leonardo da Vinci" Foundation of Milan (MUST).

As part of the renovation of the Snam Rete Gas dispatching centre, this important technology was replaced with equipment that is even more cutting edge. For more than 30 years, via remote control, the panel managed the gas flows of the Italian grid and its injection point from the main European and North African gas pipelines.

The ultimate aim of the donation is the creation of value for both the company and the museum. Snam will have the possibility of seeing its role as the major player in the country's gas system recognised in Milan, centre of the Po Valley, a major hub of the company's activities and history, precisely when it reaches its 75th anniversary. The museum, which is the largest and most visited technical-scientific museum in Italy, will add an important piece to its exhibitions, also providing new economic value to its offerings aimed at an ever growing public. The synoptic panel can be seen both as a subject of study for its value as a technical instrument, and as an iconic object to gain more knowledge about the importance of gas in the national energy system and its role as a reliable and sustainable resource. Not only will the historical aspects be stressed, but it will also be possible to dwell on the positive returns of natural gas and its uses in achieving the goals of reducing climate change and global warming on account of it being a clean and efficient resource.

The Museo Nazionale della Scienza e della Tecnologia will own the item outright and it will be placed in the section of the museum dedicated to energy systems with a dedicated installation, which will be realised in 2018.

#### Infrastructure sustainability and safety

To develop the new sites, as well as technical and economic feasibility criteria, Snam adopts procedures that respond to stringent environmental and safety compatibility evaluations.

The assessments of the effects on the environment involve all phases of the life cycle of the works, localisation, planning, realisation, operation and decommissioning. These assessments are made under the scope of the Environmental Impact Assessment (EIA) procedure, at the end of which the central and local administrations issue the permits required by existing law. With regard to the realisation of the most important works (compression stations or large pipelines), Snam evaluates the direct and indirect economic and social repercussions on the land and on local communities.

The measurements and estimates are carried out using social impact assessment tools and methods.

The results of the analyses conducted demonstrate that, by adding together Snam's direct investments and indirect investments (related to sub-contracting), there is, on average, an effect on the local economy, at municipal, provincial and regional level, equal to 17-28% of the economic value related to the realisation and operation of the work.

#### **DECREES OBTAINED DURING THE YEAR**

Name	Length (km)	Regions affected	Authority	Date of decree
Apulia - Basilicata Transportation Network Pipeline Adaptation	266.59	Apulia - Basilicata	Apulia Region	03/03/2016

#### ORDERS RECEIVED DURING THE YEAR TO CHECK EIA REQUIREMENTS

Name	Length (km)	Regions affected	Authority	Date of order
S. Andrea Apostolo dello Ionio - Caulonia Pipeline	51.70	Calabria	Calabria Region	25/02/2016
Stilo and Bivongi Pipeline diversion	5.20	Calabria	Calabria Region	25/02/2016
Pipeline doubled and Agip wells connected to the Ravenna - Chieti pipeline: installation of traps and filters	0.6	Marche	Marche Region	22/04/2016

#### APPLICATIONS SUBMITTED TO MINISTRY OF THE ENVIRONMENT (MATTM) TO CHECK EIA REQUIREMENTS

Name	Length (km) Capacity (MW)	Regions affected	Submission date
Castrovillari - Melizzano Pipeline: (GAME A variant)	3.10	Campania	07/07/2016

#### APPLICATIONS SUBMITTED TO REGIONS OR PROVINCES TO CHECK EIA REQUIREMENTS

Name	Length (km) Capacity (MW)	Regions affected	Submission date
Corte - Genoa Pipeline: Variants in Municipality of Rottofreno	5.28	Emilia - Romagna	31/05/2016
Pipeline connecting Edison Garaguso and Masseria Monaco	4.41	Basilicata	10/06/2016
Pipeline connecting Pietravairano - Pignataro Maggiore	25.10	Campania	24/08/2016
Benevento - Cisterna Pipeline: Variants	3.38	Campania	30/08/2016
Pipeline diversion for Salerno: Variant	2.08	Campania	31/08/2016
Mornico al Serio - Travagliato Pipeline - Chiari - Travagliato section	13.71	Lombardy	10/11/2016

During the design phase, the layout is selected from several alternatives, seeking to avoid or minimise extension into areas of significant natural or cultural interest, archaeological areas, geologically unstable areas and man-made areas, or areas in which the construction of new housing is planned.

In some cases, during the construction phase (subject to technical feasibility), certain procedures and technologies are used to reduce interference with the surrounding environment. These include reducing the length of working shifts, minimising temporary building site infrastructure, and using trenchless execution techniques (tunnels and micro-tunnels) as an alternative to traditional digging. Having completed the works, a careful environmental restoration operation is carried out to return the land to its original condition.

During operation, the plants are monitored 24 hours a day, and simulation and optimisation programs are used to guarantee the best setting with the goal of reducing fuel consumption and containing emission levels.

The line sections are then inspected regularly on foot, using motor vehicles and helicopters in order to detect potentially hazardous situations caused, for example, by the works of third parties in the area of the pipelines. Similarly, any land slippage at specific points of the route is also kept under surveillance. The integrity of the pipelines is also monitored by passing devices along them known as "intelligent pigs", which can detect any faults or irregularities in the material.

#### CONTROL AND INSPECTION OF THE NETWORK

	2014	2015	2016
network inspected using smart pigs (km)	1,950	1,315	1,660
network inspected by helicopter (km)	15,700	16,330	16,218



In 2016 renovation work was completed along 172 km of the Zimella – Cervignano pipeline, which runs through the agricultural plains between Veneto and Lombardy (). Works started in the same area to remove a section of the decommissioned "Tarvisio – Sergnano" pipeline, approximately 128 km long. The environmental works carried out restored the land to its original agricultural use, restoring the landscape and fertility.

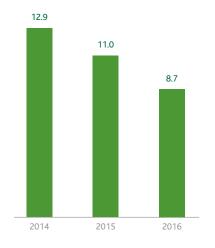
#### The protection of biodiversity

Snam considers safeguarding nature in the areas in which it operates to be of particular importance. For this reason, during the realisation of works it implements the most suitable design choices to keep impacts on biodiversity to a minimum and once these have been completed it deploys environmental restoration works and monitoring projects in accordance and in conjunction with the bodies responsible. The goal of replanting vegetation, particularly reforestation, is not just to restore the forested areas, but generally to rebuild the landscape on the whole and recover the biological function of planted areas, especially in their role as animal habitats with specific biodiversity features. The replanting and reforestation is followed by "farmland care", in other words the care and maintenance, for a period of at least five years, of the vegetation planted.

The monitoring projects concern the layouts of several pipes that interfere, even if only marginally, with natural areas of ecological and wildlife value, and are aimed at checking the effectiveness of the process of restoring the areas affected by the works, based on comparisons between the conditions after the restoration (post-operam) and the original conditions (ante-operam). The monitoring is usually carried out for the most important habitats identified during the planning stage.



# DISTANCE COVERED BY PIPELINES IN NATURA 2000 NETWORKING SITES (KM)



#### NATURE 2000 SITES AFFECTED BY THE PIPELINE ROUTING

Special protection zones/Site of EU interest	km
Former sugar plant fields of Argelato River Reno floodplain	2.130
Crevalcore habitats and environmental restoration	0.260
"Le Poscole" habitat	3.388
Danesi quarries	0.550
Greto dello Scrivia (Scrivia gravel river bed)	1.111
Fiumara di Palizzi	0.380
Fiumara Amendolea	0.920
Total	8.740

#### **ENVIRONMENTAL MONITORING AND RESTORATION (KM OF NETWORK)**

	2014	2015	2016
Restoration	78	240	227
New reforestation*	16	11	3.7
Farmland care	124	140	98
Environmental monitoring	1,055	1,009	565

 $<sup>^{\</sup>ast}$  Surface area covered by new reforestation: 74,400  $m^{2}$ 

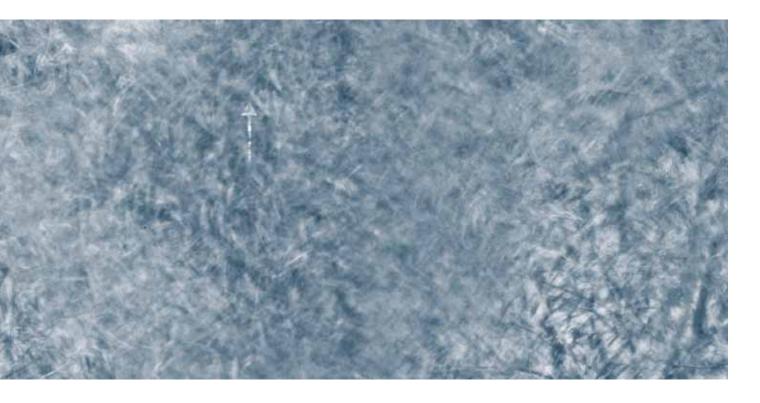
GRI-G4:EN11,EN12,EN13
Our responsibility

#### PROTECTING BIODIVERSITY ALONG THE "BROGLIANO-SCHIO" PIPELINE

The laying of the "Brogliano – Schio (DN 250)" pipeline is taking place in the province of Vicenza, along a stretch around 15 km long, involving the municipal areas of Brogliano, Cornedo Vicentino, Monte di Malo, Malo, San Vito di Leguzzano and Schio. The work involved replacing the existing pipes, which go back to the fifties and will be decommissioned and removed from the site. The pipeline passes through the EU site of importance (SIC) IT3220039 "Le Poscole" habitat, in the municipal areas of Cornedo Vicentino and Monte di Malo for about 3.4 km. The works also affected protected habitats: natural and semi-natural hay meadows under habitat 6510 "Lowland hay meadows (Alopecurus pratensis, Sanguisorba officinalis)". These hay meadows are protected because they are semi-natural environments in a grassy state and not cultivated or abandoned for spontaneous reforestation.

In order to protect the biodiversity of the meadow areas, the operation involved very careful protection of the turf by cutting and keeping the sods and putting them back in place at the end of the works.

An area of approximately 15,000 square metres of meadow has been turfed. The sods have been laid outside the cutting area, conserved and suitably protected for the entire period of the works. At the end of the works, the sods have been put back in place, restoring the grassy covering which have a specific role in nature. The turf will re-establish it completely next spring through spontaneous seeding processes.



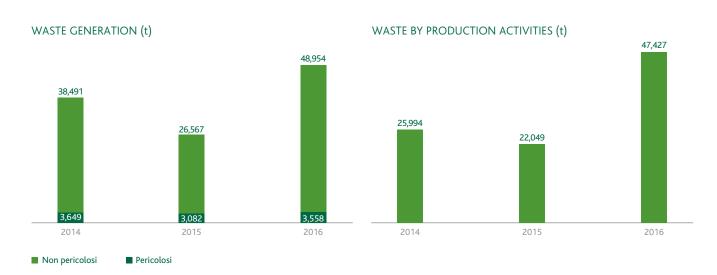


At the sites not served by sewage networks, over the years Snam has installed 18 closed-cycle sewage treatment facilities in which the waste water is treated and fully absorbed by the planted vegetation.

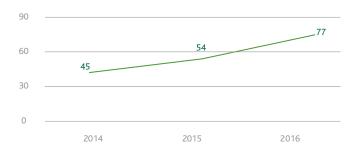
#### Waste management

In 2016, total production of waste stood at approximately 52,513 tonnes (+43.5% compared with 2015) of which more than 93% belonged to the non-hazardous waste category. The larger amount of waste products compared with the previous year is attributable to the exceptional work of replacing three pipelines (90 km of the Tarvisio Sergnano DN 850 pipeline, 1.4 km of the Bressanone Brunico DN 300 diversion, 2.3 km of the Adria DN100 diversion), activities which involved the recovery of more than 29,500 tonnes of ferrous metal.

Waste production in Snam is linked to the maintenance and management of the plants (in 2016 of the 90.3% of waste products, 77% were recovered) and well drilling operations. There may also be waste production from reclamation works during the laying of pipelines when they pass through contained sites not owned by Snam on which they need to work.



#### WASTE RECOVERED FROM PRODUCTION ACTIVITIES (%)



#### Water management

Water procurement and disposal for Snam's operations are not very significant in environmental terms, both with regard to the quantities used and the type of disposal.

In 2016, around 4.18 million cubic metres of water were withdrawn (4 million of sea water and 0.18 million of freshwater). The collection of sea water is constant over time because it is used for cooling the auxiliary systems in the liquefied natural gas regasification plant. The collection of freshwater, mainly used in the offices, fire-fighting systems and for irrigating green areas, on the other hand, fell by 2.8% compared with 2015.

As far as water disposal is concerned, the sea water is returned to the sea untreated, while the waste water is sent to the sewage systems (68% of the total) or discharged, prior to being treated, into the soil and surface water courses (36% of the total).

Upstream storage activities produced around 5,185 cubic metres of process water (-6.7% compared with 2015). Approximately 1,934 cubic metres of this water was reinjected while the rest (approximately 3,251 cubic metres) was sent for treatment to a purification plant.





The involvement of people is an integral part of the improvement processes. Snam develops programmes for a company welfare system and for promoting a healthy work-life balance for employees

#### **PEOPLE**

The growth and development of people, protecting their health and safety in the workplace, the creation of a positive work environment which offers equal opportunities to everyone based on merit, the development of professional and managerial skills, these are all essential components of how the Company operates.

#### **Working at Snam**

Snam respects everyone's dignity and offers equal opportunities for all stages and aspects of the employment relationship, avoiding any form of discrimination that could be a result of gender, age, health, nationality, political opinions or religious persuasion.

At the end of the year, following the separation of the distribution activities, the headcount stood at 2,883 employees. 58% of employees have a technical diploma, 21% are graduates.

Snam produces "good jobs" because it offers a stable and constant employment relationship because it is a capital-intensive enterprise with a presence in many areas of Italy and because it carries out qualified and specialist activities. 93% of people have a permanent employment contract and around 500 people are employed in Southern Italy (equal to 17% of the headcount). At the end of 2016 45 people were employed on part time contracts.

130 people with disabilities work at Snam and their career path promotes inclusion and integration in company processes.

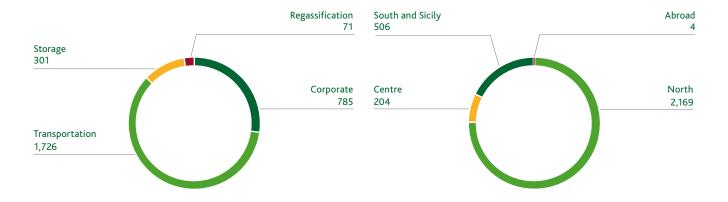
#### **SNAM PERSONNEL AT 31.12.- (NO.)**

	2014	2015	2016
	2014	2015	2016
Executives	99	99	87
Managers	447	449	421
Office workers	1,689	1,736	1,651
Manual workers	713	721	724
Total Employees	2,948	3,005	2,883

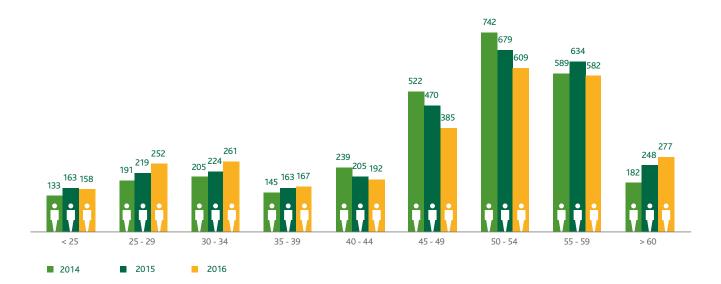
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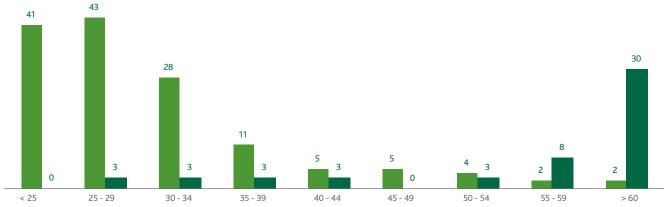




# DEMOGRAPHIC DIVERSITY: EMPLOYEES PER AGE BRACKET (NO.)



# NEW HIRES AND DEPARTURES IN 2016 BY AGE BRACKET (NO.)

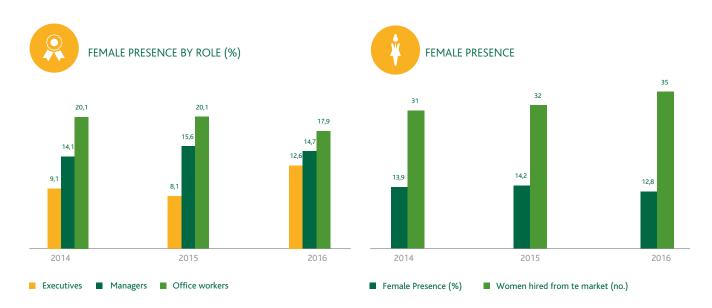


■ New Hires ■ Departures



Absenteeism rate = (hours absent/workable hours)\*100 It doesn't include the executives' absent hours

Turnover = ((incoming + departures)/average headcount employed)\*100





#### Women at Snam

- 12.8% of the headcount are women
- 25% of new hires in 2016 were women
- 12.6% of management are women
- 14.7% of managers are women
- 3 out of 4 new executives appointed in 2016 were women
- 3 out of 7 executives hired from the market in 2016 were women

The total decrease in the number of female employees (12.8% compared with 14.2% in 2015) is due to the separation of the distribution activities. The transfer of skills from Snam to Italgas also involved the transfer of 87 women who, in 2015, were working at Snam and constituted over 20% of female employees at Snam.

#### WOMEN/MEN PAY DIFFERENTIAL



#### SUPPORTING PARENTS AND PROMOTING A HEALTHY WORK-LIFE BALANCE

When on maternity leave, employees still receive company benefits and, during mandatory leave, maternity pay is 100% (rather than 80% as required by law) of remuneration for the month prior to the start of the leave.

In 2016 48 people took maternity leave (+54% compared with 2015), 41 of them were female workers. At the end of the year 28 maternity positions were filled, including 22 female employees returning to work equal to 95%, 20 positions remain open (14 in 2015).

As far as parental leave is concerned, 234 positions became vacant (including 58 female employees) and 203 were filled (including 49 female employees). At the end of the year 31 positions remained vacant (including 9 female employees). At the end of 2016 45 people were employed on part time contracts. Depending on an employee's private life, they can take hours/periods of leave from their work activities.



82% of employees took part in the 2016 Survey

Areas of enquiry of the survey: The level of engagement, circumstances that promote the involvement of people, a positive climate at work and instances of improvement for company personnel.

#### Living in a culture of change

Continuing to be a protagonist and leader in an increasingly international market context requires constantly being aware of how to enhance know-how, develop talent and build an even more dynamic and inclusive organisational culture capable of supporting company growth and renewal.

These human capital development dynamics are underpinned by the emotional bond that exists between Snam and its people. This is why the strong sense of belonging also highlighted by the results of the survey conducted in 2016, becomes the main factor at the basis of the active involvement of all employees in the continuous improvement processes, always guided by logics of entrepreneurial spirit, simplification and implementation capacity.

The portrayal of Snam that emerges from the survey is that of an organisation capable of innovation and focused on change, where employees are proud, have a sense of belonging and have confidence in the top management.

Snam promotes the participation of people in the growth of its activities through internal communication, stimulating new behaviour to contribute towards changing a corporate culture. The new "Easy" intranet portal has been set up for this purpose and has allowed a change of paradigm: from a repository for topics to a digital workplace.



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## INTERNAL COMMUNICATION TOOLS "Easy" the intranet portal

Information and awareness raising areas aimed at all Snam personnel, but also, a place for sharing knowledge, exchanging work documents, and sharing opinions through a "collective" space, designed to assist people who work in teams.

#### Main paper-based tools

The magazine "Energie", which represents Snam's corporate identity, followed the developments and changes that the company was involved in over the course of the year. The newsletter "Osservatorio Domanda Gas", which was established in 2016, with news, analysis and comments on gas demand, is available to all employees on mobile devices too.

#### **Management meetings**

Management meetings (executives and managers) were held during the year aimed at strengthening the team spirit. The meetings created schedule opportunities to reflect on the most significant moments in the activities of the business in order to ensure adequate information and achieve a constant sense of involvement and responsibility with regard to company strategies and objectives.

#### Development of skills and professionalism

The performance management systems and policies guide each contractor towards reaching precise corporate goals with personal results evaluated in a transparent way to make everyone responsible for their own professional development. The current managerial skills model based on the concept of popular leadership strongly integrated with the performance evaluation system directs all individual development paths to support the achievement of the 2017-2021 strategic plan.

In this context training plays a fundamental role in supporting management and all company personnel in the development of managerial abilities, technical expertise, know-how and innovation.

#### LEADERSHIP DEVELOPMENT PROGRAMME

The first two-year programme for the development of managerial skills and the ability to work in international teams concluded in 2016. Over 100 people were involved chosen from high flyers (highly-qualified young employees, with great potential and motivation for growth), top-performing executives and managers with potential.

The executives and managers with a high potential were part of the process where the objective was to expand their vision of business through the development of companies in Europe. Some of the main themes dealt with included: Communicating and negotiating; the economic-financial dimension; the business market and global customers. In addition to classroom-based

learning, there were regular meetings and project work, with the results reported to the company top management.

The high flyers worked on economic issues and communication techniques. The people who took part in the Leadership Development Programme made significant progress in terms of development. Specifically, more than 50% of the high flyers achieved vertical growth in their post and 13% were promoted. Around 50% of the managers achieved vertical or transverse movement in different roles.

#### **PERSONNEL TRAINING**

	2014	2015	2016
Training hours (no.)	82,458	87,620	82,184
Participants (no)	8,738	10,203	10,396
Average training hours per employee (no.)	28.0	29.2	28.5
Average training hours delivered to men (no.)	29.1	30.9	30.2
Average training hours delivered to women (no.)	20.9	18.4	17.0
Involvement (%)	98.3	96.1	97.5

#### **KEY TRAINING INITIATIVES**

Description	Hours provided (no)	Participants (no)	Recipients
Managerial training	8,674	833	High Flyers, Executives, Managers
Training dedicated to knowledge of technical systems	43,281	4,103	Technical and operational office and manual workers
Foreign languages	8,300	380	Executives, managers, office workers and technicians
Health, Safety, Environment and Quality	19,288	3,484	Executives, managers, office workers and technicians
Ethical Code, Model 231 and Anti-corruption	2,641	1,596	Executives, managers, office workers and technicians

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All work positions in Snam are subjected to the analytical and overall evaluation of the factors of Complexity, Responsibility, Experience and Autonomy (C.R.E.A.). In 2016 278 CREA evaluations were approved.

#### Remuneration policies and systems

At Snam merit is at the heart of all management actions and it is rewarded both in terms of professional development and career opportunities. At the same time, it is the benchmark so that the management of people responds to the criteria of fairness and sustainability.

The remuneration systems are periodically updated based on comparisons with the reference markets as well as taking into consideration information from external stakeholders. Specifically, they seek to ensure recognition of results achieved, the quality of professional contributions made and people's potential for development. In 2016 too, the verification and optimisation of competitive positioning and the fairness of remuneration practices for managerial and professional resources was completed.

#### INCENTIVE SCHEMES FOR DIFFERENT BANDS OF COMPANY PERSONNEL

#### Executives

Alongside any annual adjustments of fixed remuneration based on merit or promotion/added responsibility, Snam operates a variable remuneration system designed to promote professional contribution in the short-term, through the allocation of an annual monetary incentive (IMA), and in the medium-/long-term, through the allocation of a deferred monetary incentive (IMD) and a long-term monetary incentive (IMLT).

There are of claw-back mechanisms aimed at the recovery of the variable part of pay which is not due because it is received on the basis of targets reached following wilful misconduct or grossly negligent conduct or on the basis of figures that subsequently prove to be manifestly incorrect; The development and transparency of the remuneration system are guaranteed by the Total Reward Statement, the information package on the composition of the individual remuneration.

#### Non-management personnel

Snam adopts a short-term variable incentive system aimed at rewarding the best performances and young resources with potential for development. It also provides a deferred monetary incentive dedicated to managers with high potential, with the objective of supporting motivation and performance in the medium-/long-term.

In addition, all Group companies have a "Performance-Related Pay" structure, established by the collective agreement, based on the performance of corporate profitability and productivity parameters, measured in relation to annual targets agreed by the company and union representatives.

In 2016, the use of the new target allocation and evaluation system was confirmed, Performance Management, which also contains targets on behavioural aspects and sustainability issues, including those relating to preventing accidents in the workplace. All the evaluation processes were formalised and involve dialogue and feedback which provides the opportunity for an exchange and communication between the manager and contractor and also to collect information that is useful for defining new measures for personnel development.

#### SUSTAINABILITY TARGETS ASSIGNED

		2014		2015		2016
	Assigned (no.)	Reached (%)	Assigned (no.)	Reached (%)	Assigned (no.)	Reached (%)
Executives	70	100	69	99	67	91
Managers	371	100	295	99	313	93
Other personnel	268	100	238	100	88*	100

<sup>\*</sup> The fall in the number of employees to which a sustainability target has been assigned is linked to a revision, currently in progress, of the scope of performance and methods for assigning/aggregating the targets.



In 2016, the percentage of accidents involving contractor improved further compared with the already low figures achieved last year.

Specifically, the frequency index fell by 34% and the severity index fell by 29%, results which confirm the validity of the involvement, awareness raising and monitoring measures implemented over the years.

#### **Accident prevention**

Snam is constantly committed to developing and promoting the protection of health and safety in the workplace. Accident prevention, the main health and safety objective, is carried out through the adoption of targeted actions aimed at eliminating or reducing risk factors inherent in employees' work.

All of Snam's corporate activities are governed through certified management systems in accordance with standard OHSAS 18001 (occupational health and safety). Research and the adoption of good corporate practices are gradually being promoted, not only under the scope of the company, but also involving suppliers in order to extend and improve collaboration with a view to achieving better performances. The measures adopted have made it possible to reduce accidents to both company personnel and contractor personnel.

In 2016, there were a total of 9 accidents (11 in 2015), 4 of which involved employees (3 in 2015) and 5 suppliers/contractors (8 in 2015), none of them fatal.

#### **ACCIDENTS AT WORK (NO)**

	2014	2015	2016
Total employee accidents (*)	9	3	4
Total contract worker accidents	15	8	5

<sup>(\*)</sup> The figure for 2015 was restated to take into account an accident which took place in the next year declassified in 2016.

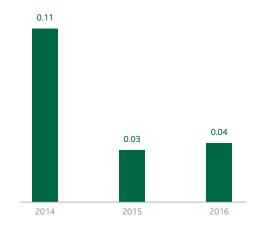
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#### EMPLOYEE ACCIDENTS AT WORK - FREQUENCY INDEX



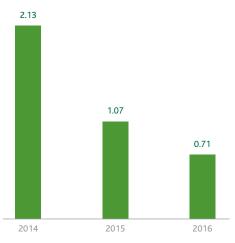
number of non-commuting accidents with incapacity of at least one day, per million hours worked

#### **EMPLOYEE ACCIDENTS AT WORK - SEVERITY INDEX**



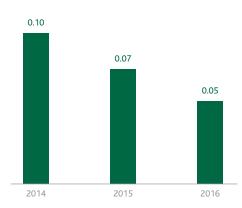
number of working days lost in relation to non-commuting accidents with incapacity of at least one day, per thousand hours worked. Date do not include fatal accidents.

#### ACCIDENTS AT WORK – CONTRACTOR FREQUENCY INDEX



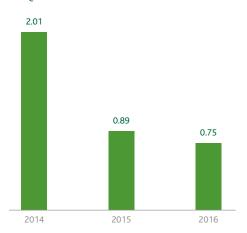
number of non-commuting accidents with incapacity of at least one day, per million hours worked

#### ACCIDENTS AT WORK - CONTRACTOR SEVERITY INDEX



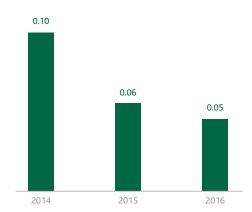
number of working days lost in relation to non-commuting accidents with incapacity of at least one day, per thousand hours worked. Date do not include fatal accidents.

### EMPLOYEE AND CONTRACTOR ACCIDENTS AT WORK - FREQUENCY INDEX



number of non-commuting accidents with incapacity of at least one day, per million hours worked

## EMPLOYEE AND CONTRACTOR ACCIDENTS AT WORK - SEVERITY INDEX



number of working days lost in relation to non-commuting accidents with incapacity of at least one day, per thousand hours worked. Date do not include fatal accidents.

#### A "ZERO ACCIDENTS" YEAR (\*)

Activities	Sub-Group
Transportation	North District, Central, Operations (San Donato headquarters), Sicily District, Centre-West District, Centre-East District, South-West District
Regasification	On call group
Storage	Fiume Treste Operations Hub, Crema (headquarters), Ripalta-Sergnano Operations Hub, Cortemaggiore-Bordolano Operations Hub, Brugherio-Settala Operations Hub

<sup>(\*)</sup> Sub-groups that achieved 365 days without accidents in 2016 Project not in force at Snam Corporate and Gasroule.



The consumption of alcoholic beverages at work is strictly prohibited by Snam. In 2016, 74 random breathalyser tests were carried out on employees who perform specific tasks.

#### **Health protection**

Personnel exposed to specific risk factors are subject to regular health checks by the appropriate medical staff. Health monitoring makes it possible to evaluate the suitability of workers to their specific task, thereby protecting their health with regard to professional risks and the work environment.

Environmental surveys are conducted periodically, aimed at monitoring micro-climate, biological and physical aspects of workplaces and compliance with workplace hygiene regulations.

Lastly, Snam also promotes various health improvement initiatives directed at employees through its corporate welfare system.

#### **HEALTH MONITORING (NO.)**

	2014	2015	2016
Medical visits	1,210	1,270	1,561
Periodic medical visits	1,061	991	1,337
Diagnostic examinations	1,231	1,828	2,252
Environmental surveys	386	203	172
Occupational illnesses reported	0	0	0

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#### **EMPLOYEES SUBJECT TO REGULAR HEALTH MONITORING (NO.)**

	2014	2015	2016
Total number of employees exposed	2,015	2,152	2,105
Employees exposed for VDT	1,756	1,908	1,864
Employees exposed for emergency cover	444	461	625
Employees exposed to chemical agents	29	21	28
Employees exposed through moving loads manually	88	101	101
Employees exposed through night-time work	88	77	100
Employees exposed to noise	25	17	24
Employees exposed for other reasons	328	135	108



The new welfare system was developed along three guidelines:

- introducing new initiatives aimed at emerging needs;
- defining interventions based on the requirements of the various bands of company personnel;
- making people aware, informed and involved.

#### Corporate welfare and a healthy work/life balance

Snam's corporate welfare system is constantly evolving to get increasingly closer to the real needs of individual people. In 2016, in-depth investigations into company personnel and the services provided were completed, by listening to employees through questionnaires, focus groups and surveys which led to a new welfare system being defined.

SnamMY, the new welfare portal, accessible from anywhere using any device, was launched during the year in order to improve communication between the company and its people.



Welfare		2016 activities
Family	Summer visits and study periods	175 children of employees attended (Cesenatico, Piani di Luzza and Malta)
	Creches	Allowance for employees who make use of them
	School	Subsidies for buying text books (for 74 employees) 15 scholarships awarded and loans for educational expenses
	Family S.O.S.	Professional counselling (42 employees took advantage of this service)
	Motherhood, adoption and foster care	Guidance on parents' rights and the company's position on parenthood
Health and	Cancer prevention	Prevention protocol, Women's protocol, Men's protocol (457 visits)
well-being	Check-ups	Health checks for managerial personnel
	Sports centres	Arrangements for physical activities at favourable terms
	Food	High-quality company restaurant and take-away service for private use
	Workplace Health Programme:	Member of the health programme launched by the Lombardy Region
	Specialist medical services	Arrangement with the Monzino Cardiology Centre for visits for employees and their families
Time for yourself	Benefits	Flexible working hours Tax and legal help
Savings and relations	Micro-credit	Subsidised rate loan (246 employees took advantage of this borrowing for a total of approximately €1 million).
<del>Co</del>	Mobility	Purchase of subsidised travel on public transport (215 bought). Shuttle service to San Donato Milanese
	Arrangements	Insurance policies, bank credit cards, car hire, purchase of branded goods, booking of holidays, at favourable terms.



The SMART WORKING experiment continued in 2016 and will conclude in 2017. The extension to all Snam companies will be evaluated from the analysis of the results.

#### Industrial relations

In 2016 relations with trade unions nationally and locally featured numerous meetings dedicated to analysing business development projects and sharing the effects on company personnel of the new organisational arrangements. Dedicated agreements were signed for the transportation and storage businesses with the Unitary Representation Bodies for regulating the 24-hour shift arrangements required by the new dispatching regime even during strikes in order to safeguard the continuity of the "system" and, at the same time, guarantee the exercising of the right to strike.

As far as the transportation business segment is concerned, the work of the SMART GAS project technical committee, made up in equal measure of company and union representatives, continued with the aim of analysing the technical aspects of the project and solving any problems.

In the regasification sector, meetings were held with the Trades Union Organisations, nationally and locally, aimed at discussing and comparing issues involving the development of the business.

The negotiations, consistent with the provisions of the Industrial Relations Protocol of 17 October 2013, aimed at strengthening Level Two negotiations, led to the definition between the parties of the Performance-Related Pay productivity and profitability indicators for 2016 for all Snam companies. Negotiations conducted during the year for the renewal of the national agreement reached a positive conclusion in January 2017.

#### **EMPLOYEE DISPUTES (NO.)**

	2014	2015	2016
Total disputes pending at 31.12	11	10	9
begun in the reference year	11	4	10
ended in the reference year	8	5	13

<sup>4</sup> disputes begun in 2016 refers to JShared liability in contracts

#### SMART WORKING AND ENVIRONMENTAL BENEFITS

The pilot stage of the Smart Working project involves the provision of the occupational activity, even outside of the workplace, for one day per week. The survey conducted on the 150 people involved produced the following results:

- cars and motorbikes are the means of transport most used to reach the place
  of work on smart working days (around 60%) followed by public transport,
  namely buses, trains, the underground (36%), while people who go to the
  office by cycling or walking were the minority (4%);
- as far as the use of fuel is concerned, oil is the most used fuel (50%), even if the figure for petrol, used for cars and motorbikes is significant (43%), while the use of dual-fuel (petrol/LPG and petrol/methane) stands at 7%.

The calculation of carbon dioxide emissions prevented only took into consideration employees' vehicles and did not consider public transport because those vehicles would have completed their journeys whether or not the users involved in the initiative had been present.

The experiment showed that employees' vehicles avoided travelling a distance of approximately 125,000 km thereby preventing the emission into the atmosphere of approximately 20,000 kg of CO<sub>2</sub>.



#### **MARKET**

Snam promotes constructive relations with regulators and institutions and works on developing services directed at the market, focusing on their quality to satisfy the requirements of shippers, traders and end users, and is constantly seeking to evolve.

#### The importance of regulation nationally

In the Snam business sustainable development model, the quality and orderliness of relations between the company and the AEEGSI play a vital role. Tariff regulation, specifically, has, over time, become an essential condition both for channelling investments in the network and for developing infrastructure capital from an economic aspect. To date, 95.5% of Snam revenues are actually from regulated activities.

Snam interacts with the AEEGSI in the following ways:

- responds, directly or through trade associations, to the public consultations
  that the authority carries out with regard to various sector activities,
  in preparation for the definition of new standards or the revision
  of existing standards;
- participates in the round tables established by the authority, always with regard to the development of the regulatory framework;
- processes the amendments of the Transport Network, Storage and Regasification Codes, then submitted to the authority for approval;
- takes part in collecting data and surveys conducted during the year in order to evaluate the status of the sector or the individual services and periodically sends the information required to fulfil information obligations



The tariff criteria are usually defined every four years and guarantee the covering of operating costs, amortisation and depreciation and fair remuneration for the net invested capital.

There are also differentiated incentives depending on the type of investments made during the course of each regulatory period.

Every year each Snam company formulates a tariff proposal which is submitted to the authority for approval.

#### Snam's contribution to integration at a European level

The AEEGSI and Snam also work at the European level, respectively, in the Agency for the Cooperation of Energy Regulators (ACER) and the European Network of Transmission System Operators for Gas (ENTSOG).

These two bodies have the task of respectively developing European guidelines and codes aimed at contributing to the objective of creating a single natural gas market.

The following progress was made in 2016:

- implementation of EU rules on the allocation of capacity, balancing and interoperability, which came into force between 2015 and 2016.
- definition of the European codes on tariffs and changes to the CAM code on the sale of newly created transport capacity, for which the legislative approval process was concluded in 2016 and which is expected to come into force in 2017.

- preparation of the European Ten-Year Network Development Plan
   (TYNDP) published in December.
- drafting of two regional investment plans respectively involving the southnorth connecting route between Italy and Northern European markets and South-East Europe, involving the new natural gas procurement routes from the Caspian Sea region. The publication of the third edition of the reports is expected in early 2017.
- preparation of around 20 documents including responses to public consultations and association positions, in relation to documents and opinions produced mainly by the European Commission and ACER. The most important issues for consultation involved EU and domestic market energy policy developments, with special reference to the role of gas in the future energy mix and that of infrastructures in guaranteeing benefits in terms of the security of procurement, competitiveness and sustainability.

#### **RELATIONS WITH THE AEEGSI**

Description	Transportation	Storage	Regasification
Responses to consultation documents (no.) (*)	10	2	1
Responses to consultations/observations through associations (no.) *	14	4	1
Tariff proposals (no.)	5	3	1
Data collections (no.)	112	89	25
Investigations (no.) **	1	1	0
Proposal to amend contractual documents and codes (no.) ***	12	4	3
Proposal to amend approved contractual documents and codes (no.)	12	1	0

<sup>\*</sup> Responses to consultations (the Authority, Ministry of Economic Development and Energy Market Operator) through trade associations.

<sup>\*\*</sup> Information sent to the Authority in 2016 with reference to investigations in the sector. Includes fact-finding investigations.

<sup>\*\*\*</sup> Also includes proposals still being evaluated by the Authority, including contractual documents and agreements with operators in the context of regulated services.



The transportation capacity made available at the network entry points (daily average offered) is more than 370 million cubic metres.

With the Bordolano field gradually coming into operation, the storage capacity has increased to 12.0 billion cubic metres. Storage capacity allocated through auctions via the capacity portal now make up 98% of capacities offered and allocated.

In 2016, a new integrated service was offered as an experiment which by an auction process links the corresponding storage capacity to every regasification slot.

The service will be offered again in 2017.

The new balancing system implemented through EU Regulation 312/2014 came into force on 1 October 2016.

PRISMA is the international project involving 37 European gas transmission operators from 16 countries. Its goal is to encourage harmonised service delivery and access rules and facilitate the creation of a single European natural gas market by offering transportation capacity through a single shared digital platform.

#### The development of services to facilitate the market

Thanks to the development of Snam services over the last ten years the Italian gas market has seen constant growth in transportation operators going from 30 in 2003 to almost 200. Additionally, 45 connection contracts were signed in 2016 to create new delivery/redelivery points (including 2 for the injection of biomethane) or upgrade existing ones.

Through the new balancing system, operational since October 2016 managed by the PRISMA platform, operators can now make gas exchanges and transport capacity transactions on an intra-day, daily, monthly, quarterly and annual basis, for a maximum of 15 years.

To encourage even greater flexibility of the system, Snam was willing to allow its customers continuous renomination cycles 24 hours a day, based on which operators can reformulate their transportation programmes up to 35 times for the same gas day.

Snam buys and sells gas through the new regime to guarantee the balancing of each operator. At the end of the day it provides the gas at a premium to whoever sold more than they brought to the system or, conversely, if the operator introduced more gas than its customers consumed, it will purchase the excess quantity, at a discount.







Manages the commercial processes of daily planning, allocation and provisional and definitive balances.

#### Sampei Portal

Manages storage contracts in terms of the management of gas stocks and movements.

#### Myg@sview Portal

Dashboard which can be customised by transportation users and traders with a set of functions that allows rapid access to transportation and balancing services.

#### ServiRe Portal

Managements the requests for opening new Redelivery Points and for closing/reopening existing ones.

#### **Stogit Capacity Portal**

Manages the storage capacity contract-based process.

In order to manage relations with operators, Snam has developed IT systems and web portals that now represent a unique feature of the company that is regularly upgraded.

#### QUALITY SUPPLIED (COMPLIANCE WITH NETWORK CODES)

	2014	2015	2016
Transportation			
Active customers (shippers) (no.)	134	139	136
New connection agreements for delivery/redelivery points (no.)	45	65	45
Contracted transportation capacity/Available transportation capacity (foreign entry/interconnection points) (%)	85	86	72%
Compliance with deadlines for issuing connection offers (%)	100	100	100
Compliance with deadlines for performing services subject to specific commercial quality standards (%)	100	100	100
Interruptions carried out with sufficient advance notice (%)	95	92	98
Regasification			
Compliance with maximum time for the acceptance of monthly programming proposals for deliveries (%)	100	n.r(*)	100
Compliance with the maximum period of interruption/reduction in capacity at the terminal due to maintenance works (%)	100	100	100
Storage			
Active customers (shippers) (no.)	107	118	9
Contractual storage capacity/Available storage capacity (%)	100	100	100
Compliance with deadlines for performing services subject to specific commercial quality standards (%)	100	100	100
Connection flow lines subject to supervision (%)	76	76	100
Total capacity not made available following interruptions/reductions to the service (%)	0	0	(

<sup>\*</sup> n.r.=no request received

#### Shipper's Day in transportation

During the event dedicated to shippers and traders, the main challenges that the market is facing following the increase harmonisation of European rules, with special reference to those of access and commercial balancing were illustrated. Among the topics discussed were: the development of the commercial offering over the last year; the new market scenarios for biomethane; the latest development in the upgrading of gas metering.

170 people attended the event representing around 80 companies.

#### Shipper's Meeting in storage

During the shipper meeting with customers, there was the opportunity of visiting the new Bordolano storage facility. Meetings with customers will continue in future years, providing an opportunity to discuss business matters and compare notes.

#### **Customer satisfaction**

Snam constantly measures the quality perceived by customers through customer satisfaction surveys conducted with transportation and storage customers. The survey is conducted on the web, thereby avoiding having to manage paper documents.

The results for 2016 confirm a positive general trend in both business segments.



#### RATING ON THE CUSTOMER SATISFACTION INITIATIVE (%)



#### CUSTOMER SATISFACTION WITH TRANSPORTATION

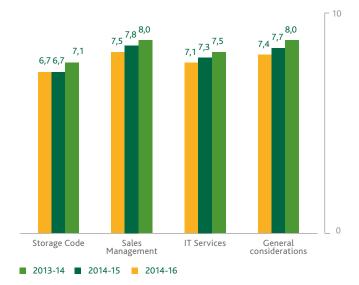
#### **Objectives**

- It evaluates the quality of services offered for the transportation and balancing sectors and the new commercial features introduced in the year also with regard to the results of previous surveys
- It identifies further possible developments of the commercial services offered

#### The numbers of the 2016 survey

- All the shippers and traders who Snam worked together with in the thermal year 2015/2016 were involved
- 135 operators responded to the questionnaire, a participation rate of 87%
- 80% of respondents expressed great satisfaction with the stakeholder engagement activities promoted by the company to improve the quality of services offered and consolidate collaboration

#### AVERAGE SCORE BY THERMAL YEAR (NO.)



#### CUSTOMER SATISFACTION WITH STORAGE

#### **Objectives**

- It evaluates the clarity of the code, the availability and efficiency of information services and commercial management
- It also collects suggestions from end users to improve the areas mapped in the questionnaire defining any measures to be taken

#### The numbers of the 2016 survey

- 73 customers who moved gas in the thermal year 2015/16 were involved
- 57 responses were received, equal to 78%
   (68% in 2015). The evaluations expressed highlight a substantial improvement in the service offered
- Meetings with customers continued, especially with those that purchases storage capacity for the first time in 2016. Among these, traders who joined more traditional shippers increased and the major Italian bank featured importantly



The Company has been committed for some time to mutually strengthening the culture and good practices surrounding transparency, appropriate relations, workplace safety and protecting the environment. Snam is committed to adopting responsible and sustainable purchase criteria and to optimising the related management processes.

#### THE SUPPLY CHAIN

Snam operates in a transparent manner and in full compliance with the spirit of free competition seeking to involve suppliers in reaching long-lasting high performance levels with a view to mutual growth and creation of value.

#### The sustainable management model for suppliers

By revisiting the organisational model the Chief Corporate Services Officer was put in charge of the supply chain function in order to guarantee greater coordination of procurement activities within Snam.

The extended application of strategic sourcing methods will make it possible to achieve cost savings in line with business activities and to maintain an adequate pool of suppliers to manage tenders and planned procurement requirements.

Snam receives around 2,000 applications from potential suppliers every year. All of those who intend to supply goods, works and services to Snam must not only satisfy the requirements of quality, price and reliability, but they must also share the desire for the innovation of processes and the commitment to reduce impacts and risks of an environmental and corporate nature inherent in the chain. This happens through a rigorous and thorough qualification process, the only way in which a supplier candidate comes into contact with Snam to let them know current capacities and future potential ones.

Many elements are subject to evaluation, starting with technical and management capacities to economic and financial reliability, from the ethical profile, including references, to commitment to fighting corruption, safeguarding and protecting the environment, promoting healthy and secure working conditions and the absence of forced labour and the economic exploitation of minors.

#### Mapping of the supply chain

To detect actual and potential problems in the environmental, social and economic areas.

#### Cooperation

To work together with international organisations in defining the most appropriate standards and good practices for sustainable performance and to share the information with the supply chain

#### Development of skills and expertise

To share best practices via the portal and to provide incentives for change at a company culture level



#### Striving to improve performance

To verify and ensure the improvements achieved and to develop dedicated improvement programmes and clearly inform suppliers about them

#### **Communication of expectations**

To reveal Snam's values and culture of sustaintability and standardise the sustainable modus operandi required

### Verification of the performance of suppliers

To progressively improve the performance of suppliers, identify the areas at risk and constructively analyse the results of their performance

An increasingly well-established relationship						
Quality	Not only requirements of quality, price and reliability, but also commitment to process innovation					
Safety	Dissemination of the culture of prevention and attention to the health and safety of workers					
Values	Transmission and sharing of values: legality, correctness, transparency and compliance with free competition					
Transparency	Correctness, traceability and transparency in commercial relations and in exercising activities					
Continuous improvement	Striving towards continuous improvement, mutual growth and creation of shared value					
Sustainability	Reduction of impacts and risks of an environmental and social nature inherent in the supply chain					

#### **SUPPLIERS ANALYSED BY SUSTAINABILITY ISSUES**

		N	lumber	١	Vork prac	ctices (2)	Enviro	nmental	criteria		Human	rights <sup>(3)</sup>
Goods	2014	2015	2016	2014	2015	2016	2014	2015	2016	2014	2015	2016
Qualified suppliers	1,443	850	754	37%	43%	42%	37%	43%	42%	100%	100%	100%
of which criticality classes A and B	204	144	129	100%	100%	100%	100%	100%	100%	100%	100%	100%
Suppliers qualified in the year	129	56	54	25%	60%	50%	25%	60%	50%	100%	100%	100%
of which criticality classes A and B	17	10	7	100%	100%	100%	100%	100%	100%	100%	100%	100%
Works												
Qualified suppliers	403	353	310	70%	70%	75%	70%	70%	75%	100%	100%	100%
of which criticality classes A and B	82	72	83	100%	100%	100%	100%	100%	100%	100%	100%	100%
Suppliers qualified in the year	101	33	30	74%	82%	80%	74%	82%	80%	100%	100%	100%
of which criticality classes A and B	42	7	9	100%	100%	100%	100%	100%	100%	100%	100%	100%
Services												
Qualified suppliers	2,271	1,728	1,631	38%	33%	34%	38%	33%	34%	100%	100%	100%
of which criticality classes A and B	153	124	133	100%	100%	100%	100%	100%	100%	100%	100%	100%
Suppliers qualified in the year	389	127	130	29%	41%	36%	29%	41%	36%	100%	100%	100%
of which criticality classes A and B	32	15	10	100%	100%	100%	100%	100%	100%	100%	100%	100%

<sup>(1)</sup> A supplier may be in possession of several qualifications on account of the different nature of the products
(2) Aspects relating to health and safety
(3) Ethical aspects (regularity of contributions/DURC (single insurance contribution payment certificate), Law 231, child labour, forced labour, etc.).

#### **KEY PERFORMANCE INDICATORS (KPI)**

Description of KPI	KPI data	Pre-set target	Target reached in 2016	Sector	Activity status
Number of works suppliers (criticality A and B) with OHSAS 18001 certification	2014	Reach a value of 100% in 2016	100	Snam Group	

<sup>■</sup> Target reached

#### **Digitalised Vendor Management System**

Since May all procedures for registering, renewing or extending supplier qualifications have been carried out exclusively online, through a dedicated IT platform. The qualification and performance evaluation process of those working for Snam has been digitalised, with a large number of suppliers (more than 2,200) divided into approximately 650 product categories, which feature multinationals and independent contractors, small and medium enterprises and cooperatives. A system that has brought considerable advantages for the company and its suppliers.

- Efficiency: the process is guided and the system only requires the updating of documents that have expired and obsolete information;
- Security: when a document is uploaded online, it is automatically archived;
- Transparency: the progress of the paperwork is always visible online;
- Service: an integrated messaging service makes it possible to remain in contact with the Company.

#### Together with suppliers for a culture of sustainability

In 2016, as well Snam met with its suppliers with the aim of creating a shared culture on fundamental issues, such as innovation, sustainability and business ethics.

During the meeting, in which more than 450 people took part, a great deal of attention was paid to the value of collaboration between the company and suppliers as a factor for development, the strategic importance of the sustainable supply chain, the theme of transparency and the fight against corruption.

Specific discussions then touched on more technical

Specific discussions then touched on more technical subjects, such as: the new procurement code; the environment and innovation (the best practices of foreign investees); innovative technologies in the oil and gas industry; the development of technologies to promote alternative uses of natural gas.

The event was recognised as a training credit by the Milan Order of Engineers.

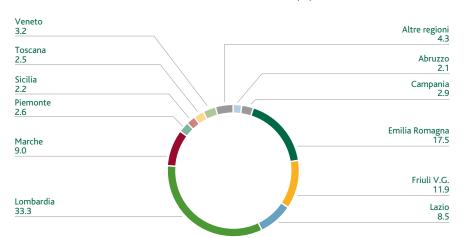
#### **Procurement numbers**

In 2016 Snam directly provided work for around 660 companies (687 in 2015), 388 of which belong to the small-medium business sector (SME), concluding over 1,000 procurement contacts (in line with 2015), worth a total of approximately €1.36 billion (+€1.27 billion in 2015) including €1.3 billion in Italy (equal to 95.6%). Among the goods purchased the most important material is steel (piping, connectors, etc.) which, in 2016, amounted to a supply of approximately 15,200 tonnes.

Procurement, based on the head offices of suppliers, is distributed throughout all regions of Italy, in line with the Company's roots in the entire country.

At 31 December, the vendor list included 2,245 qualified suppliers, and around 400 suppliers were in the process of being renewed or obtaining new qualifications. The supply chain was checked and monitored with audits during the qualification phase of critical product classes, 634 feedback reports collected on services rendered by 185 suppliers. Additionally, 1,502 suppliers and subcontractors were checked with regard to regularity of contributions, through 3,089 inspections which led to 87 irregularities intercepted (2.8%). There were 40 provisions issued for non-compliance, including warnings, suspensions and withdrawal of qualification.

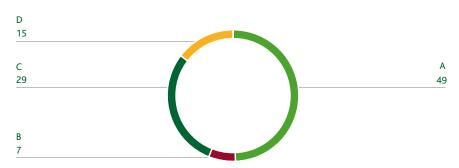
#### GEOGRAPHICAL BREAKDOWN PROCUREMENT IN ITALY (%)



The geographical distibution refers to suppliers' administrative headquarters

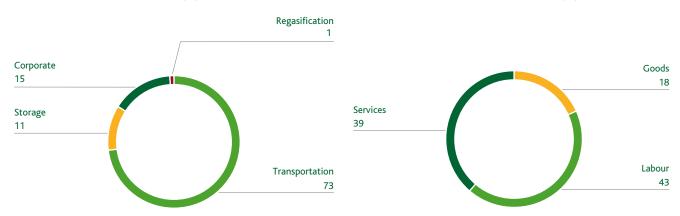
The product sectors (goods, services and works) are classified on four levels (A, B, C, D) in terms of criticality based on technological complexity and impact on Snam's performance The classes of criticality A and B represent the most critical levels.

#### BREAKDOWN OF PROCUREMENT BY CRITICAL CLASS (%)



#### BREAKDOWN OF PROCUREMENT (%)

#### PROCUREMENT BY PRODUCT CATEGORY (%)



#### Reputational checks on suppliers

In 2016, around 1,200 reputational checks were carried out which involved suppliers, sub-contractors and participants in tenders.

The objects of the checks were: qualification processes (514), sub-contractor authorisations (495), participation in tenders (97) and allocation/revision of contracts (23). Following the checks conducted 38 provisions were adopted: 22 rejections of sub-contractor authorisations; 5 qualification suspensions; 2 rejections of the qualification authorisation; 2 qualification withdrawals; 7 rejections of the tender authorisation.

#### REPUTATIONAL CHECK BREAKDOWN BY ACTIVITY (%)

#### MEASURES ADOPTED (NO.)



#### **DISPUTES WITH SUPPLIERS (NO.)**

	2014	2015	2016
Total disputes pending at 31.12	5	9	18
Disputes begun in the year	2	4	13
Disputes ended in the year	3	2	4

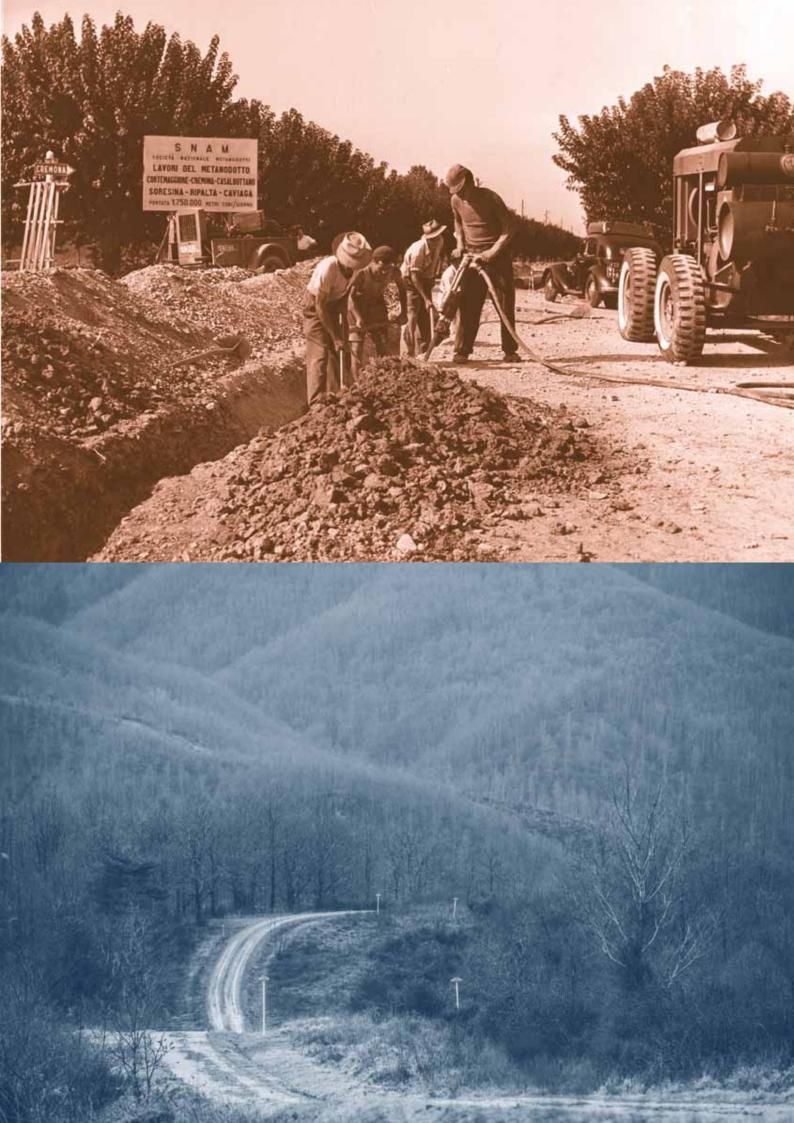
The disputes are mainly a result of issues related to contractual management (60%) and tender procedures (40%).

#### THE DEVELOPMENT OF THE SUPPLIER PORTAL

Activated in 2013, the Portal is the most important way of implementing Snam's procurement policy and of making an additional contribution in terms of transparent, traceable and complete information available to current and potential suppliers.

It contains information, details, best practices and documents updated with the processes and procedures regulating qualification and procurement activities. At the end of 2016 there were more than 1,800 suppliers registered on the portal (+20% compared with 2015), each of which has information at its disposal, in the dedicated reserved area, on the commodity sectors for which it is qualified, opened contracts, performance in terms of occupational safety, administrative elements and paperwork.

Over the course of the year there were more than 102,000 visitors (up around 15% compared with 2015) who accessed the Portal over 298,000 times (up 27% compared with 2015); more than 930,000 pages were read.



### **Annex**

### DATA AND PERFORMANCE INDICATORS

#### **KEY OPERATING FIGURES**

	2014	2015	2016
Natural gas transportation			
Gas injected into the network (109 m3)	62.25	67.25	70.63
Transportation network (km)	32,339	32,534	32,508
Average journey of gas in Italian transportation network (km)	404	419	582
Gas compression stations (no.)	11	11	11
Installed power in the gas compression stations (MW)	894	877	922
Liquefied Natural Gas regasification			
Liquefied natural gas injected into the network (109 m3)	0.01	0.03	0.21
LNG tanker loads (number)	1	1	1
Natural gas storage			
Gas injected into storage (109 m3)	8.13	9.84	9.97
Gas delivered from storage (109 m3)	7.57	9.74	10.03
Operational concessions (no.)	8	9	9

### **KEY FINANCIAL FIGURES (\*)**

	2014	2015	2016
Financial and economic data			
Total revenue (€ millions)	2,578	2,627	2,560
Adjusted EBIT (€ millions)	1,496	1,481	1,336
Adjusted net profit - continuing operations (€ millions)	723	863	826
Adjusted net profit (€ millions)	2,219	2,344	1,016
Net profit - continuing operations (€ millions)	692	796	591
Net profit (€ millions)	2,911	3,140	861
Technical investments (€ millions)	1,313	1,272	1,272
- Continuing operations (€ millions)	954	879	879
- Discontinued operations (€ millions)	359	393	393
Net capital invested at 31 December (€ millions)	20,824	21,365	17,553
Shareholders' equity at 31 December (€ millions)	7,171	7,585	6,497
Net financial debt at 31 December (€ millions)	13,652	13,779	11,056
Free Cash Flow (€ millions)	297	771	1,707
Added value produced (€ millions)	2,445	2,429	2,518
Added value distributed (€ millions)	1,907	1,831	1,917
Snam stock			
Number of shares in share capital (millions)	3,500.6	3,500.6	3,500.60
Number of shares outstanding on 31 December (millions)	3,499.5	3,499.5	3,470.70
Average number of shares outstanding during the year (millions)	3,384.7	3,499.5	3,496.80
Year-end official share price (€)	4.11	4.85	3.922
Average official share price during the period (€)	4.23	4.51	4.101
Market capitalisation (€ millions)	14,383	16,973	13,612
Dividends paid in the period (€ millions)	507	875	875

<sup>(\*)</sup> For comments on the economic-financial results, see the annual report

#### MAIN DATA AND INDICATORS ON EMPLOYEES

	2014	2015	2016
Total employees (no.)	2,948	3,005	2,883
Average headcount (no.)	3,019	2,984	3,026
Average age of employees (years)	46.8	46.6	46.1
Average length of service (years)	21.5	21.7	21.1
Employees by business segment	21.5	L 1.7	21.1
Corporate (no.)	706	715	785
Transportation (no.)	1,874	1,918	1,726
Storage (no.)	291	299	301
Regasification (no.)	77	73	71
Employees by grade		, 5	
Executives (no.)	99	99	87
Managers (no.)	447	449	421
Administrative staff (no.)	1,689	1,736	1,651
Manual workers (no.)	713	721	724
Employees by type of contract			
Permanent contract (no.)	2,713	2,779	2,631
Apprenticeship or internship contract (no.)	178	171	206
Fixed-term contract (no.)	0	1	1
Part-time contract (no.)	57	54	45
Employees by geographical area	J.	J .	
North (no.)	2,194	2,242	2,169
Central (no.)	226	216	204
South and Sicily (no.)	527	544	506
Abroad (no.)	1	3	4
Employees by gender			<u> </u>
Men (no.)	2,537	2,578	2,514
Women (no.)	411	427	369
Remuneration differential - women/men (executive grade)	0.90	0.93	1.02
Remuneration differential - women/men (management grade)	0.95	0.96	0.96
Remuneration differential - women/men (administrative staff grade)	0.88	0.88	0.89
Entries and Departures			
Hired from the market (no.)	152	162	141
of which university graduates (no.)	74	75	73
of which high school graduates (no.)	78	86	66
of which women (no.)	31	32	35
of which men (no.)	121	130	106
Other new employees (non-consolidated companies, acquisitions, etc.)	6	4	36
Percentage of university graduates hired (%)	49	46	52
Departures in the year (no.)	223	68	53
Turnover (%)	12.6	7.7	6.4
Absenteeism rate (%)	4.2	4.3	4.6
Training			
Training hours (no.)	82,458	87,620	82,184
Participants (no)	8,738	10,203	10,396
Average training hours per employee (no.)	28.0	29.2	28.5
Executive training hours (no.)	4,442	2,744	2,940
Management training hours (no.)	11,141	11,143	10,021
Administrative staff training hours (no.)	41,441	41,763	31,072
Manual workers training hours (no.)	25,434	31,970	38,151
Average training hours delivered to men (no.)	29.1	30.9	30.2
Average training hours delivered to women (no.)	20.9	18.4	17.0
Training hours for health, safety and environment (no.)	20,064	24,305	19,288
Participation for health, safety and environment (no.)	3,184	4,117	3,484

 $<sup>36\</sup> people$  were employed on staff leasing contracts in 2016

#### MAIN HSE DATA AND INDICATORS

	2014	2015	2016
Health and safety			
Employee accidents (no.)	9	3	4
Employee accident frequency index	1.84	0.62	0.81
Employee accident severity index	0.11	0.03	0.04
Contractor accidents (no.)	15	8	5
Contractor accident frequency index	2.13	1.07	0.71
Contractor accident severity index	0.10	0.07	0.05
Employee and contractor accident frequency index	2.01	0.89	0.75
Employee and contractor accident severity index	0.10	0.06	0.05
Energy			
Energy consumption (TJ)	8,331	9,087	10,957
Emissions			
Natural gas emissions (10 <sup>6</sup> m <sup>3</sup> )	50.8	49.7	48.2
GHG scope 1-2-3 emissions (10 <sup>3</sup> t CO <sub>2e0</sub> )	1,646	1,701	1,801
GHG scope 1 emissions (10 <sup>3</sup> t CO <sub>2e</sub> )	1,350	1,373	1,439
GHG scope 2 emissions (10 <sup>3</sup> t CO <sub>2ea</sub> ) - Location based	26	27	28
GHG scope 3 emissions (10³ t CO <sub>2ea</sub> )	270	301	334
NOx emissions (t)	465	400	434
CO emissions (t)	231	257	281
CO <sub>2</sub> emissions/energy used (kg/GJ)	54.1	54.3	55.0
NOx emissions/energy used (kg/GJ)	0.056	0.044	0,040
Waste			
Total waste production (t)	42,140	29,649	52,513
Non-hazardous waste production (t)	38,491	26,567	48,954
Hazardous waste production (t)	3,649	3,082	3,558
Waste recovered from production operations (%)	45	54	77
Water withdrawals and disposals			
Freshwater withdrawals (10 <sup>3</sup> m <sup>3</sup> )	178	182	177
Freshwater disposals (10 <sup>3</sup> m <sup>3</sup> )	114	132	139
Seawater withdrawals (10³ m³)	4,000	4,000	4,000
Seawater disposals (10 <sup>3</sup> m <sup>3</sup> )	4,000	4,000	4,000
HSE Management			
Environmental expenses (€ millions)	159.9	154.8	139.8
Health and safety expenses (€ millions)	41.0	37.5	47.9
Medical visits (no.)	1,210	1,270	1,561
Periodic medical visits (no.)	1,061	991	1,337
Diagnostic examinations (no.)	1,231	1,828	2,252
Total HSEQ audits conducted (no.)	217	203	212
Environmental surveys (no.)	386	203	172

#### MAIN HSE DATA AND INDICATORS – BUSINESS SEGMENTS

	2014	2015	2016
Natural gas transportation			
Health and safety			
Employee accidents (no.)	7	3	1
Contractor accidents (no.)	11	7	4
Employee accident frequency index	2.23	0.97	0.32
Employee accident severity index	0.17	0.05	0.00
Contractor accident frequency index	1.84	1.13	0.65
Contractor accident severity index	0.08	0.05	0.05
Energy and Environment			
Energy consumption (TJ)	4,153	4,278	5,824
CO <sub>zea</sub> scope 1 emissions (tonnes)	810,408	883,826	921,954
Natural gas emissions (10 <sup>6</sup> m³)	37.2	37	34.6
Natural gas recovered (10 <sup>6</sup> m <sup>3</sup> )	3.0	3.6	4.5
NOx emissions (t)	237	225	228
Energy consumption/compressed energy (%)	0.23	0.23	0.25
CO <sub>2</sub> emissions/compressed gas (kg/10 <sup>6</sup> m <sup>3</sup> )	5,941	5,805	6,023
Natural gas emissions/km of network (m³/km)	1,151	1,138	1,066
NOx emissions /compressed gas (kg/10 <sup>6</sup> m³)	6.3	5.7	4.4
Average emissions of NOx per turbine/total installed capacity ([mg/Nm <sup>3</sup> ]/MW)	5.4	4.6	4.4
DLE turbine operating hours/Total turbine operating hours (%)	87	88	94
Liquefied Natural Gas regasification			
Health and safety			
Employee accidents (no.)	0	0	1
Contractor accidents (no.)	1	0	0
Employee accident frequency index	0	0	8.65
Employee accident severity index	0	0	0.66
Contractor accident frequency index	32.72	0	0
Contractor accident severity index	0.43	0	0
Energy and Environment			
Energy consumption (TJ)	31	52	128
CO <sub>zeq</sub> scope 1 emissions (tonnes)	32,169	38,659	54,298
Natural gas emissions (10 <sup>6</sup> m³)	1.9	2.0	2.9
NOx emissions (t)	0.3	1.1	5.5
Natural gas storage			
Health and safety			
Employee accidents (no.)	1	0	1
Contractor accidents (no.)	2	1	1
Employee accident frequency index	2.02	0	2.00
Employee accident severity index	0.01	0	0.11
Contractor accident frequency index	1.98	0.89	1.27
Contractor accident severity index	0.17	0.18	0.07
Energy and Environment			
Energy consumption (TJ)	4,117	4,740	4,985
CO <sub>2eq</sub> scope 1 emissions (tonnes)	410,728	450,162	461,976
Natural gas emissions (10 <sup>6</sup> m³)	11.7	10.7	10.7
NOx emissions (t)	227	175	201
Emissions of natural gas for storage/gas stored (%)	0.067	0.051	0.047
Emissions of NOx/gas stored (kg/10 <sup>6</sup> m³)	28.0	17.8	20.1
Average emissions of NOx per turbine/total installed capacity ([mg/Nm³]/MW)	6.2	5.6	5.4

#### METHODOLOGY NOTE

#### Introduction and presentation of the document

The Report on Operations that Snam has attached to the 2016 consolidated financial statements reports in full on data and information of an economic-financial and non-financial nature through a format known as integrated thinking, developed on the basis of the framework proposed by the IIRC (International Integrated Reporting Council), for the purpose of representing the business model and creation of sustainable value.

At the same time, the Company continues to publish a separate sustainability report, although it is synergistic with the above-mentioned report, for the purpose of giving a full and exhaustive report on material issues, for the benefit of stakeholders and, specifically, SRI and Global Compact analysts, and in compliance with the GRI guidelines.

#### Consolidation scope and criteria

The report contains data and information with reference to the financial year ended 31 December 2016, with the exception of information relating to corporate governance and the ownership structure, which are updated at the publication date. The activities included in the scope of reporting are:

- Corporate (Snam S.p.A with the subsidiary Gasrule Insurance Limited)
- Transport (Snam Rete Gas S.p.A.);
- Liquefied Natural Gas (LNG) regasification (GNL Italia S.p.A);
- Storage (Stogit S.p.A.).

Note the scope of reporting has changed compared with the previous financial year on account of the separation of the activities relating to the distribution of gas in Italy, the sector in which Italgas and its subsidiaries and associates operated.

In order to maintain comparability with previous years, the data for 2014 and 2015 were recalculated and reported without the distribution data.

There are no differences, on the other hand, in the consolidation criteria adopted in comparison with those in the Financial Report.

#### Reporting process and methods

The process of collecting data and information and of preparing the report is coordinated and managed by the sustainability unit of the Snam parent company in conjunction with the various corporate functions and operating companies. The publication of the document, at the same time as the Financial Report, takes place after the approval of the Snam Board of Directors on 6 March 2017.

The economic and financial, operating and governance data is taken directly from the Financial Report and from the Report on Corporate Governance and Ownership Structure. The data on the environment, personnel and relating to other aspects dealt with in the document are collected directly from the competent functions.

The calculation methods used for determining the various parameters of the indicators are given in the specific reference paragraphs. To guarantee the comparability of the indicators deemed most significant over a period of time and to give the reader the opportunity of comparing the performance achieved, the current values have been compared, using graphs and tables, with those for the previous two financial years. We have tried within this document to place equal emphasis on positive and negative aspects, providing, where deemed appropriate, a comment on the results achieved, including the facts and events that the Company was involved with in 2016.

The contents of the report are also supplemented with additional information published in the section on sustainability on the website www.snam.it.

#### Application of the GRI-G4 guidelines

The report is prepared in conformity with the G4 version of the Global Reporting Initiative Guidelines. The breadth and depth of the reporting of the issues dealt with in the document reflect the results of the materiality analysis, carried out using specific methodology and updated annually under the scope of the planning cycle for sustainability undertakings and measures. In this regard, note that it was updated in 2016 following the distribution business leaving the scope of activities.

#### REPRESENTATION OF SCOPE OF MATERIAL ISSUES

Material Aspects	Aspect Boundary		Limitation of As	spect Boundary
	Within the Organisation	Outside the Organisation	Within the Organisation	Outside the Organisation
Economic performance	One Company	Investors, Customers	-	-
Procurement practices	One Company	Suppliers	-	Reporting not extended second-tiers suppliers
Energy	T, S	Suppliers	-	Suppliers' energy consumption not accounted
Biodiversity	Т	-	-	n.a.
Emissions	T, S, R	Suppliers	-	Suppliers' pollutant air emissions not accounted
Overall expenses	T, S	-	-	n.a.
Suppliers Environmental Assessment	One Company	Suppliers	-	Reporting not extended second-tier suppliers
Employee	One Company	-	-	n.a.
Labor/Management Relations	One Company	-	-	n.a.
Occupational Health and Safety	One Company	Suppliers	-	-
Training and education	One Company	Suppliers	-	Suppliers' training not accounted
Labor Practices Grievance Mechanism	One Company	-	-	n.a.
Suppliers assessment for labor practices	One Company	Suppliers	-	Reporting not extended second-tier suppliers
Suppliers Human Rights assessment	One Company	Suppliers		Reporting not extended second-tier suppliers
Local communities	One Company	-	-	n.a.
Anti-Corruption	One Company	Suppliers	-	Reporting not extended second-tier suppliers
Compliance	One Company	-	-	n.a.

Legenda

S Storage

R Regasification

C Corporate

One Company: T, S, C

For the purpose of applying the G4 standards, the results that emerged from the materiality analysis are associated with the list of material aspects listed in the standard.

Based on covering the disclosure standards and indicators associated with material issues, Snam's self-declared level of adherence to the G4 standard is "in accordance – comprehensive".

As far as the material aspects for which the reporting has not yet been extended to the external perimeter are concerned ("Limitations regarding the perimeter of the Aspect"), Snam is committed to implementing specific measures in the coming years which will allow the scope of the reporting to be gradually extended".

#### **Assurance**

The report was audited by the independent auditors (Reconta Ernst & Young S.p.A.) in accordance with the principles and indications of the International Standard on Assurance Engagement (ISAE 3000) issued by the International Auditing and Assurance Standards Board (IAASB). The results of the audits conducted are given in the Independent Auditors' Report attached.

Reference period	2016	
Frequency	Annual	
Latest document published	2015 Sustainable Paths Report on social responsibility - Snam	
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#### **GRI CORRELATION TABLE**

 $\textbf{RS} = \text{Sustainability Report } \ \textbf{RF} = \text{Financial Report } \ \textbf{RCG} = \text{Corporate Governance Report } \ \textbf{RR} = \text{Remuneration Report } \ \textbf{RCG} = \text{Corporate Governance Report } \ \textbf{RR} = \text{Remuneration Report } \ \textbf{RCG} = \text{Corporate Governance Report } \ \textbf{RCG} = \text{RCG} = \text{RCG}$ 

Genera	al standard Disclosures	Reference Document	Page/ notes		
Strategy	/ and Analysis	'			
G4-1	Sustainability strategy	RS	10-44		
G4-2	Impacts, risks and opportunities:	RF	41-43,149-159		
Profile o	of the organisation				
G4-3	Name of the organisation	RS	cover		
G4-4	Brands, products and services	RS	36-37,88		
G4-5	Location of head office	The company headquarters is San Donato Mila http://www.snam.it/en/about-us/headquarter/index.html			
G4-6	Countries of operation, including significant impacts related to products, activities, services and relations	RS RF	25,27, 36-37		
G4-7	Ownership structure	http://www.sna Shareholders/ir RF	am.it/en/Investor_Relations/ ndex.html; 28-30		
G4-8	Markets served	RS	88		
G4-9	Size of the organisation	RS	36-37		
G4-10	Employees by type of contract, gender, geographical area, grade				
		RS	71-74		
G4-11	Employees covered by collective agreements	(the energy and storage and reg water contract to all Snam wo of employees w guarantees all v	tional collective labour agreements doil contract for the transportation, assification segments and the gas/for the distribution segment) apply rkers. At the end of 2015, 49.5% were members of a union. Snam workers the right to express their to join associations and to engage activities.		
G4-12	Description of the supply chain (number of suppliers, procurement volumes and markets)	RS	92		
G4-13	Changes in the scope of operations including localisation of suppliers		92-96		
G4-14	Application of the prudential approach	RF	41-43,149-159		
G4-15	List of charters or principles to which the organisation adheres or	RS	47		
	other initiatives supported				
G4-16	List of trade associations that the organisation is a member of	responsibility_t	am.it/en/Sustainability/ cowards_everyone/technological_ partnerships.html		
Materia	lity and scope of the report				
G4-17	List of the consolidated entities in the consolidated financial statements and those not included in the sustainability report	RS	Methodology note		
G4-18	Explanation of the process for defining the contents of the financial statements and the way in which the organisation has implemented the reporting principles	RS	Methodology note 44		
G4-19	List of material aspects identified	RS	44		
G4-20	Give the scope outside of the organisation for every material	RS	Methodology note 44		
C 4 31	aspect reported	D.C.			
G4-21 G4-22	Report the scope within the organisation for every material aspect Explanation of the effects of any change in the information	RS There are no si	Methodology note gnificant modification		
	included in previous reports and the reasons				
G4-23	Significant changes in objective or scope	RS	44		

G4-24	der engagement  List of stakeholders engaged by the organisation	RS	45
G4-24 G4-25	Identification process	RS	45
G4-25	Approach to the engagement, including frequency and type of	RS	45,75,91
G4-27	Themes that emerged from the engagement, management	RS	44
- "	methods also through reporting		
	f the report		
G4-28	Period to which the Report refers	RS	Methodology note
G4-29	Lasted report published	RS	Methodology note
G4-30	Reporting frequency	RS	Methodology note
G4-31	Contacts	RS	Methodology note
G4-32	Choice of in accordance option and GRI table - see details	RS	Methodology note
G4-33	Assurance policies and practices	RS	Methodology note
Governa	nce		
G4-34	Governance structure including committees which depend on the main governing body	RCG	29-32,42-45
G4-35	Delegation of processes by the main governing body to senior executives and other members of the organisation with regard to economic, social and environmental issues	RS	44
G4-36	Appointment of an executive with responsibility for sustainability and their line of reporting	RCG	41-42
G4-37	Direct engagement of main governing body with stakeholders with regard to issues of sustainability or management of feedback in the case of delegation	RS	44
G4-38	Composition of governing bodies and committees (executive role, independence, other positions, etc.)	RCG	29-33,42-45,47
G4-39	Executive role of the Chairman	Snam Preside	nt is not executive
G4-40	Selection criteria and processes of members of the main governing body and committees, specifying whether or not criteria of diversity and independence are included	RCG	29-33,42-45,47
G4-41	Conflicts of interest	RCG	44-45
G4-42	Role of the main governing body in the definition of the vision/ mission of sustainability, policies and objectives	RS	44
G4-43	Initiatives to increase awareness of the main governing body of sustainability issues	RS	44
G4-44	Process for the evaluation of the main governing body with regard to the governance of economic, environment and social issues and corrective measures	RCG	60-61
G4-45	Role of the main governing body in the evaluation of the effectiveness of the management of the process of risks relating to sustainability issues	RF	149-156
G4-46	Role of the main governing body in the process of reviewing the risks relating to sustainability issues	RF	149-156
G4-47	Review frequency by the main governing body of the impacts, risks and opportunities relating to sustainability issues		
G4-48	Indication of the main governing body which approves the Sustainability Report and checks that all material issues are covered	RS	Methodology note
G4-49	Process for notifying main governing body of critical situations	RCG	61-74
G4-50	Nature and number of critical situations notified to the main governing body and mechanisms used to manage them	RF	157
G4-51	Remuneration policies for main governing body and executives (in detail) and information if they are related to sustainability performance	RR	7
G4-52	Processes for calculating remuneration, any involvement of external consultants and their degree of independence from management	RR	13-15
G4-53	Involvement of stakeholders in the processes for calculating remuneration	RR	13-19
G4-54	Relation between total annual compensation of the highest executive and the median compensation of employees in each relevant country	Confidential	

G4-55	Ratio between the percentage increase of the total annual compensation of the highest executive and that of the median compensation of employees in each relevant country	Confidential	
Ethics a	nd integrity		
G4-56	Principles, values and standards of behaviour	RS	49
G4-57	Internal and external mechanisms for obtaining opinions on behaviour (helplines, etc.)		nam.it/en/governance-conduct/ uct/whistleblowing/
G4-58	Processes for encouraging reporting of illegal or unethical behaviour and or promoting ethical behaviour (hotlines, etc.)	http://www.snam.it/en/governance-conduct/ business-conduct/whistleblowing/	

#### **SPECIFIC STANDARD DISCLOSURES**

Mate	rial aspects	Reference	Pages/notes
		Documents	
	Category: Economic		
	nic performance	D.C.	25 27 22 26 27 44
DMA		RS	25,27,32,36-37,44
EC1	Economic value directly generated and distributed	RS	41
EC2	Economic-financial implications linked to climate change	RS 52-56	
EC3	Cover of obligations undertaken during definition of pension plan (benefit plan obligations)	In 2016 Snam has fulfilled social contributions in compliance with by applicable law	
EC4	Significant government economic aid	Not present	
Procure	ement practices		
DMA		RS	44,92-96
EC9	Policies, practices and percentage of expenses concentrated on local suppliers	RS	96
	Category: Enviromental		
Energy			
DMA		RS	44,57,59
EN3	Energy consumption within the organisation divided by primary energy source	RS	57-58
EN4	Energy consumption outside the organisation	No data available	
EN5	Energy intensity	RS	104
EN6	Energy saving	RS	57,59
EN7	Reduction of energy requirement for products and services	RS	57,59
Biodive	rsity		
DMA		RS	44,66-68
EN11	Location and dimensions of land owned, rented or managed in protected areas (or adjacent to protected areas) or areas with high biodiversity outside of protected areas	RS	66-68
EN12	Description of major impacts of activities, products and services on biodiversity of protected areas or areas of high biodiversity outside of protected areas	RS	66-68
EN13	Protected or restored habitats	RS	66-68
EN14	Number of protected species whose habitat is in areas where the organisation operates, divided by level of risk of extinction	Not applicable	
Emissio	ons		
DMA		RS	44,52-57,60
EN15	Total direct greenhouse gas emissions by weight (scope I)	RS	54
EN16	Total indirect greenhouse gas emissions by weight (scope II)	RS	55
EN17	Other indirect greenhouse gas emissions (scope III)	RS	56
EN18	Carbon intensity	RS	104

ENIZO	Emissions of substances harmful to the ozone layer by weight		Absont
EN20	Emissions of substances harmful to the ozone layer by weight	D.C.	Absent
N21	NOx, SOx and other significant emissions into the atmosphere broken down by type and weight	RS	60
	l expenses	DC	12 11 62
DMA FN121	Eventure and investments for the protection of the continuous hard.	RS	42,44,62
EN31	Expenses and investments for the protection of the environment broken down by type	RS	62
	r evaluation by environmental criteria		
DMA		RS	44,92-98
EN32	Percentage of new suppliers selected on the basis of environmental criteria		94
EN33	Percentage of critical existing suppliers in terms of environmental impacts analysed in terms of performance and corrective measures undertaken		94
	Category: Social		
WORK			
Employ	ment		
DMA		RS	44,71-85
LA1	Total number of new hires and turnover by age group, gender and	RS	72-73
	geographical area		
LA2	Planned benefits for employees on permanent contracts not planned for	There are no sig	gnificant modification
	employees on fixed-term or part time contracts		
LA3	Return rate after parental leave broken down by gender	RS	74
	ement of employment		
DMA		RS	44,71-85
LA4	Minimum period of notice for operational changes (organisational changes), specifying whether or not these conditions are included in the collective agreement	The provisions of the national collective labour agreement are applied (see G4 11)	
Оссира	tional health and safety		,
DMA	•	RS	44,79-82
LA5	Percentage of workers represented on the health and safety committee		Worker representation is ensured through ref. T.U. Legislative Decree No. 81/2008 and the national agreements
LA6	Rate of accidents at work, illnesses, work days lost, absenteeism and total number of deaths, broken down by geographical area	RS	79-80
LA7	Existence of workers at a high risk of contracting occupational illnesses	RS	81
LA8	Health and safety trade union agreements		Worker representation is ensured through ref. T.U. Legislative Decree No. 81/2008 and the national agreements
	g and education		
DMA		RS	44,76-77
LA9	Average hours of training per year per employee, broken down by gender and category of workers	RS	77
LA10	Programmes for the management of skills and for promoting progressive training/updating to support the continuous deployment of employees and for the management of the final stage of their careers	RS	76
LA11	Percentage of employees regularly receiving performance assessments and career development	RS	78-79
Supplie	r evaluation on work practices		
DMA		RS	44,92-98
LA14	Percentage of new partner suppliers analysed in terms of work practices and actions undertaken	RS	94
	Percentage of existing critical suppliers analysed in terms of work practices	RS	94
LA15	and actions undertaken		
LA15			

SOCIETY				
Supplier evaluation on human rights				
DMA		RS	44,9-98	
HR 10	Percentage of new suppliers analysed in terms of compliance with human rights	RS	94	
HR 11	Percentage of existing critical suppliers analysed in terms of human rights and actions undertaken	RS	94	
Local con	nmunities			
DMA		RS	44,61-68	
SO1	Percentage of operations that have implemented engagement programmes, impact assessment and local development programmes	RS	61-68	
SO2	Operations with a potential or actual negative impact on local communities	RS	52	
Anti-Cori	ruption			
DMA		RS	49	
SO3	Percentage of business units analysed for risk of corruption and risks identified	RS	49	
SO4	Communication of anti-corruption policies and employee training	RS	49	
SO5	Actions undertaken in response to episodes of corruption	RF	157	
Compliar	ice			
DMA		RCG	All the document	
SO8	Monetary value of significant fines and total number of non-monetary sanctions for non-conformity to laws or regulations	RF	346-254	

#### GLOBAL COMPACT RECONCILIATION TABLE

The ten principles	2016 Sustainability Report	Page	
	Human Rights		
Principles 1, 2 - Businesses are required to promote and respect human rights universally recognised under the scope of the respective spheres of influence and to ensure they are not even indirectly  • Snam operates in the reference framework of the United Nations Universal Declaration of Human Rights, the International Labour Organization Fundamental Conventions and the OECD Guidelines for Multinational Enterprises and the principles sanctioned by the United Nations Global Compact (principles sanctioned by its code of ethics).			
complicit in the abuse of human rights.	<ul> <li>Snam promotes sustainability and business ethics in the supply chain and conducts checks on human rights and workplace safety at suppliers and sub-contractors.</li> <li>Snam protects health and safety at work through training, awareness</li> </ul>	94 77,79-8	
	raising and information initiatives.	11,13-0	
	Work		
Principles 3, 4, 5, 6 - Businesses are required to support the freedom of association of employees and to recognise the right to collective	<ul> <li>Snam respects everyone's dignity and offers equal opportunities for all stages and aspects of the employment relationship, avoiding any form of discrimination that could be a result of gender, age, health, nationality, political opinions or religious persuasion.</li> </ul>	71	
agreements; the elimination of all forms of forced labour is mandatory;	<ul> <li>Snam applies the Energy and Oil contract and guarantees trade union rights for all workers.</li> </ul>	84	
the effective elimination of child labour; the elimination of any form of	<ul> <li>Snam conducts regular surveys to improve relations between the company and employees</li> </ul>	75	
discrimination with regard to occupation and profession.	Snam develops initiatives to reconcile the work/life balance	82-83	
Principles 7, 8, 9 - Businesses are	Snam develops projects to reinforce its operating excellence and to help	18-20,	
required to take a preventive approach with regard to environmental challenges; to undertake initiatives that promote greater environmental responsibility;	with containing greenhouse gas emissions.  • Protecting the environment and biodiversity are an integral part of the definition of corporate policies and investment decisions for all of Snam's activities	52-57 66-68	
and to encourage the development and the dissemination of technologies that	<ul> <li>All of Snam's activities are overseen by certified environmental management systems (ISO 14001).</li> </ul>	51,61	
respect the environment.	• Snam carries out specific energy management and CO <sub>2</sub> saving activities	52-53	
	Anti-corruption		
Principle 10 - Businesses should be committed to opposing corruption in all its forms, including extortion and	<ul> <li>Snam disseminates ethical principles and business values</li> <li>Snam works with Transparency International on anti-corruption and governance</li> </ul>	47-49 49	
bribery.	<ul> <li>Snam provides training on legality and anti-corruption issues</li> <li>Snam carries out reputational checks at suppliers and sub-contractors Support with Sustainable Development Goals</li> </ul>	49 97	
Support to Sustainable Development Objectives	Snam is also committed to helping with the sustainable development of the economy and society of the future with reference to the Sustainable Development Goals defined by the U.N.: specifically, it is actively involved in goals 7, 9 and 13.	10- 11,18- 20,22- 29,52-59	

#### LETTER OF ASSURANCE



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Independent auditors' report on the document "Natural gas for decarbonisation - 2016 Sustainability Report" (Translation from the original Italian text)

To the Board of Directors of Snam S.p.A.

We have carried out a limited assurance engagement of the document "Natural gas for decarbonisation - 2016 Sustainability Report" (hereinafter "Sustainability Report") of Snam S.p.A. and its subsidiaries (hereinafter "Snam Group") as of December 31, 2016.

#### Management's responsibility on Sustainability Report

The Management is responsible for the preparation of the Sustainability Report in accordance with the "G4 Sustainability Reporting Guidelines", issued in 2013 by GRI - Global Reporting Initiative, that are detailed in the paragraph "Methodology Note" of the Sustainability Report, as well as for that part of internal control that they consider necessary in order to allow the preparation of a Sustainability Report that is free from material misstatements, even caused by frauds or not-intentional behaviors or events. The Management is also responsible for defining the Snam Group's objectives regarding the sustainability performance and for the reporting of the achieved results, as well as for the identification of the stakeholders and of the significant matters to report.

#### Auditors' responsibility

It is our responsibility the preparation of this report on the basis of the procedures carried out. Our work has been conducted in accordance with the criteria established by the principle "International Standard on Assurance Engagements 3000 – Assurance Engagements other than Audits or Reviews of Historical Financial Information" ("ISAE 3000"), issued by the International Auditing and Assurance Standards Board for the engagements that consist in a limited assurance. This principle requires the respect of relevant ethical principles, including those related to independence, as well as the planning and the execution of our work in order to obtain a limited assurance that the Sustainability Report is free from material misstatements. These procedures included inquiries, primarily with company's personnel responsible for the preparation of the information included in the Sustainability Report, documents analysis, recalculations and in other procedures in order to obtain evidences considered appropriate.

The procedures performed on the Sustainability Report were related to the compliance with the principles for defining report content and quality, as articulated in the "G4 Sustainability Reporting Guidelines", and are summarized below:

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Capitale Sociale € 2.950.000,001.v.
Iscritta alia S.O. del Registro delle Imprese presso la C.C.I.A.A. di Roma
Codice fiscale e numero di iscrizione 00434000584 - numero R.E.A. 250904
P.IVA 00891231003
Iscritta al Registro Revisori Legali al n. 70945 Pubblicato sulla G.U. Suppl. 13 - IV Serie Speciale del 17/2/1998
Iscritta all'Albo Speciale delle società di revisione
Consob al progressivo n. 2 delibera n.10831 del 16/7/1997

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- a. Comparison of the economic and financial data and information included in the Sustainability Report with those included in the Snam Group's consolidated financial statements as of December 31, 2016 on which we issued our audit report, pursuant to art. 14 and 16 of Legislative Decree dated January 27, 2010, on March 20, 2017;
- b. Analysis, through interviews, of the governance system and of the process to manage the issues related to the sustainable development regarding Snam Group's strategy and operations;
- c. Analysis of the process relating to the definition of material aspects included in the Sustainability Report, with respect to the criteria applied to identify priorities for the different stakeholders' categories and to the internal validation of the process outcome;
- d. Analysis of the operating mode of the processes supporting the initiation, recording and management of the quantitative data reported in the Sustainability Report. In particular, we have carried out the following procedures:
  - interviews and discussions with personnel of the Management of Snam S.p.A. and of its subsidiaries Snam Rete Gas S.p.A. and Stoccaggi Gas Italia S.p.A., to obtain an understanding about the information, accounting and reporting systems in use for the preparation of the Sustainability Report, as well as about the internal control processes and procedures supporting the collection, aggregation, data processing and transmission of data and information to the department responsible for preparation of the Sustainability Report;
  - on-site verifications at the Ripalta Cremasca (CR Italy) operating site of Stoccaggi Gas Italia S.p.A.;
  - analysis on a sample basis of the documentation supporting the compilation of the Sustainability Report, in order to confirm the processes in use, their adequacy and the operation of the internal control for the correct processing of data and information referred to the objectives described in the Sustainability Report;
- e. Analysis of the compliance and internal consistency of the qualitative information included in the Sustainability Report to the guidelines identified in paragraph "Management's responsibility on Sustainability Report" of the present report;
- f. Analysis of the process relating to the involvement of the stakeholders, with reference to the procedures applied, through the review of minutes or any other existing documentation relating to the main topics arisen from discussions with them;
- g. Obtaining of the representation letter, signed by the legal representative of Snam S.p.A., relating to the compliance of the Sustainability Report with the guidelines indicated in paragraph "Management's responsibility on Sustainability Report", as well as to the reliability and completeness of the information and data presented in the Sustainability Report.

Our engagement is less in scope than a reasonable assurance engagement in accordance with ISAE 3000 and, as consequence, we may not have become aware of all the significant events

#### LETTER OF ASSURANCE



and circumstances which we could have identified had we performed a reasonable assurance engagement.

#### Conclusion

Based on our work, nothing has come to our attention that causes us to believe that the "Natural gas for decarbonisation - 2016 Sustainability Report" of Snam Group as of December 31, 2016 is not in compliance, in all material aspects, with the guidelines "G4 Sustainability Reporting Guidelines" issued in 2013 by the GRI - Global Reporting Initiative, as stated in the paragraph "Methodology Note" of the Sustainability Report.

Turin, March 20, 2017

EY S.p.A. Signed by: Stefania Boschetti, Partner

This report has been translated into the English language solely for the convenience of international readers

