



## We contribute to the fight against climate change

Actions	Target	2022 Performance
Enhancing the activities of ESCo Geoside	<ul style="list-style-type: none"> <li>– 280,000 MWh saved by ESCo customers, corresponding to about 62,000 tons of CO<sub>2</sub>, thanks to energy efficiency interventions implemented between 2022 and 2028</li> </ul>	<b>9,530</b> <hr/> tCO <sub>2</sub> eq
Reducing the Group's energy consumption and greenhouse gas emissions	<ul style="list-style-type: none"> <li>– -34% of Scope 1 and 2<sup>74</sup> emissions by 2028, -42% by 2030 (baseline 2020), Net Zero Carbon by 2050</li> <li>– -27% of net energy consumption by 2028, -30% by 2030 (baseline 2020)</li> <li>– -25% Gas leakage rate<sup>75</sup> by 2028 (baseline 2020)</li> </ul>	<b>-18.5%</b> <hr/> Scope 1 and 2 emissions  <b>-20.3%</b> <hr/> net energy consumption  <b>-13%</b> <hr/> gas leakage rate
Reducing the GHG emissions from the Group's value chain	<ul style="list-style-type: none"> <li>– -30% Scope 3 emissions by 2028 (baseline 2020)</li> </ul>	<b>-25%</b> <hr/> Scope 3 emissions

74. Market-based.

75. Volume of fugitive emissions of natural gas/volume of gas distributed



## We count on digitalisation to bring about the energy transition and the decarbonization

135

I Directors' Report

II Consolidated Financial Statements

IV Annexes to the Consolidated Financial Statements

Actions	Target <sup>76</sup>	2022 Performance
Repurposing the network to increase its flexibility and ensure the necessary connections for the distribution of biomethane and hydrogen	<ul style="list-style-type: none"> <li>100% network ready to accommodate hydrogen by 2028</li> <li>100% digitised network by 2024</li> </ul>	<p>95% of the network is already compatible with a 20% H2, in blend H2NG (plants currently compatible up to 2%)</p> <p>At the end of 2022, DANA operated 80 of the 767 plants in the Italgas Group's network. There are 2,091 digitised sub-networks, out of the Italgas Group's total of 5,550 sub-networks (total figure as at 31 December 2022)</p>
Extending the network to non-methanised territories	<ul style="list-style-type: none"> <li>100,000 new users connected to the extensions of Group's natural gas distribution networks by 2028, in areas currently not methanised, thus replacing more polluting sources, allowing sector coupling and reducing costs for customers</li> </ul>	<p><b>6,000</b></p> <p>new users connected to the Group's natural gas distribution network expansions in Italy</p>



## We protect ecosystems and promote a circular economy


Actions	Target	2022 Performance
Introducing ecodesign principles in smart meters production	<ul style="list-style-type: none"> <li>50% of all active smart meters designed according to «Design for environment» criteria in lieu of GPRS meters by 2028</li> </ul>	<p>In 2022, the first prototype was produced and manufactured, and around 20,000 pre-series pieces are scheduled for production towards the end of 2023</p>
Reducing the amount of waste sent on for disposal	<ul style="list-style-type: none"> <li>100% of waste produced annually by the Group sent on for recovery by 2028</li> <li>93% of waste produced annually by the contractors of the Group sent on for recovery by 2028</li> </ul>	<p><b>97.6%</b></p> <p>of annual waste produced by the Group sent for recovery</p> <p><b>94.5%</b></p> <p>of annual waste produced by the Group's contractors sent for recovery</p>
Managing and mitigating the impact of the Group on the ecosystems	<ul style="list-style-type: none"> <li>Realisation by 2024 of an integrated model for the evaluation, management and monitoring of the impacts of Group activities on the ecosystems</li> </ul>	<p>Issuance of Guidelines for Biodiversity and Ecosystem Services (BES) Management and Ecological Sensitivity Mapping for the Biodiversity of Italgas Assets</p>


76. The targets refer to the scope of Group companies consolidated on a line-by-line basis as at 2021, thus not including any changes as a result of ATEM tenders, M&A transactions and DEPA Infrastructure.

## Consumption

The energy source used the most in the Group's activities is natural gas, in both civil and industrial uses, and for vehicles. Since 2016, Italgas has been monitoring its consumption with the aim of reducing its environmental impact over time according to a continuous improvement process in line with the objectives identified in its 2022-2028 Strategic Plan.

Energy consumption totalled 472,0 TJ in 2022. The figure shows a marked improvement over 2021 (-125.2 TJ, corresponding to a reduction of -21.0%).

 Italy					
Net energy consumption <sup>79</sup>	u.m.	2020	2021	2022 <sup>80</sup>	% Change 2021-2022
Fuel energy consumption for industrial use	TJ	322.5	319.3	242.6	-24.0%
Fuel energy consumption for civil use	TJ	45.5	46.7	32.4	-30.6%
Fuel energy consumption for vehicles	TJ	123.0	137.2	111.5 <sup>81</sup>	-18.7%
Net electricity consumption for industrial use	TJ	56.8	56.6	51.7	-8.7%
Net electricity consumption for civil use	TJ	44.0	37.1	33.5	-9.7%
Thermal energy consumption for civil use	TJ	0.3	0.3	0.3	0.0%
<b>Total</b>	<b>TJ</b>	<b>592.1</b>	<b>597.2</b>	<b>472.0</b>	<b>-21.0%</b>

 Greece		
Net energy consumption	u.m.	Sep-Dec 2022
Fuel energy consumption for industrial use	TJ	1.2
Fuel energy consumption for civil use	TJ	0.5
Fuel energy consumption for vehicles	TJ	4.5
Net electricity consumption for industrial use	TJ	0.4
Net electricity consumption for civil use	TJ	2.1
<b>Total</b>	<b>TJ</b>	<b>8.7</b>

### Fuel energy consumption for industrial use

In 2022, fuel energy consumption for industrial use recorded a decrease of 76.7 TJ, falling from 319.3 TJ to 242.6 TJ (-24.0% compared to 2021).

Thanks to the efficiency initiatives implemented, a decrease was recorded in industrial self-consumption of natural gas for the gas preheating process: over the year, at Italgas Reti, 392 preheating optimisation systems were installed, while Toscana Energia completed the efficiency campaign on its plants.


79. This refers to total energy consumption, from which any self-produced and self-consumed electricity consumption is subtracted. Geoside's consumption related to heat management and energy service contracts is not counted. These contracts provide for the registration of gas and district heating supplies to Geoside in order to provide the heating service to the managed buildings. For 2022, consumption is as follows: 9,561,160 MWh (equivalent to 34.4 TJ) for "district heating energy/heat management services", 2,984,971 sm<sup>3</sup> of methane (equivalent to 117.6 TJ) for "energy/heat management services".

80. The 2022 consumption values have been calculated using the ISPRA 2022 conversion factors - Table of national standard parameters: standard parameters - fuels/materials.

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

- Other Indirect Emissions (Scope 3): arising from travel (business travel), outsourced activities (supply chain) and emissions related to purchased energy production.

The Italgas Group's main greenhouse gas emission contribution is from fugitive emissions of natural gas from distribution networks, distributed gas preheating processes in the decompression systems and the use of cars in the corporate fleet.

 Italy					
Scope 1 and Scope 2 <sup>84</sup>	u.m.	2020	2021	2022 <sup>85</sup>	Change % 2021-2022
Fugitive gas emissions <sup>86</sup>	(10 <sup>3</sup> tCO <sub>2</sub> eq)	146.6	133.4	120.0	-10.0%
Emissions from gas consumption for industrial use	(10 <sup>3</sup> tCO <sub>2</sub> eq)	18.2	18.1	13.8	-23.8%
Emissions from gas consumption for civil use	(10 <sup>3</sup> tCO <sub>2</sub> eq)	2.6	2.6	1.8	-30.8%
Emissions from fuel consumption for vehicles	(10 <sup>3</sup> tCO <sub>2</sub> eq)	5.7	6.4	5.4 <sup>87</sup>	-15.6%
Emissions from thermal energy for civil use	(10 <sup>3</sup> tCO <sub>2</sub> eq)	0.0	0.0	0.0	0%
Emissions from electricity consumption for industrial use	(10 <sup>3</sup> tCO <sub>2</sub> eq)	0.2	0.0	0.0	0%
Emissions from electricity consumption for civil use	(10 <sup>3</sup> tCO <sub>2</sub> eq)		0.2	0.2	0%
<b>Total</b>	(10 <sup>3</sup> tCO <sub>2</sub> eq)	<b>173.3</b>	<b>160.7</b>	<b>141.2</b>	<b>-12.1%</b>

2022 saw a drop in total Scope 1 and Scope 2 emissions of 12.1% compared to the previous financial year. The main components that contributed to this decrease are fugitive emissions and emissions from gas consumption for industrial use, which in total make up about 95% of the total Scope 1 and Scope 2 emissions.

Gas emissions for civil and industrial use are in line with the consumption trend described in the "Consumption" section, while emissions from transport fuel consumption decreased by 15.6%, in line with the aforementioned trend. The initiatives implemented resulted in an overall reduction of more than 42% in NO<sub>x</sub> emissions on 2021 (0.085 gNO<sub>x</sub>/km). Another significant parameter is the value of Particulates (0.0005 gPart/km). The savings obtained, if the same number of kilometres had been travelled using a non-bifuel and older fleet of operations vehicles, is quantified as ranging between 50 and 55% of nitrogen oxides and 1500% of particulate; CO<sub>2</sub>savings amounted to 1.5 thousand tonnes. These indicators provide further representation of the capacity to reduce emissions levels, brought about by the fleet transformation project.

84. Scope 2 market-based.

85. The 2022 emission values were calculated using the ISPRA 2022 Emission Factors – Table of national standard parameters: standard parameters – fuels/materials

86. Thanks to the collaboration with the Polytechnic University of Turin to estimate the fugitive emissions that cannot be quantified with the CRDS system, the values for 2022 also include the estimate of emissions from permeation, operational, due to maintenance on reduction units and for meter replacements (about 0.97% of total fugitive emissions).

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