CLIMATE ACTION AND TRANSITION BONDS REPORT

Energy to inspire the world





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SNAM'S PROFILE

Snam S.p.A ("Snam", "the Company", or "the Group") is Europe's leading operator in natural gas transport and storage, with an infrastructure capable of delivering the transition to hydrogen.

Snam operates a transportation network of approximately 41,000 km between Italy, Austria, France, Greece and the United Kingdom and owns 3.5% of the world's natural gas storage capacity.

With 80 years of experience in the development and management of networks and plants, Snam guarantees a security of supply and promotes the energy transition across territories. Besides transportation and storage, the Company is also one of the main operators in LNG regasification with a presence in Asia, Middle East and North America.

Snam is committed to upgrading its infrastructure to meet hydrogen-ready standards and the development of integrated projects along the green gas value chain, with investments in biomethane, hydrogen, sustainable mobility and energy efficiency. It also contributes to creating new green spaces through a benefit company that carries out forestry projects.

Snam has committed itself to a net zero target on Scope 1 and 2 CO₂ equivalent emissions by 2040 as well as a target for indirect Scope 3 (subsidiaries and suppliers) emissions reduction by 2030.

INTRODUCTION

Snam is one of the world's leading energy infrastructure operators and ranks among Italy's largest listed companies, by market capitalization.

Over the last six years, Snam has carried out the repurposing of its infrastructures, focusing on international development and launching new start-ups focused on energy transition. Putting ESG factors at the centre of Snam's strategy will be essential to aiding the development of a competitive, safe and zero net emissions energy system for the future, built on; the consolidated ability to implement and manage projects in the transportation and storage of natural gas, the skills acquired with green gases and on recent trends on the energy transition, a growing international presence also relevant for integrated greenfield projects, and the large number of partnerships with international investors.

With the new 2021-2025 Strategic Plan, Snam has further stated its role of enabler and driver in the energy transition, in line with the United Nations 2030 sustainable development goals (SDGs) and with the Paris Agreement framework. Snam is one of the first energy companies to target carbon neutrality in the medium-long term by setting a target for net zero Scope 1 and 2 emissions by 2040. Moreover, Snam aims to contribute to the decarbonization of the system through significant investments in innovation, R&D and digitalization. The Company has also set targets on its indirect Scope 3 emissions for 2030, those emissions attributable to suppliers and associates. Snam is the first EU TSO to set such a target in relation to its suppliers. Snam has also raised its natual gas emission target from 45% to 55% by 2025 (on a 2015 basis), which is more ambitious than the UNEP (UN Environment Programme) target of - 45%.

In addition, to demonstrate its commitment to ESG, Snam has developed a "scorecard" covering 14 thematic areas with 23 material and quantitative targets. The ESG Scorecard is a tool which helps stakeholders to have a view on the main ESG targets within the larger ESG corporate framework with 140 KPIs. While performance monitoring is quarterly based, the review and update of the ESG areas and KPIs follows the Strategic Plans' announcements and in the 2021 update, Snam further strengthened its ESG Scorecard including a new area on Sustainable Finance.

Snam's 2021-2025 Strategic Plan details investments for ca. 8.1 billion euro (700 million euro more relativeto the previuous plan). attributable both to regulated activities - 6.8 billion euro - and to new businesses in the energy transition space - over 1.3 billion euro (almost doubled compared to the previous plan) – dedicated to biomethane, energy efficiency and projects related to hydrogen. Within the capex plan, c.50% of the investments is for "hydrogen ready" infrastructures as the substitution and development of assets with "hydrogen ready" standards and aimed at promoting the development of hydrogen to foster the decarbonization of the energy, transportation and manufacturing sectors.

In recent years, Snam has also started the process of aligning their financing strategy with the sustainability targets and sustainable finance is currently one of the pillars of Snam's development strategy and investments in the energy transition. Snam's commitment to sustainable finance has been formalized through a specific target within the ESG Scorecard and, in particular, is aimed at increasing the weight of sustainable finance over 80% by 2025. In this context, Snam is committed to have all future bonds in ESG format mainly leveraging on the new Sustainable Finance Framework, under which Snam will be able to issue both instruments to finance specific projects, aligned with the Delegated Acts of the EU Taxonomy, and instruments for general corporate purposes.

Finally, Snam's commitment as a major player in the energy transition is also reflected in more transparent reporting focused on the issue of combating climate change. Since 2018, the Company has published a stand-alone document in accordance with the recommendations of the Task Force on Climate-Related Financial Disclosure (TCFD).

SUSTAINABILITY STRATEGY WITHIN SNAM'S CORPORATE STRATEGY

THE EVOLUTION OF SNAM TOWARDS THE ENERGY TRANSITION

Over the past 5 years, Snam has moved in the energy trasition space even through the creation of dedicated business units focused on biomethane, sustainable mobility, energy efficiency and hydrogen.

Snam has developed its expertise in the field of biomethane, supporting the construction of infrastructures suitable for its production and has deployed CNG and LNG refueling stations throughout the national territory, with the aim of promoting sustainable biomethane mobility. In March 2021, Snam and SIAD - a leading chemical group in the production and supply of industrial gases across Engineering, Healthcare, LPG and Natural Gas sectors - signed a framework agreement to start a technological collaboration in the small-scale and mid-scale liquefaction sector with the aim of encouraging the spread of LNG and Bio-LNG as alternative fuels for sustainable mobility and other end uses. The agreement aims to create on a global scale, on behalf of third parties, small and medium-sized plants for the liquefaction of natural gas and biomethane, which will be modular and standardized with variable capacities. Thanks to their flexibility the liquefaction plants, in addition to fueling sustainable mobility, will be used for other processes such as the conversion of electricity production from diesel to natural gas, and some energy-intensive industrial processes.

The Company is also contributing to the Italian sustainable development through its subsidiary Renovit, being involved in the energy efficiency of residential buildings, factories and public administration's buildings. In June 2021, Snam signed a loan agreement with the European Investment Bank (EIB) for a total of 150 million euro to support energy efficiency projects in the residential and industrial sectors which are promoted by Renovit for a total expenditure of 200 million euro.

Finally, Snam has carried on several investments related both to the application of hydrogen by exploiting the existing network to assess the H2 readiness and to the consolidation of strategic partnerships. In particular, the collaboration with De Nora enables Snam to further consolidate its position in the green gases value chain also through new projects at an international level.

TOWARDS NET ZERO

One of the central themes that emerged from COP26 (the Conference of the Parties) is the need to focus on specific actions aimed at achieving the ambitious decarbonization goal set at international and European levels. In particular, Snam has recently presented its Vision to 2030 which provides for 23 billion euro investments leveraging on three main pillars such as multimolecule energy networks, multi-molecule energy storage, and green projects. In this context, Snam will deploy the know-how earned over time and its orientation to ESG issues, the Net Zero targets, the consolidation and creation of strategic partnerships, as well as a solid financial structure.



Snam has recently renewed its commitment to Net Zero by 2040 defining a target to reduce natural gas emissions from its operations, by upgrading the target already set one year before (from -45% to -55% by 2025 vs 2015) and including two new targets on Scope 1 and Scope 2 emissions. The former is in line with the reduction targets established by the Oil and Gas Methane Partnership (OGMP) 2.0 and COP26 (-30% of methane emissions by 2030 compared to 2020 levels). While for the latter Snam plans to reduce direct (Scope 1) and indirect energy (Scope 2) emissions by 28%, 40% and 50% (vs. 2018) by 2025, 2027 and 2030 respectively, up to the carbon neutrality of the Group by 2040. In addition, two further targets for the reduction of CO₂eq Scope 3 emissions have been defined, making Snam the first EU TSO to set Scope 3 emission reduction targets covering its suppliers. By setting targets on emissions beyond its direct control, Snam therefore launched an important message aimed at encouraging and raising awareness of suppliers and affiliates in the definition of clear plans to reduce greenhouse gas emissions.

To achieve the objectives set out in the Net Zero Carbon plan, Snam has planned various actions which can be grouped into 3 macro-areas:

Reduction of emissions from Snam's operations:

- Interventions and application of best practices for minimizing methane emissions (LDAR, in line recompression during maintenance);
- Reduction of Snam's CO₂ emissions and of energy requirements, in part thanks to the installation of new and more efficient elettrocompressor in transport and storage stations;
- Use of renewable electricity.

Reduction of emissions from Snam's buildings and company fleet:

- Planning the transfer to a new LEED GOLD certified office;
- Utilization of green electricity from photovoltaic plants;
- Conversion of the company vehicle fleet into methane vehicles.

Green gas development:

• Development and insertion into the network of new green gases, such as biomethane and hydrogen.

As part of Snam's other indirect emissions (Scope 3), the Group has established two targets. The first, -46% by 2030 compared to 2019 levels, takes into account the emissions of associated companies and other minor emission categories. The second, -55% by 2030 compared to 2019, is expressed in terms of the intensity of the supply chain emissions.

For the reduction of Scope 3 emissions, Snam will implement actions following three guidelines:

- Initiatives with associated companies
- Initiatives with suppliers
- Initiatives for the reduction of other indirect emissions

THE OBJECTIVES OF THE NET ZERO CARBON STRATEGY



All targets set by 2030 are in line with the goal of containing global warming within 1.5°C established in the Paris Agreement and within the generic methodology of the SBTi (Science-based Targets Initiative).

OTHER KEY ESG AREAS

With a view to making sustainability an increasingly important driver of business, Snam has included sustainability targets in the Remuneration Policy of the CEO and Top Management by accordingly selecting KPIs from the ESG scorecard. Indeed, in both the short and the long term incentive plans ESG target are weighted as 20% of the total. In particular, Snam has included targets in the short term remuneration plan related to; safety, positioning within ESG indices (DJSI, FTSE4GOOD, CDP Climate Change, Sustainalytics) and the increase in sustainable finance. The reduction of natural gas emissions and gender diversity are the two ESG targets within the long term plan.

SDGS IN OUR BUSINESS PRACTICES

When looking at the SDGs which are core to Snams operations, Snam's investments have a deeper impact on the following:

SDG 7

Affordable and Clean Energy

Increasing the production of energy from renewable sources, including green gases, and improving the energy efficiency of Snam's operations whilst avoiding or reducing the impact on the environment, landscape and cultural heritage.

Snam achieves this objective through its subsidiaries Snam4Environment and Renovit: The former is specialized in infrastructure for biomethane production (from organic waste, agricultural and agro-industrial waste, and zootechnical effluents) and in the promotion of green activities, while the latter is one of the main Italian operators in energy efficiency services for residential, industry and public administration.

Snam4Environment aims to encourage market development thanks to a low-risk business model, leveraging on the skills of the Renerwaste and Iniziative Biometano platforms, which manage plants that produce biomethane from urban and agricultural waste in Italy. Investments of 850 million euros by 2025 are planned (net of 100 million euros for possible grants).

Renovit is going to scale up its growth path with a solid pipeline of investments for ca. 200 million euro until 2025.

SDG 9

Industry, Innovation and Infrastructure

Building more resilient and sustainable infrastructure.

In the new Strategic Plan, 50% of the investments are dedicated to "hydrogen-ready" infrastructures (replacement and development of new assets with hydrogen-ready standards). The conversion of compression stations into hybrid ones is also planned, aiming at contributing to the carbon neutrality goal by 2040. There will be also consistent investments in digitalization to allow Snam to become the most technologically advanced company, with the aim of guaranteeing greater safety and sustainability of operating activities.

SDG 11

Sustainable Cities and Communities

Snam has established Snam4Mobility, a company dedicated to the promotion of sustainable mobility using natural gas (CNG and LNG) and renewable gas (bio-CNG and bio-LNG). By 2025, the company expects the construction of 175 new refueling stations and also the expansion of the offer for heavy vehicles thanks to the activation of a new small-scale liquefaction plant, and the adaptation of the Panigaglia LNG terminal for truck-loading services for transport. Approximately 100 million euro of investments are planned to 2025.

SDG 13

Climate Action

With the goal of playing a key role in the energy transition and with a long-term vision consistent with its purpose and European targets, Snam will be one of the first energy companies to reach carbon neutrality by 2040 and provide a wide contribution to the decarbonization of the system through the development of green gases and hydrogen.

Snam's milestones towards carbon neutrality are to reduce its methane emissions by 55% vs 2015 level by 2025, to reduce its CO₂eq Scope 1 and 2 emissions by 50% vs. 2018 level by 2030 and to support the evolution of green gases keeping on investing in biomethane and hydrogen.

Regarding the Scope 3 emissions, Snam has two distinct reduction targets. The first, -46% by 2030 compared to 2019 levels, and the second, -55% by 2030 compared to 2019, is expressed in terms of the intensity of the supply chain emissions.

Over the past two years, Snam has also set up a Business Unit dedicated to hydrogen, with the aim of being at the forefront of a sector with great prospects. The areas in which the plan's investments will be concentrated are mobility, in collaboration with Snam4Mobility (trains, refueling stations for light and heavy vehicles, airports), the industrial sectors (thermal, feedstock, fuel cells), and R&D and venture capital initiatives. The plan includes projects for which Snam have submitted requests for grants (IPCEI, Innovation Fund, Horizon 2020). From the Hydrogen Business Unit about 250 million euros of investments are planned by 2025 (net of 100 million euros of possible grants).

Away from this, Snam also intends to focus on new technologies as per the partnership with ITM and De Nora to get a technological edge on electrolyzes and to start new pilot projects. In this context, Snam, has been awarded (together with other partners) three grants under the Fuel Cells and Hydrogen Joint Undertaking, which will allow access to funds for pilot projects at the European level which will additionallycreate new end-use partnerships.

SUSTAINABLE FINANCE ALIGNED WITH CORPORATE STRATEGY

Snam is committed to achieve carbon neutrality by 2040 and expects to provide a broad contribution to the decarbonisation of the system through the development of green gases and, in particular, hydrogen.

Climate change is a crucial topic to consider in order to achieve long term business success. Our Strategic Plan is clear evidence of Snam's consolidated attention to ESG issues commanding a substantial amount of green and green-like investments such as the recent amandement to corporate Bylaws "Energy to inspire the world"¹.

Snam's choice of taking part in the Sustainable Finance market is a natural consequence of our desire to align the company's financial structure with our sustainable growth and targets in the medium-long term.

Snam's commitment towards ESG investments and initiatives is integrated within the financial strategy and it was reaffirmed in early 2020 when Snam joined the **UN Global Compact and the CFO Taskforce**, an initiative which aims to bring together investors, issuers, banks and credit agencies to create an efficient market for SDG investments and capital flows, and consistency in how to measure SDG KPIs. At the EU level, Snam is also member of the **Corporate Forum for Sustainable Finance**, an initiative of European companies set up with the aim of creating a permanent network for exchanging views and useful ideas for developing sustainable finance, linked to projects that have a positive impact on the environment.

In 2020, Snam also joined the **ICMA's Climate Transition Working group** made up of representatives from more than 80 entities participating in the capital markets. The Working Group published in December 2020 the Climate Transtion Finance Handbook² which provides clear guidelines³ on the information that should be made publicly available to investors when raising funds in debt markets for climate transition-related purposes. This could be via an issuance of 'Use of Proceeds' bonds aligned with the Green and Social Bond Principles or Sustainability-Linked Bond Principles to be used for general corporate purposes. On 19th January 2021, Snam also joined the Nasdaq Sustainable Bond Network, the sustainable finance network run by Nasdaq which brings together investors, issuers, investment banks and specialist organisations. The joining of this network, celebrated through the projection of the Snam logo on Nasdaq Tower in Times Square, New York City, aims to further expand Snam's potential audience of international investors, particularly those more sensitive to sustainability-related issues.

Snam began in 2018 a path towards the alignment of its financial strategy with the Group's corporate strategy in order to consolidate its role in the energy transition in Europe, to diversify the investor base and to make them aware of Snam's ESG initiatives and investments. Consistent with this approach, in 2018 Snam finalized the conversion of existing 3.2 billion euro syndicated credit facilities into a sustainable loan with economic performances linked to

¹ Information available at the following link: https://www.snam.it/en/Media/Press-releases/2020/Snam_Board_of_ Directors_amendments_Bylaws.html

² Available at: Climate-Transition-Finance-Handbook-December-2020-091220.pdf (icmagroup.org)

³ The guidelines laverage on i) an issuer's clear climate transition strategy and governance, ii) a relavant climate transition trajectory of the business model, iii) an issuer's climate transition strategy based on science based targets and transition pathways, and iv) a transparent communication.

the achievement of certain ESG KPIs, the third largest sustainable loan signed in the world and the first by a gas utility. In 2021, Snam also signed new term loans with the main Italian banks for a total amount of 600 million euro with same ESG features as the sustainable loan and agreed a new 150 million euro financing from European Investment Banks aimed at the financing of Group's energy efficiency projects.

On the capital market side, Snam has an active Euro Commercial Paper program for the issuance of up to 2.5 billion euro of ESG notes linked to environmental and social sustainability objectives in line with the sustainable loan, and obtaining for the program an ESG rating equal to EE assigned by the ESG rating company, Standard Ethics.

Moreover, in the bond market, Snam issued its inaugural Climate Action bond in February 2019 and, successively, four Transition bonds, the first two in June and November 2020 and the most recent ones in February and June 2021. By moving from a Climate Action to a Transition bond, Snam has intended to consolidate its role in the energy transition and to increase investors awareness of Snam's ESG initiatives and investments, by making its sustainable finance strategy consistent with long-term environmental objectives. In June 2020, Snam launched its Transition Bond Framework which emphasized the key role of green gas in achieving the long-term decarbonization targets and the role of existing infrastructure in facilitating the energy transition.



In addition to the eligible categories identified in the Climate Action Bond Framework, **a new eligible category (i.e. the "Retrofit of gas transmission network") has been included** to capture activities carried out with the aim of adapting Snam's gas network to be ready to transport a certain increasing percentage of hydrogen and/or other low-carbon gases, in line with that which is stated in the EU Taxonomy. In March 2021, for its innovative content, the Framework has been awarded by Environmental Finance the Award for Innovation - Use of Proceeds category - as part of the Environmental Finance Bond Awards.

The clarity that Snam has been able to provide through its new Framework on what it aims to achieve has been well received and investors have shown a deep interest in the new Transition component. On the back of the new framework, on 10th June 2020, Snam successfully launched the first 10 year Transition bond for 500 million euro. The issuance was followed by many other issuances in Transition Format for an overall amount on 2.850 million euro, including the Climate Action Bond. All the issuances reached high level of oversubscription by high quality and geographically diversified institutional investors. Moreover, ESG investors participation has been significant among all the bonds with an average of ca. ³/₄ of the final book represented by ESG accounts.

In November 2021, on the occasion of the presentation of the new Strategic Plan, Snam published their Sustainable Finance Framework⁴ moving forward with a new step in the sustainable financing choices of the Group. In particular under the new Framework, Snam has the ability to issue bonds in "Use Of Proceeds" format (Eu-Taxonomy aligned Transition Bond) or "General corporate purpose" (Sustainability-Linked Bond) linked to the most relevant environmental KPIs monitored by Snam and strictly connected to the achievement of long term corporate targets.

As part of the Sustainable Finance Framework, in January 2022 Snam issued an inaugural Sustainability-Linked Bond in dual Tranche format for a total amount of 1.5 billion euro characterized by a demand 3 times higher than the offer and with the presence of ESG investors up to 85% of the total allocated. For these Inaugural Bonds, the economic performances (coupon step-up) are linked to the achievement of selected targets on related KPIs:

- (i) a natural gas emission reduction target equal to -55% by 2025 and a target reduction of Scope 1 and 2 emissions in 2027 equal to -40% were associated to the short tranche; and
- (ii) a reduction target of Scope 1 and 2 emissions in 2030 of -50% was associated to the long tranche.

4 https://www.snam.it/export/sites/snam-rp/it/investorrelations/debito_credit_rating/file/Sustainable-Finance-Framework_Snam_29.11.2021.pdf

SUSTAINABLE FINANCE FRAMEWORK			UPDATED				
			USE OF PRO	CEEDS FORMAT			
			USE OF PROCEED	S COMPONENT			
			CATEGORY	SDGs			
			Transmission and Distribution Networks	9 Mersta Mersdam Me			
NEW			Pollution Prevention and Control	9 Provide the second se			
SUSTA	NINABILITY-LINKE	D FORMAT	Retrofit of Gas Transmission Network	9 HYRKS FUNDAUE EXPENSION FOR CALIFORNIA CALIFICA CALIFORNIA CALIFORNIA CALIFORNIA CALIFORNIA CALIFORNIA CALIFORNIA CALIFORNIA CALIFORNIA CALIFORNIA CALIFORNIA CALIFIC			
KPI #1	Baseline 2015	SPT	Manufacture of Biogas	7 ENERGIA PULITA O IMPRESE. 19 LOTTA CONTRO			
Absolute natural gas emissions (measured in Mm³)	49.74 Mm ³	(SPT1) -55% reduction by 2025	and Biofuels for Use in Transport and of Bioliquids				
(Manufacture	7 ENERGIA PULITA 9 IMPRESE. 13 LOTTA CONTRO E ACCESSIBLE 9 IMPOVAZIONE 13 LOTTA CONTRO			
KPI #2	Baseline 2018	SPTs	of Equipment for the Production				
Absolute direct	1,529 ktCO ₂ eq	(SPT2) -40%	and Use of Hydrogen				
(Scope 1) and indirect (Scope 2) GHG emissions (tCO ₂ eq)		(SPT3) -50% reduction by 2030	Electricity Generation Using Solar	7 DEREIANULA TOXASSEE TO			
KPI #3	Baseline 2019	SPT	Photovoltaic Technology				
Absolute Indirect Scope 3 GHG emissions (tCO ₂ eq)	762 ktCO ₂ eq	(SPT4) -46% reduction by 2030	Infrastructure for Rail Transport	7 DESCRIPTION LECTRONAL CALLED AND AND AND AND AND AND AND AND AND AN			

Chart 1 - Structure of the Sustainable Finance Framework (November 2021). The twofold Framework embeds a Use of proceeds section and a Sustainability linked section.

CLIMATE ACTION AND TRANSITION BONDS REPORT 2022

Snam's Sustainable Finance at the end of 2021 reached ca. 11 billion euro which is equal to 60% of committed funding, reaching the target of 60% announced in November 2020 for 2024 three years early. During 2021, Snam issued ESG instruments for a total of 4 billion euro and, in November 2021, it has updgraded the target on sustainable Finance setting to have more than 80 of Snam funding by 2025 raised through sustainable finance instruments and deeply exploiting the opportunities of the recent Framework for all the future bonds.



In the context of Snam's Sustainable Finance strategy, the herein report represents the third edition⁵ of the annual report aimed at sharing with investors information on Eligible Projects financed under the Climate Action and Transition Frameworks for which a sumamry is reported below.

USE OF PROCEEDS

The proceeds of the Climate Action and Transition bonds will be used to finance or refinance, in whole or in part, existing and/or future Eligible Projects.

For the purposes of this section, "Eligible Projects" mean Carbon & Emission Reduction, Renewable Energy, Energy Efficiency, Green Construction Projects and Retrofit of Gas Transmission Network which meet a set of environmental criteria, approved by Snam's Climate Action and Transition Bond Committee ("Committee") and, where applicable, a reputed Second Party Opinion provider.

5 The 2020 and 2021 Reports are available at the following link: https://www.snam.it/en/Investor_Relations/debt_ credit_rating/sustainable_finance.html

ELIGIBLE PROJECTS	DESCRIPTION	SDGs
Carbon & Emission Reduction Projects	 Infrastructure, equipment, technology, systems and processes that demonstrate a reduction in energy use/losses and reduction in emissions in industrial facilities. Examples of investments include, <i>inter alia</i>: a. replacement of old generation boilers ("heaters") with more efficient boilers ("Skids") with an expected nominal energy saving of at least 15% and a reduction of methane emissions of around 5,400 standard cubic meters for each plant; b. revamping of the network connection nodes, with the replacement of gas-powered pneumatic instrumentation with electrically driven instrumentation; c. replacement of turbo-compressors with latest-generation machines yielding an expected reduction in NOx emissions of at least 75%⁶; d. electrification of compressor units⁷: replacement of turbo-compressors powered by gas with electric machines resulting in the elimination of natural gas use and leading to an expected lower consumption of gas at least of 4 million standard cubic meters and to expected savings in terms of NOx emissions of at least 35 tons per year; and e. installation of Leak Detection System which allows a real time monitoring of the network and a timely intervention in case of significant gas leaks. The system locates the CH₄ leakage and can significantly reduce the time for intervention. f. replacement / renovation of valves, control and command devices, pneumatic actuators and instrumentations etc. with an expected reduction in natural gas emissions at completion of the intervention of	9 Providence and a second seco
Renewable Energy Projects	Acquisition and development of biomethane plants and upgrading of existing biogas plants, in Italy and abroad. Both greenfield and revamping projects will have biomass sustainability and greenhouse gas emission reduction criteria laid down in the Renewable Directive as fundamental pillars. Biomethane supply chain can deliver very high decarbonisation effects while preserving biodiversity and food security ⁸ .	7 EXCEPTION P EXCEPTION 9 Moress Marketering Control Control Control Control Control Control Control Control Control Control Control
Energy Efficiency Projects	 Energy efficiency projects for Snam's corporate facilities or supply chain. Examples of investments include, <i>inter alia</i>: a. replacement of traditional lamps with LED lamps, with an expected nominal energy saving of at least 40%; b. acquisition of (i) up to 100% of the capital of the Energy Service Company ("Esco") TEP Energy Solution, one of the leading Italian companies in the energy efficiency sector with more than 200 customers including leading Italian companies and multinationals, and (ii) potential future acquisitions of companies in the energy efficiency sector; c. energy efficiency solutions for industrial plants; and d. deep renovation for real estate segment (residential and tertiary) including implementation of energy management systems. 	7 ERSEANUEL CONSTRAINT 11 CONSTRAINT 11 CONSTRAINT 11 CONSTRAINT 13 LANGENER 13 LANGENER CONSTRAINT CONSTR
Green Construction Projects	Development and maintenance of conservation areas, natural capital preservation and the development and maintenance of green areas/buildings. For example: a. construction of new buildings which are expected to receive at least LEED "Gold" or at least BREEAM "Excellent" certification; and b. renovation of buildings leading to an annual energy use reduction of at least 30% of per m ² basis.	
Retrofit of gas transmission network	 Activities and projects carried out with the aim to adapt Snam's gas network to be ready to transport a certain increasing percentage of hydrogen and/or other low-carbon gases, coherently with what stated in the relevant EU Taxonomy. Examples of projects include: a. Research and development (studies and pilot projects) for green gases transportation and storage b. Replacement of already existing pipelines with new certified <i>hydrogen-ready</i> ⁹ pipelines, in order to enable the integration of hydrogen and other low-carbon gases, while maintaining at the same time the current network operating and safety standards. For avoidance of doubt, gas network expansion is excluded. 	9 MORESE ENCASIONTINI ENCASIONTINI ENCASIONTINI ENCASIONTINI ENCASIONTINI ENCASIONTINI ENCASIONT

6 In case of replacement of gas powered turbo-compressors. In the case of Brugherio plant, the replacement of an old electric-compressor with latestgeneration machine has a positive environmental impact in terms of flexibility of the system.

7 The electrification of compressors units strongly contributes to reach the target of -40% of direct CO_2 emissions by 2030.

8 In particular, the energy conversion of agricultural residues such as manure can avoid GHG emission from cattle breeding allowing in some cases to reach a carbon negative effect. Advanced agricultural practices such as "biogasdoneright" implemented in order to supply anaerobic digestors with non-food sustainable secondary energy crops can both ameliorate the carbon sequestration capacity of agricultural land and mitigate the soil erosion phenomenon. In addition, the circularity concepts behind "biogasdoneright" practices considers the digestate as a biological fertilizer that can substitute chemical fertilizers obtained from fossil sources.

9 For certified hydrogen-ready Snam means SNAM internal standards ("GASD") coming from the implementation of international standards currently available. Design and construction of all SNAM network are based on these standards including company's know-how. The SNAM's network "hydrogenready" is based on the ASME B31.12' "Hydrogen Piping and Pipeline" standard. GASD remain unchanged for H2NG mixtures up to H2 100% in volume. These standards regulate design and construction phases of new gas network.

PROJECTS EVALUATION AND SELECTION

At issuance and on an annual basis the Snam Finance Department determines the proceeds of the Climate Action and Transition bonds not yet allocated ("Unallocated Proceeds") and sends a request to the Committee asking for Eligible Projects to be funded over the next 12 months, up to an amount equal to the Unallocated Proceeds.

The Committee, based on the criteria set in the Use of Proceeds section of the Transition Bond Framework, address the requests to the Relevant Functions and provides them the guidelines for the selection of the projects.

The Relevant Functions select the Eligible Projects, using the criteria set forth in the Use of Proceeds section of the Transition Bond Framework and following the guidelines provided by the Committee, and indicate the capital expenditures expected over the next 12 months.

The Committee is responsible for approving (or rejecting) the Eligible Projects contained in the list provided by the Relevant Functions and a dedicated internal function ERM (enterprise risk management team) executes risk analysis on the whole group and projects, including ESG assessment.

INTERNAL REPORTING

On a quarterly basis, the finance department collects, aggregates and shares information related to all Eligible Projects funded with the Committee and in particular, the current funded amounts and a relevant focus on relevant changes quarter by quarter. In case a change raises, the committee is promptly informed.

On a yearly basis, this information collected about the eligible projects is reported in the annual reporting process.

VERIFICATION – EXTERNAL REVIEW

An external and independent certification entity analyses the information included in the Climate Action and Transition Bond Report, in coherence with the previous Climate Action Bond Report published in February 2020¹⁰, and releases the Annual Climate Action and Transition Bond Report Assurance (in accordance with ISAE 3000), until all the bonds proceeds are allocated in full.

10 Details on the Climate Action Bond Report 2020 available at: https://www.snam.it/export/sites/snam-rp/it/investorrelations/debito_credit_rating/file/07_20_snm_climate_action_final.pdf

USE OF PROCEEDS AND ENVIRONMENTAL BENEFITS

At the date of this report Snam has issued Use of Proceeds bonds totalling 2.85 billion euro consisting of the Climate Action bond in 2019 and Transition bonds in 2020 and 2021. In the next months, the amounts raised in the capital markets not yet allocated will be used to finance or refinance, in whole or in part, existing and/or future Eligible Projects identified under the five eligible categories of the Transition Bond Framework updated in June 2020 while the amount unallocated is expected to be invested in the next few years. Until the full allocation, the company will hold the corresponding funds in cash and cash equivalents, or repay the outstanding debt. However, the company is committed to allocate to eligible projects an amount equal to the Bonds' proceed. As of the end of 2021 the Climate Action and the June 2020 Transition Bond are fully allocated

Eligible projects identified, financeable at 31 December 2021 and for which we expect to be financed over the plan horizon amount to ca. 4.2 billion euro thus leaving a considerable buffer over the total of the bonds already issued. The amount of projects to be financed has increased by ca. 500 million euro compared to the amount reported in the 2021 Report of which, aligned with the figures reported in the Business plan 2021-25 presented in November 2021, ca. 2.4 billion euro is related to the fifth category added to the framework (namely "Retrofit of gas transmission network").

As of the end of 2021, out of 2.85 billion raised ca. 60% has been allocated to eligible projects equal to ca. 1.6 billion euro (vs. 965 million euro in 2020) of which ca. 50% related to the fifth category. As figures below show the "Retrofit of gas transmission network" represents the largest category with a consistent amount to be financed.



ELIGIBLE PROJECT IDENTIFIED

ALLOCATION OF PROCEEDS

Bond issued before 12/2021	ISIN	Date of issuance	Original tenor	Size (m€)	Coupon p.a.	Allocated (m€) 12/2019	Allocated (m€) 12/2020	Allocated (m€) 12/2021	Allocated (%) 12/2020	Allocated (%) 12/2021	Category of the framework
Climate action bond	XS1957442541	21/02/19	6.5 years	500	1.25%	235	410	500	82%	100%	Carbon & Emission Reduction; Reneawable Energy; Energy Efficiency; Green Construction.
Transition bond	XS2190256706	10/06/20	10 years	500	0.75%	-	475	500	95%	100%	Carbon & Emission Reduction; Reneawable Energy; Energy Efficiency; Green Construction; Retrofit of gas Transmission network
Transition bond	XS2268340010	30/11/20	8 years	600	0%	-	80	298	13%	50%	Carbon & Emission Reduction; Reneawable Energy; Energy Efficiency; Green Construction; Retrofit of gas Transmission network
"Dual tranche" Transition bond	XS2300208928 XS2300345837	15/02/21	4.5 years ca.9 years	750	0% 0.75%	-	-	190	-	25%	Carbon & Emission Reduction; Reneawable Energy; Energy Efficiency; Green Construction; Retrofit of gas Transmission network
Transition bond	XS2358231798	30/06/21	10 years	500	0.625%	-	-	107	-	21%	Carbon & Emission Reduction; Reneawable Energy; Energy Efficiency; Green Construction; Retrofit of gas Transmission network
				2.850		235	965	1.595	60%	56%	

Below are the details for each category of the framework at the end of 2021, both in terms of amount already allocated, and the actual or expected environmental impacts.

1. CARBON & EMISSION REDUCTION PROJECTS

This category includes those identified investments which aim at reducing the greenhouse gasses emissions, energy consumption and the CH₄ and CO₂ emissions related to the Group's industrial assets.

Investment category/ description	Description of the investments	Funded amount at the end of 2020 (€000)	Environmental Performance indicator (A or N¹¹)	Environmental benefit
Replacement of old generation boilers ("heaters") with more	Between 2018-2022, 84 heaters will be replaced, arriving at a skid	30,918	N - Energy saving expected at the end of the activity	15% ¹²
efficient boiler units ("Skids").	about 99 MW		N - Methane leakages avoided	1.5 MSmc ¹³ /year
Revamping of the equipment at the network's main connection nodes	Replacement of gas powered pneumatic instrumentation with electrically driven instrumentation - Expected within March 2022	11,038	A - Methane leakages avoided	742,000 Smc/year
Replacement of turbo-	The activity consists in the replacement of turbo-		N - NOx lower emissions	80%
compressors with latest- generation machines	compressors with latest- generation machines powered by gas	78,771	N - Methane usage avoided	1,6 MSmc/year
Replacement of gas-powered turbo- compressors with electric powered compressors	The replacement of turbo- compressors powered by gas with electric machines will allow lower consumption of gas	39,685	N - Lower consumption of fuel gas	In excess of 90 MSmc at 2030
Monitoring of methane leakeges and installation of Leak Detection System for a real time monitoring of the network	The pressure monitoring system allows to detect leakage of natural gas and promptly intervene	8,724	N - Avoided methane emission	1.4 MSmc/year
Replacement/renovation of valves, control and command devices	Replacement of the valves with pneumatic actuators with valves with electric actuators and of control and command devices for globe valves with a monitor function (about 460 positioners)	25,239	A - Methane leakages avoided	10.3 MSmc

The Carbon & emission reduction category includes those single projects which have an higher relevance for the achievement of the Group's Emission targets in terms on natural gas emissions and Scope 1 & 2 emissions.

- 11 "A" is used when the environmental benefit has been identified on an actual basis or can be assessed with a random sample data collection, while "N" stays for those projects for which the environmental cannot be assessed on an actual basis but it can be deducted exclusively by the constructor's information.
- 12 The value does not factor in the level of obsolescence of the old heaters, indeed assuming a certain degree of obsolescence vs nominal efficiency of the heaters at the end of the useful life to be replaced the energy efficiency would be comfortably above 15%.
- 13 Smc stands for Standard cubic meter, i.e. the amount of gas stored in 1 cubic meter at standard conditions of temperature (15 °C) and pressure (1013.25 millibars, i.e., atmospheric pressure). MSmc is the equivalent of 1 million standard cubic meters.

2. RENEWABLE ENERGY PROJECTS (BIO-METHANE)

As of the end of 2021, Snam has invested ca. 195 million euro in eligible projects falling within this category of which ca. 50% related to the direct acquisition of plants and company holding more than one plant and the remaining 50% for the development of biomethane plants or upgrading of existing biogas plants.

Within this category, eligible investments are plants mainly producing biomethane, but also those plants producing biogas therefore ultimately the electricity itself can be eligible as the final output is the production of renewable energy.

Company	Location	Feedstock	Production	Expected/ Installed Capacity
Enersi Sicilia	Caltanissetta	Organic Fraction Municipal Solid Waste (OFMSW) ¹⁴ and agricultural biomass	Production of biomethane expected within 2022	1.5MW
	Albairate	Organic Eraction	Production of biogas with conversion into biomethane	3.7MW
Renewaste	Tortona	Municipal Solid Waste (OFMSW) ¹⁵	Production biogas for electricity production, conversion to produce biomethane expected within 2022	4MW
Iniziative Biometano (includes 15 plants)	The coverage of the 15 plants is homogeneously dispersed through Italy	Livestock Manure and Agricultural By- products	Infrastructures for the production of electricity from biogas. Prospected conversion of the biogas production infrastructures to biomethane	35MW ¹⁶

Over the plan horizon, Snam plan to continue investing in the bio-methane and considering current visible investments the expected expenditure is at least 350 million euro of which more than half for the acquisition of existing plants while the remaing part will be dedicated to capex. Looking at the environmental benefits, these future investment are expected to generate an additional production capacity in excess of 26MW.

- 14 Origin of the feedstock expected to be 100% from the region.
- 15 For both the plants the origin of the feedstock is ca. ³/₄ from north of Italy and ca. ¹/₄ for the south.
- 16 Cumulated production over the 15 plants.

3. ENERGY EFFICIENCY PROJECTS

The category includes investments for (i) the energy efficiency of the current Snam's assets, (ii) the acquisition of ESCo companies, and (iii) the financing of the projects within ESCo companies held by Snam with the aim to support the development of the entire Italian energy efficiency sector for residential, industrial and tertiary segments.

Investment category/ description	Description of the investments	Funded amount at the end of 2021 (€000)	Environmental Performance indicator (A or N ¹¹)	Environmental benefit	
Replacement of traditional lamps with LED lamps	Substitution and installation of LED lamps on Snam's assets	2,858	N – Estimated energy saving on an annual basis	40% equivalent to a saving of 1860 MWh	
Acquisition of ESCo companies	Acquisition of TEP Energy Solution, TEA, Mieci & Evolve, others	96,128	Companies operating in the energy efficiency sector for residential, industrial and tertiary business solutions		
Financing of TEP/TEA's Residential Business (deep renovation for real estate sector)				8.551 ¹⁷ ton CO ₂ avoided annually	
Financing TEP/TEA's Industrial Business (Energy Performance Contracts for energy efficiency solutions)	Investing in ESCo companies hold by Snam for supporting the development of the energy efficiency market	218,611	A – Avoided CO ₂ emissions both direct and indirect (raw materials transport and extraction)	4.201 ¹⁸ ton CO ₂ avoided annually	
Financing TEP/TEA's Tertiary Business (Energy Performance Contracts for energy efficiency solutions)			,	1.361^{18} ton CO ₂ avoided annually	
Financing Mieci & Evolve	Investing in ESCo companies hold by Snam for supporting the development of the energy efficiency market	42,802	A – Avoided CO ₂ emissions both direct and indirect (raw materials transport and extraction)	8.567 ¹⁹ ton CO ₂ avoided annually	

- 17 The calculation of the impact is based on the average energy saving expected from all the 149 interventions within the company portfolio completed between 2019 and 2021.
- 18 The CO₂ saving is stimated factoring in direct and indirect emissions calculated on the basis of actual energy saving reported for each plant compared to the energy usage prior to inverviene.
- 19 The calculation is based on the effective energy usage for the plants, and the energy usage prior to the intervention.

4. GREEN DEVELOPMENT PROJECTS

This category mainly includes projects of renovation of current Group's buildings with an improvement on the energy usage such as the construction of new buildings with high level of energy efficiency.

At the end of 2021, the proceeds allocated are ca. 45 million euro equal to ca. 40% of eligible progects under this category which amount to circa 110 million euro. 9 out of 13 projects are related to deep renovation and energy efficiency²⁰ of Snam's buildings which are responsible for a cumulative **reduction of the impact on the environment for ca. 184 ton/CO₂eq** per year as the result of the energy saving following the interventions. An improvement of at least two energy classes for relevent projects is estimated.

The remaining projects are related to new buildings which are in progress and the completion is planned in the next few years. For these projects best-in-class energy efficiency solution will be adopted and LEED certificates and B/C energy classes are expected. In particular, one of the new building is related to the new headquarter for the Group for which a detailed case study can be found below.

5. RETROFIT OF GAS TRANSMISSION NETWORK

The fifth category of the Framework includes investments in (i) Research and Development on green gas transportation and storage activities with the aim of assessing the full compliance of Snam current assets with hydrogen and preparing them to transport higher and higher percentage of green gasses; and ii) the replacement of already existing pipelines with new certified hydrogen-ready²¹ pipelines. The hydrogen readiness of new replaced pipelines is assessed by considering the technical features that new pipelines have and testing them on several operational scenarios.

The retrofit of gas transmission network accounts for more than half of the total eligible projects under the Framework. At the end of 2021, within this category, 22 replacement projects have been identified and all of these are currently under execution. The extension of pipelines that will be replaced over the next four years is expected to be ca. 1.300 km and, as also stated in Snam Business Plan presented in November 2021, Snam expects to replace ca. 3000 Km of network applying H2-ready standards.

Since 2020, the amount allocated to this category has been increasing noteably and at year-end 2021, ca. 800 million euro have been allocated and circa 190 km of new replaced hydrogen-ready pipelines are already in operation.

20 The main interventions are exterior insulation, condensing boilers and heat pumps, photovoltaic plant and LED lamps.
21 For hydrogen-ready pipelines Snam means SNAM internal standards ("GASD") coming from the implementation of international standards currently available. Design and construction of all SNAM network are based on these standards including company's know-how. The SNAM's network "hydrogen-ready" is based on the ASME B31.12' "Hydrogen Piping and Pipeline" standard. GASD remain unchanged for H2NG mixtures up to H2 100% in volume. These standards regulate design and construction phases of new gas network. For more details, see the case study "Retrofit of gas transmission network projects: qualification of H-ready pipelines".

CASE STUDIES OF SELECTED PROJECTS

CARBON & EMISSION REDUCTION PROJECTS: REVAMPING OF MALBORGHETTO STATION AND IN-LINE PLANTS

The compression station of Malborghetto has been revamped to allow the import of natural gas from Russia, and its delivery through the Italian network of gas pipelines. At present, it is equipped with:

- 2 compression units (TC1 and TC2) composed by a gas turbine, type NP-FR 3R, with centrifugal compressor, type NP-PCL802-1/30. These compression units (realized in the '70s), due to their elevate range of emissions of NOx and CO, have been restricted to operate for a maximum of 17500 hours each, starting from the 1st January 2016 to the 31st December 2023. After this date, those will have to be dismantled.
- 2 compression units (TC3 e TC4) composed by a gas turbine NP-PGT25 DLE, coupled with a centrifugal compressor NP-PCL 603-2
- 1 compression unit (TC5) made up of a gas turbine NP-PGT25 DLE, coupled with a centrifugal compressor NP-PCL 603-1

The implementation of the Project "Revamping of Malborghetto station and inline plants" will allow Snam to completely renew the following parts of the implant of the station, those which are more in need of urgent actions considering their obsolescence, and in order to keep on respecting the Snam Rete Gas internal codes and standards related to reliability levels of the network operability:

- Replacement of the compression units (TC1 and TC2) with 2 brand-new units of ca. 12MW, composed by an electric motor and an integrated centrifugal compressor, characterized by zero NOx and CO emissions.
- The choice of these electric integrated units will allow, on one hand, the installation of a brand-new technology and, on the other hand, the reduction to zero of the emissions released into the atmosphere.
- These new electric compression units will require, to be powered, a new connection with the Terna electricity grid, which in turn will imply the design and creation of a new Switching Station powered at 132kV, and a Distribution Substation reducing the voltage from 132 to 20 kV, together with their relative connections in HV (high voltage) and MV (medium voltage);
- Revamping of all the aged instrumentation, of the protection and control system, of the switchboards and of the auxiliary systems with those adequate to allow the installation of these 2 electric compressors
- Upgrade of both the piping and the auxiliary implants of the station, linked to the gas transportation network, in order to adequate them to the transport regimes
- Replacement of current all the gas-powered Actuators, with Pneumo-Electric-Hydraulic ones, which will allow the reduction of pneumatic emissions in the atmosphere.

Activities planned to date, following the authorized MAP:

- 2019-2020 Detail Engineering –
- 2020-2022 Main Permits (Still on goingo at the date of the report)
- 2021-2022 Procurement Main Materials and Construction
- 2022-2025 Construction²² (commissioning and end-over of the two new units forecasted for December 2024).

²² The first operation date of the new ELCO EC5-6 will be heavily dependent from the authorization process during the construction.regulate design and construction phases of new gas network. For more details, see the case study "Retrofit of gas transmission network projects: qualification of H-ready pipelines".

RENEWABLE ENERGY PROJECT: THE ENERSI PLANT

Enersi Sicilia is an innovative project that involves the recovery of the organic fraction of solid urban waste (the Italian acronym is "FORSU") through the construction of a biomethane production plant and quality compost. The biomethane produced will be inserted in the network as a renewable energy source while the compost will be used as a natural fertilizer to replace chemical fertilizers.

Snam4Environment, a wholly-owned subsidiary of Snam, was involved in the operation. The conclusion of the first phase happened in November 2018, with the acquisition of a company vehicle holding an authorization to build and operate a biomethane-powered production plant of FORSU.

Construction works began in December of the same year and, from the last update on their status of progress, they should end with the introduction of biomethane in Snam networks by Q1 2022, despite some slowdowns due to an appeal to the TAR introduced by some local committees.

The numbers of the project

The plant will be able to recover around 40,000 tons/year of FORSU and will contribute to improving the efficiency of the waste management system of the Province, and of the Region, by favouring the reduction of the environmental impact through a lower use of landfills and waste transport outside of the Region, therefore also reducing costs for the municipality and the citizens.

The key numbers of the project:

- Project investment: 26.4 M€
- Approximately 3.0 Mmc/year of biomethane (corresponding to an annual energy production of approximately 30 GWh) produced equal to:
 - approximately 3.000 families served for one year with the biomethane produced, or
 - approximately 570 cars a day fed with the biomethane produced, or
 - over 3.500 equivalent tons of oil saved per year, and
 - Approximately 7.000 tons/year of compost produced, intended for agronomic use and replacing chemical fertilizers

What are the advantages for the territory, thanks to the Enersi Sicilia plant?

The main and immediate advantages for the territory are:

- Employment and skills generation: at least 8 permanent and qualified jobs;
- Investments within the territory: economic return on local companies, which will be involved in the construction, support and supply phase of the plant;
- Savings for the citizens and/or the municipality in terms of transfer tariffs to the Enersi Sicilia plant: the construction of the plant within the Caltanissetta basin will reduce the distances travelled by the vehicles that are currently transporting the organic waste produced locally outside the province, minimizing the long-range vehicle traffic, and therefore the logistics costs attached to it. There is also a consequential improvement on the relative atmospheric emissions of the vehicles mentioned above.



ENERGY EFFICIENCY PROJECT: TEP ENERGY SOLUTIONS

TEP Energy Solution is one of the main Italian Energy Service Companies, in charge of energy efficiency operations by offering casebased solutions aimed at reducing companies' economic and environmental cost. In 2020 Snam concluded the acquisition of 100% of TEP's capital, to further the decarbonization of the country and a better use of energy in the areas where it operates.

TEP's mission is to contribute to the energy transition helping its customers to reduce their environmental footprint both through energy efficiency solutions and tree planting in urban areas.

The main strengths of TEP Energy Solution are technological independence, investment capacity directly to customers' projects, an R&D team dedicated to scouting of technological solutions, and large operational and contractual flexibility.

Amongst TEP Energy Solution's successes, it is important to note that more than 13 million tons of CO₂ are annually avoided thanks to their projects, it has been accredited in the Italian energy services manager (the English translation of "gestore dei servizi energetici GSE S.p.A.") since 2006, it has accumulated over 200 clients, and it handles over 1.5 million white certificates.

As a company operating in the energy efficiency business, **the commitment for sustainability and decarbonization is at the core of the TEP's business strategy**. Besides this, TEP developed a special attention to the regeneration of cities and it is committed to continue to create urban woods which are functional both against air and noise pollution and as leisure spaces for local communities.

TEP's sustainability strategy fits into Snam's

one, which acknowledges the company's success through a combination of economical, environmental and social factors addressing all the stakeholders' requests. With the adoption of its new business strategy, Snam aims to be a reference point for the Italian and European path towards decarbonization.

TEP Energy Solution has envisioned various energy efficiency projects, either for companies, for the public administration, and for condominiums. The following meaningful projects will be explored in detail: CasaMIA, Energy Performance Contract, Nearly Zero-Energy Buildings, and ambitious photovoltaic efforts.

CasaMIA

CasaMIA (Italian for "my home") is TEP's complete solution for the energy requalification of condominiums. It is an organic program of intervention project that finances itself with the energy consumption savings (up to 70%) and with a certified tax credit, while at the same time increasing the residential building's comfort and the wellness of the residents. Moreover, CasaMIA helps Italian condominiums to reduce their environmental impact, increase their value (up to 15%) and contribute to the city wellbeing, thanks to the planting trees activity specifically supported by the project.

A successful example of the CasaMIA project was completed in August 2019 in the suburbs of Crotone. After only a couple of months, TEP Energy Solutions managed to renovate radically a condominium by providing and installing the outer vertical coat in expanded polystyrene, stapled with steam. **The sum of the energy saved by the building was 31%**.

Sustainable Energy Program

The Sustainable Energy Program assists companies to develop new strategies allowing a more sustainable use of the natural capital – an innovative and sustainable path to increase their energy and social and environmental performance.

This program is meant to offer long term solutions useful for the industrial planning of customer companies.

Tep, investing along with its customer, manages all the energy related topics and helps companies to take strategic decisions and sustainable planning (ESG).

The Sustainable Energy Program's purpose is to identify an Action Plan to be developed in the following steps:

- Operational: aiming to improve the energy and emission performance of the customer company
- Managerial: aiming to sustain the continuous improvement of the customer company's performance
- Communicational (knowledge): aiming to improve the customers company's ability to communicate the determinants of the decision-making processes.

TEP Energy Solution's first Nearly Zero-Energy Buildings

In 2020 TEP Energy Solution initiated the deep renovation of two residential complexes in Ponte di Legno (BS), hence developing its first "Nearly Zero-Energy Buildings", i.e. buildings that, thanks to the technologies and materials employed, consume very little energy and are able to generate the amount they need directly on site, from renewable sources.

The intervention is part of TEP's commitment to support renovation of urban centres and the overall economic and social development of territories, also through the involvement of local businesses. The project concerns 80 real estate units for a value of 15 million euro and is aiding the recovery of an area with a strong tourist vocation, that was structurally compromised. The buildings, dating back to the first half of the 1970s, will be rebuilt according to the new anti-seismic legislation and will be subject to further improvement interventions: acoustic insulation, removal of architectural barriers to enhance accessibility, renovation of the surrounding areas and reduction of the landscape impact.

In the post-intervention configuration, the buildings will fall within the A4 energy class, the highest under current law. From an energy point of view, a thermal coat and integrated photovoltaic systems will be installed, as well as the connection to the city district heating network. The interventions will benefit from the Sismabonus and Ecobonus fiscal incentives, thus allowing for a substantial saving in the investment costs.

The renovation plays a strategic role also for the tourist value of Ponte di Legno, a well-known locality in Valcamonica (Brescia) and one of the main towns in Lombardy: part of the Adamello Park, the town is a destination for quality tourism in both winter and summer. The complexes involved in the project are located near touristic and accommodation destinations, such as ski slopes, as well as next to the future headquarters of the Terme di Ponte di Legno, which is to become one of the main attractions of the whole Camonica Valley.

The project has been made possible thanks to the CasaMia (MyHouse) program developed by TEP to support residential buildings in increasing their energy efficiency and seismic sturdiness through fiscal stimuli.

TEP Energy Solution's Ambitious Photovoltaic Efforts

In 2020 TEP completed a large-capacity photovoltaic power station for a major Italian company active in the transformation of hightech metals for the automotive sector.

The project is an important example of the potential of distributed generation and self-consumption. Namely, it has led not only to considerable economic savings for the company – thanks to the reduction of energy withdrawals from the grid and to the ability to sell energy on it – but also to an important downsizing of its carbon footprint – thanks to the reduction of polluting emissions. The company will in fact be able to sell to the grid almost 15% of the generated energy and will avoid the emission of about 1.000 ton of CO₂ into the atmosphere per year.

The power station, installed on the roofs of the Prealboino (BS) plant, enjoys a relevant size with an extension of over 20,000 square meters, almost 3 football fields, and represents a very ambitious investment for the Italian renewable energy sector, adding up to about 3% of the annual market.

TEP will also support the customer in the ordinary and extraordinary maintenance of the power station for the next 20 years in order to ensure its optimal energy performance.

The project has been developed thanks to the Sustainable Energy Program created by TEP to guide companies, through a continuous improvement approach, in increasing the energy efficiency of their operations, all the while minimizing their environmental footprint.



RETROFIT OF GAS TRANSMISSION NETWORK PROJECTS: QUALIFICATION OF H-READY PIPELINES

In the transition to a net zero-emission economy and, later on, in a fully decarbonized world, **hydrogen in combination with renewable electricity will play a major role among energy sources**. Green gases are expected to represent almost one third of the energy mix by 2050.

Hydrogen, the first element of the periodic table and the most abundant in the universe, is present, combined with other elements, in compounds such as water or minerals, hydrocarbons and biological molecules. Hydrogen is not present in nature in its essential form. However, it can be produced through a wide range of chemical and physical processes. The cost of production of green hydrogen is expected to decline quickly in the coming years, making hydrogen competitive vis-à-vis fossil fuels and allowing decarbonization of the hard to abate sectors. Hydrogen can become a "game changer" for energy transition.

Snam is among the first mover in the hydrogen space having been the first Gas TSO to successfully test a 10% blending of H2 on part of the infrastructure and the creation in 2019 of a dedicated business unit, while expanding its footprint in the H2 ecosystem also by striking an industrial partnership with De Nora, a global leading player in sustainable technologies.

In its long term strategy, Snam focused on these areas of development in the hydrogen:

- 1. Ensuring that assets are "hydrogen ready" and can accommodate growing blends²³;
- 2. Promoting the creation of a national H2 backbone mainly based on repurposing the existing gas infrastructure;
- 3. Developing hydrogen projects starting from small scale national projects and evolving to larger and more international integrated ones, also in partnership with other players leveraging on well established energy transition platforms and unparalleled execution capabilities.

Starting from H2 readiness, analysis over the ca 33.000km of pipes have been completed applying the internationally recognized standard (ASME B31.12) dealing with the transport of hydrogen by pipe. It confirms that almost all the existing network is ready to transport up to 100% H2, although in some cases this leads to a reduction of the Maximum Operating Pressure (MOP).

The entire verification process, as well as the determination of the applicable MOP for the transport of hydrogen, will be certified by RINA, one of the leading international third parties certification bodies.

In storage, the results of the first tests run with universities and research centers on the possibility of storing hydrogen in blend with natural gas up to significant percentages also up to 100% without identifying changes or alterations, are particularly encouraging. The next step envisages a first pilot project in a Snam site to check test results over the long term.

Over the period 2021-25, Snam will be involved in the replacement of 1.300km of gas pipelines with hydrogen ready standards. All the replacements will be done in respect of standards based on ASME B13.12 "Hydrogen Piping and Pipeline" so that they will be able to accept hydrogen up to 100% of the H2NG mixture.

Italy is particularly well-suited for hydrogen thanks to its excellent natural resources for generating renewable power, and its existing gas infrastructure network – including the connections to North Africa, with low-cost hydrogen to break-even before 2030 – earlier than other European markets.

²³ To date, studies suggest pipelines can accommodate high percentages of hydrogen with limited adjustments. Snam has tested the impact of a 10% blend on existing turbo-compressors, and scouting the market for machines which can reach higher percentages. Membranes to separate different gasses before the final delivery are also interesting because of the flexibility they provide to the network.

In the vision to 2030, it was presented that Snam projects to deliver by 2030 a H2 backbone of 2.700 km mainly repurposed all the way from Mazara del Vallo in the South to our export locations Passo Greis and Tarvisio in the North.

This infrastructure will connect green H2 production areas in the South and potential blue H2 supply in the North East, with industrial consumers throughout the country. It is essential for the hydrogen market to develop at scale, allowing the transport of 20 TWh by 2030, but already targeting at least 150 TWh at full development and unlocking hydrogen at a levelized cost of 2-4 €/kg.

The backbone is the first step towards the creation of an integrated, interconnected national hydrogen market in Europe, and

the positioning of Italy as an hydrogen hub. Further investments will emerge to serve growing Italian demand and export opportunities, especially leveraging on the renewable potential in North Africa. There are parallel lines from North Africa to Germany, which could facilitate the early emergence of an export route.

We expect the Italian Hydrogen Backbone to be regulated, in line with the orientation that is emerging at the European level with the Hydrogen and decarbonized gas package presented by the European Commission in December 2021. The package highlights the key role of hydrogen in achieving carbon neutrality and represents a further step in the definition of a framework in order to support the development of a hydrogen value chain.



A NEW AND INNOVATIVE HEADQUARTER FOR A BEST-IN-CLASS UTILITY COMPANY

A space designed to focus on people and respond to future working dynamics, in connection with the city and nature. Operational in 2024, the new building will stand alongside the historic San Donato office site and it will host approximately 1,000 employees of the Milan area.



In 2021, Snam has signed an agreement with Covivio for the purchase of a future building in Milan which, starting from the first quarter of 2024, will become the company's headquarters, alongside the historic San Donato Milanese office site. The new building will be developed in the Symbiosis district²⁴ in accordance with the sustainability criteria of the European Sharing Cities initiative and was designed to give centrality to people and future work dynamics. It will be integrated with the city and its green area, thereby contributing to the urban regeneration of the area south of Porta Romana.

Consistent with Snam's purpose of contributing to the energy transition in the interest of all its stakeholders, the project adopts an innovative approach to respond to some of the main environmental challenges of our time, such as reducing CO₂ emissions, improving air quality and making cities more livable.

The decision to build a new headquarters has two objectives: on one side, to optimize Snam's real estate presence in the area, which has grown over time alongside the company's development and is now distributed over five different sites between San Donato Milanese and Milan, by embracing approximately 1,000 people. On the other, to create a modern space that is increasingly coherent with new ways of working, increasingly flexible and open to social interaction, with more services for people and greater integration with the community and the area.

The new building will be built between Via Condino and Via Vezza d'Oglio in the dynamic district "Symbiosis", where other relevant companies have settled. Symbiosis is an innovative and sustainable urban regeneration project, developed by Covivio, with zero local emissions and mainly powered through renewable sources. Designed by Piuarch – a Milan-based firm that has always been attentive to the values of environmental quality and relationship with its context, which operate with a view to energetic, social, landscape and innovation sustainability – the building will have a total surface area of approximately 19,000 m² and will consist of three overlapping volumes over 14 floors.

The building integrates a wide range of elements to meet tomorrow's working needs: in addition to flexible and efficient offices, it will embrace various inclusive spaces dedicated to social interaction. The alternation of working environments with spaces dedicated to collaboration, creativity and innovation will also be flanked by services that will help to ensure high levels of wellbeing for people. A space where the office is no longer just a physical place of work, but a destination, a place where people can generate value for all stakeholders and experience Snam's sense of community.

Designed according to the highest standards of sustainability and comfort, the building will meet the most important national and international certifications in terms of energy efficiency (LEED & WELL not below Gold, BRAVE, CENED and Casaclima). This project reflects Covivio's CSR commitments and its vision of tomorrow's real estate, which the group is also deploying in all its urban regeneration projects.

One of the key aspects of the project is the continuity of greenery between outdoor and indoor spaces, which will promote air quality in the working environment. Outdoor, a park of over 8,500 m² by Antonio Perazzi, the landscape designer with an open-air green theatre, which will also be open to the public for outdoor educational activities and events. A landscape with a recognizable, innovative and ecological design and at the same time very respectful of the environment.





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