INDUSTRIAL WATER

The Italgas Reti production process does not involve the use of water for industrial purposes, with the exception of the quantities used to top up the gas preheating systems, inserted inside the cabins used to reduce the pressure of gas collected from the high pressure gas pipe system, without the presence of industrial drains.

Medea also uses water, which is heated to vaporise the LPG in liquid phase as it leaves the tanks. This water, which is also released into the fire-fighting system, is collected from the aqueduct or groundwater via wells. At the Sassari plant, the washing water is released to the ground, after treatment, in compliance with the authorisation.

For 2020, as part of the reclamation work, approximately 230,670 cubic metres of water were taken from the contaminated groundwater; this was treated to take the concentrations of pollutants back to the limits permitted for discharge in public drains, in compliance with current legislation and authorisations.

WATER FOR CIVIL USES

The Italgas Reti Environmental Analysis, prepared in accordance with standard UNI EN ISO 14001, showed that use of water resources is not a significant environmental aspect. However, the safeguarding of resources and their rational use is envisaged by the HSEQ Policy. This is why the Group is committed to reducing limited water consumption. The withdrawal of fresh water from the aqueduct, used for hygiene-sanitary purposes in the changing rooms and offices and for the fire-fighting system, came to approximately 98 thousand cubic metres. As regard civil drains, all waste water is conveyed, considering its nature, to the drains without any treatment.

This differs for Italgas Acqua, the Group company that manages the distribution of water under concession in five municipalities of Campania. For this company, managing water consumption means collecting the water, making it suitable for drinking and distributing it to the city, guaranteeing quality standards and continuity and regularity of service.

Main Key Performance Indicators

NFS

STANDARD GRI 302-1 ENERGY CONSUMPTION WITHIN THE ORGANISATION

ENERGY CONSUMED WITHIN THE ORGANIZATION	U.O.M.	2018	2019 [51]	2020
FUEL ENERGY CONSUMPTION				
Fuel energy consumption from non-renewable sources				
Fuel energy consumption for civil and industrial use	TJ	361.08	367.70	368.03
_ *of which natural gas for civil use*		47.59	45.29	45.29
_ *of which natural gas for industrial use*		311.15	313.62	310.15 [52]
_ *LPG and propane air for civil and industrial use*		2.34	8.79	12.59
Fuel energy consumption for vehicle [53]		97.24	122.04	122.99
_ *of which diesel*		63.98	17.90	10.96
_ *of which petrol*		19.37	25.45	18.10
_ *of which natural gas*		13.89	78.68	93.94 [54]
Fuel energy consumption from renewable sources				
Fuel energy consumption from renewable sources	TJ	0	0	0
Total fuel energy consumption				
Total fuel energy consumption	TJ	**458.32**	**489.74**	**491.03**

[51] The data relating to the consumption of natural gas energy by vehicles has been restated with respect to the 2019 Non-Financial Statement. For the value reported in the 2019 Consolidated Non-Financial Statement, please refer to the document published on the Group's website at https://www.italgas.it/export/sites/italgas/italgas-gallery/Documenti_it/Non-Financial-Statement-2019.pdf.

[52] Please note that as compared with 2019 and 2018, propane air has been considered separately from LPG.

[53] For more details on the trend of consumption linked to vehicles, refer to the specific graphs and information in the paragraph "Emissions and related reduction actions" of this document.

[54] The trend of energy consumption is consistent with the change in the fuel mix used by the vehicle fleet. For more details on the trend of consumption linked to vehicles, refer to the specific graphs and information in the paragraph "Emissions and related reduction actions" of this document.

ENERGY CONSUMED WITHIN THE ORGANIZATION	U.O.M.	2018	2019 [51]	2020
CONSUMPTION OF PURCHASED ENERGY				
Consumption of purchased energy from non-renewable sources				
Electricity	kWh	28,685,654	27,790,612	413,369
Heating energy	kWh	0	0	88,816*
Consumption of purchased energy from renewable sources				
Consumption of purchased energy from renewable sources	kWh	0	0	27,586,897
Total consumption of purchased energy				
Total consumption of purchased energy	TJ	**103.27**	**100.05**	**101.12**
TOTAL ENERGY CONSUMED WITHIN THE ORGANISATION				
Total energy consumed within the organization	TJ	**561.59**	**589.78**	**592.15**

*This figure refers to the consumption for district heating of the new Seaside site.

STANDARD GRI 302-3 ENERGY INTENSITY

Below are some energy intensity values in respect of different reference parameters:

1. Energy intensity calculated by comparing the total Group energy consumption with the gas distributed. This parameter offers an indication of the quantity of energy used to supply $10^6 Sm^3$ of gas.

ENERGY INTENSITY	U.O.M.	2018	2019 *	2020
Global energy intensity	$TJ/10^6 Sm^3$	0.071	0.074	0.070
Total energy consumed within the organization	TJ	561.59	589.78	592.15
Gas distributed	$10^6 Sm^3$	7,873	8,001	8,477

* In 2019, 3 months of Toscana Energia are considered

2. Energy intensity calculated by comparing the total industrial natural gas energy consumption with the gas distributed. This parameter offers an indication of the quantity of energy used for pre-heating to supply $10^6 Sm^3$ of gas.

ENERGY INTENSITY	U.O.M.	2018	2019 *	2020
Natural gas for industrial use energy intensity	$TJ/10^6 Sm^3$	0.040	0.039	0.037
Total natural gas for industrial use energy consumption	TJ	311.15	313.62	310.15
Gas distributed	$10^6 Sm^3$	7,873	8,001	8,477

* In 2019, 3 months of Toscana Energia are considered

3. Energy intensity calculated by comparing the total Group energy consumption with km of network. This parameter offers an indication of the quantity of energy used to supply the service per km of network.

ENERGY INTENSITY	U.O.M.	2018	2019 *	2020
Energy intensity per km of network	GJ/km	9.15	8.37	8.32
Total energy consumed within the organization	GJ	561,592.27	589.782,89	592,147.77
km of network	km	61,361	70,502	71,185

* In 2019, 3 months of Toscana Energia are considered

4. Energy intensity calculated by comparing industrial electricity consumption with km of network. This parameter offers an indication of the quantity of electricity (mainly for cathodic protection) used to supply the service per km of network.

ENERGY INTENSITY	U.O.M.	2018	2019 *	2020
Industrial electrical energy intensity per km of network*	GJ/unit	0.86	0.785	0.798
Industrial electricity consumed within the organization	GJ	52,634.2	55,374.68	56,824.3
km of network	unit	61,361	70,502	71,185

* In 2019, 3 months of Toscana Energia are considered

5. Energy intensity calculated by comparing the total Group energy consumption with the number of delivery points active. This parameter offers an indication of the quantity of energy used to supply the service per delivery point.

ENERGY INTENSITY	U.O.M.	2018	2019 *	2020
Energy intensity per delivery point*	GJ/unit	0.084	0.078	0.078
Total energy consumed within the organization	GJ	561,592.27	589.782,89	592,147.77
Active delivery points	unit	$6.708 \cdot 10^6$	$7.573 \cdot 10^6$	$7.595 \cdot 10^6$

* In 2019, 3 months of Toscana Energia are considered

STANDARD GRI 303-3 WATER WITHDRAWALS

WATER WITHDRAWALS	U.O.M.	2018	2019	2020
Water withdrawn from the aqueduct	m^3	156,187	134,067	98,014
Water withdrawn from the subsoil		300	4,183	1,497
Total water withdrawn		156,487	138,250	99,511

STANDARD GRI 303-4 WATER DISCHARGE

WATER DISCHARGE	U.O.M.	2018	2019	2020
Discharged in underground water[55]	m^3	30	333	1,387
Discharge to sewers		156,187	137,917	98,014
Sent to other treatment plants		270	NA	110
Total discharges		156,487	138,250	99,511

For the Italgas Group, the water drains correspond to the collections; consequently, water consumption is zero (**Standard GRI 303-5 Water consumptions**).

STANDARD GRI 305-1 DIRECT (SCOPE 1) GHG EMISSIONS

STANDARD GRI 305-2 INDIRECT (SCOPE 2) GHG EMISSIONS FROM ENERGY CONSUMPTION

STANDARD GRI 305-3 OTHER INDIRECT (SCOPE 3) GHG EMISSIONS

STANDARD GRI 305-4 INTENSITY OF GHG EMISSIONS

DIRECT AND INDIRECT EMISSIONS AND OTHER GHG EMISSIONS	GRI STANDARD	U.O.M.	2019[56]	2020
Total scope I	**305-1**	10^3t CO_2eq	**156.3**	**173.1**
Total scope II**	**305-2**		**7.5**	**0.2**
Total scope III	**305-3**		**136.3**	**153.3**[57]
Carbon intensity***	**305-4**	$tCO_2eq/10^6Sm^3$	**20.5**	**20.4**

** 2019: Scope II location-based, 2020: scope II market-based

***Calculated as scope 1 and scope 2 emissions/gas distributed

[55] SPlease note that water is drained in the soil after treatment.

[56] Data restated with respect to the 2019 Non-Financial Statement.

[57] The substantial reduction in scope 3 emissions that characterised 2020 is due to the choice made by Italgas, differently from previous years, to use the final data of contracts (effective cost) rather than that ordered (assigned). In addition, the Scope 3 calculation does not include the companies Toscana Energia Green and Italgas Acqua.

STANDARD GRI 305-7 NITROGEN OXIDES (NO_x), SULPHUR OXIDES (SO_x) AND OTHER SIGNIFICANT EMISSIONS

tNO_x EMISSIONS	2019	2020
Civil	1.26	1.26
Industrial	17.27	17.28
Vehicles	5.04	3.11
Total	**23.6**[58]	**21.7**

EMISSIONS AVOIDED	tCO_2 eq
Network conversion from LPG to natural gas	217
Vehicle fleet conversion	1,250
Renovation of the site at Largo Regio Parco 11, Turin	382
Preheating optimisation systems	500
Installation of smart meters	192
Photovoltaic	2,373
Purchase of electricity from certified renewable sources	7,039
Total emissions avoided	**11,953**

STANDARD GRI 306-4 WASTE DIVERTED FROM DISPOSAL

WASTE BY TYPE AND DISPOSAL METHOD	U.O.M.	2018		2019		2020	
		Hazardous	Non-hazardous	Hazardous	Non-hazardous	Hazardous	Non-hazardous
Recovery/Recycling	t	4.08	795.6	2.0	637.5	31.5	527.9
Of which ferrous material		0	421.8	0.0	581.6	1.0	424.5
of which other material		4.08	373.8	2.0	55.9	30.5	103.4

[58] 2019 NO_x emissions were calculated partly using the 2020 calculation method and, where not possible, the 2019 calculation method was applied.

STANDARD GRI 306-5 WASTE DIRECTED TO DISPOSAL

WASTE BY TYPE AND DISPOSAL METHOD	U.O.M.	2018 *		2019 *		2020	
		Hazardous	Non-hazardous	Hazardous	Non-hazardous	Hazardous	Non-hazardous
Incineration	t	0	0	0	0	0	0.1
of which ferrous material		n.a.	n.a.	n.a.	n.a.	0	0
of which other material		n.a.	n.a.	n.a.	n.a.	0	0.1
Waste sent directly to landfill		0	0	0.3	0	0	0
of which ferrous material		n.a.	n.a.	n.a.	n.a.	0	0
of which other material		n.a.	n.a.	n.a.	n.a.	0	0
Other disposal plant		6.3	2.7	3.9	3.3	3.3	67.0
of which ferrous material		n.a.	n.a.	n.a.	n.a.	0,8	0
of which other material		n.a.	n.a.	n.a.	n.a.	2.45	67.0
Total		6.29	2.7	4.19	3.31	3.25	67.07

*In order to standardise the report with the new version of the GRI, the table has been amended in respect of previous versions, hence waste is not available broken down by type of material for 2018 and 2019.

MAIN DATA ON RECLAMATION	2018		2019		2020	
	n	m^2	n	m^2	n	m^2
Sites involved by reclamation works or to be reclaimed	31	1,477,000	32	1,269,951	32	1,265,551
Certified reclamation works	0	0	3	15,909	0	0
Approved characterisation plans	26	1,233,524	28	1,226,319	28	1,208,348
Approved risk analysis (152/2006) or approved preliminary reclamation projects (pursuant to 471/99)	23	1,155,524	23	1,132,588	23	1,109,240
Approved operative reclamation projects (152/2006) or approved final reclamation projects (pursuant to 471/99)	19	625,213	20	1,120,178	19	1,094,760
Operative safety measures	1	257	1	10,805	1	257
Soil emergency safety measures	0	0	0	0	0	0
Groundwater safety measures	8	0	9	0	10	0