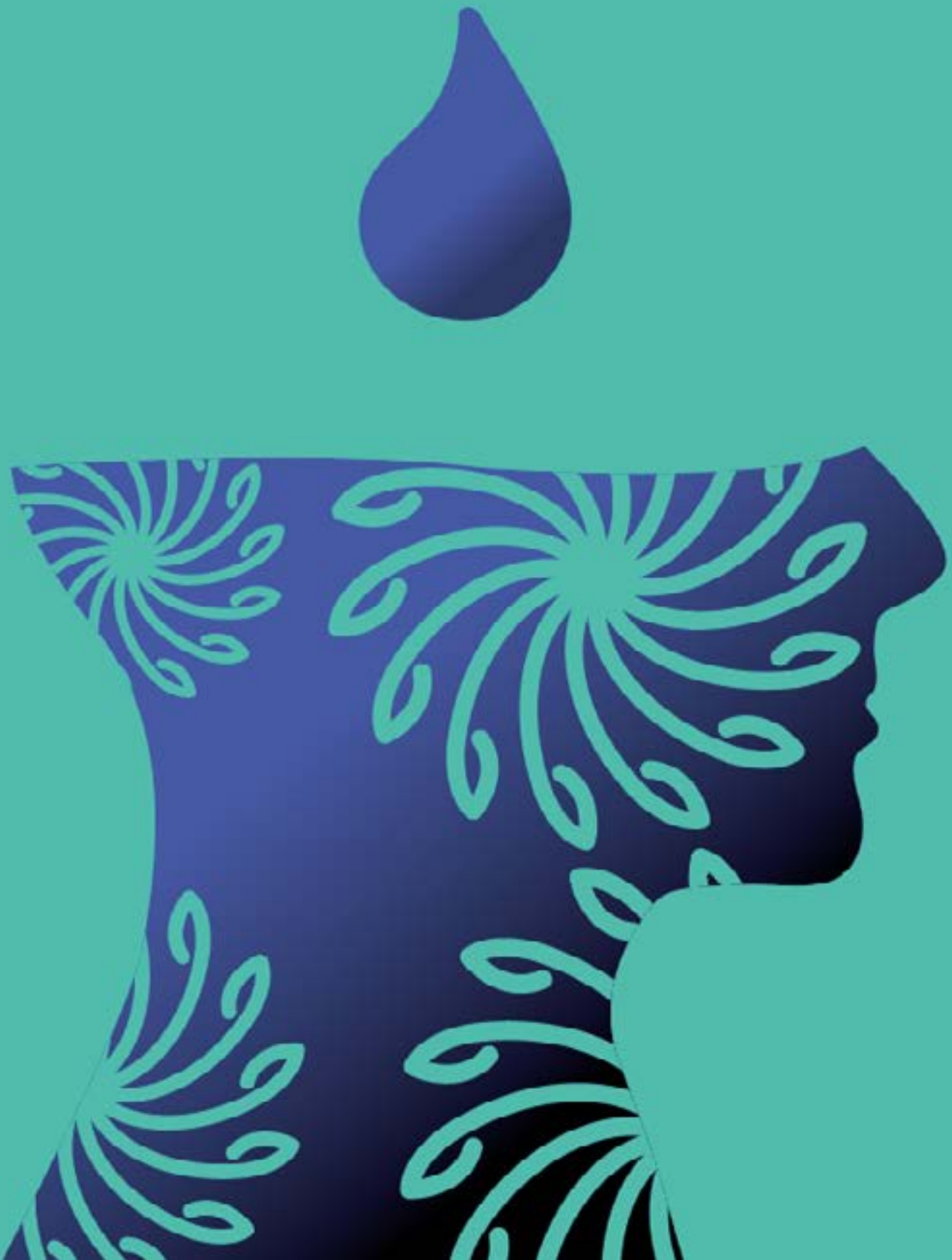
Business segment operating performance



Snam Infrastructures in Italy

NATURAL GAS TRANSPORTATION

ENTRY POINTS / REVERSE FLOW	8
COMPRESSION STATIONS	13
PIPELINES UNDER OPERATIONS	

NATURAL GAS STORAGE

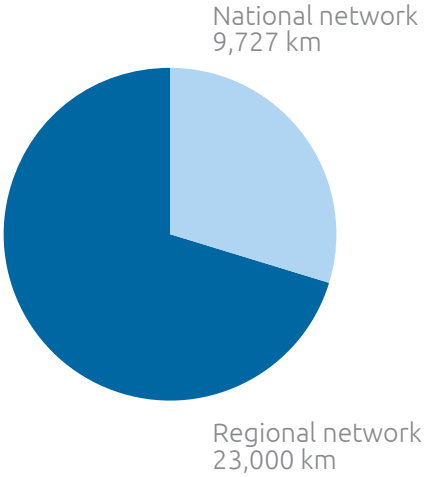
OPERATING CONCESSIONS	9

LNG REGASIFICATION

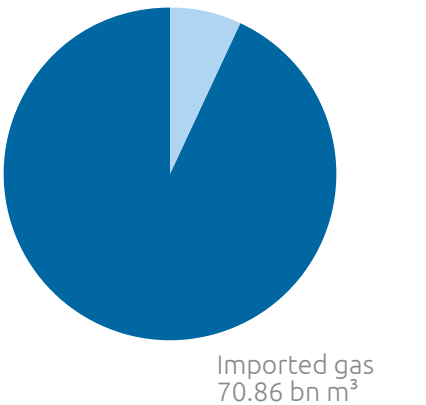
REGASIFICATION PLANT	1

Natural gas transportation

32,727 km
Operating gas pipeline network



75.37 bn m³
Gas injected in the national network



Snam, through its subsidiaries Snam Rete Gas S.p.A. and Infrastutture Trasporto Gas, is the leading Italian natural gas transportation and dispatching operator, and owns almost all the transportation infrastructures in Italy, with over 32,727 kilometres of high- and medium-pressure gas pipelines (approximately 94% of the entire transportation system). Snam manages the gas pipeline network via 8 districts, 48 maintenance centres throughout Italy, 13 compression stations, including the two new Minerbio and Sergnano plants that came into operation in 2018, and a new dispatching unit that has recently been renovated in terms of structure and technology. The gas coming from abroad is fed into the network in the seven import channels, corresponding to the interconnections with the import pipelines and LNG regasification terminals. Once it has been imported or regasified, the gas is transported to the local distribution networks, the regional network redelivery points or large end users such as thermoelectric power stations or manufacturing plants.

Snam awards transportation capacity to shippers who apply. In this way, users acquire the right to inject or withdraw a quantity of gas not exceeding the daily rate allocated on any day of the thermal year. The conditions for access to the service are contained in the Network Code. Shippers have the possibility of making gas sales and trades at a Virtual Trading Point (PSV) of the National Network, thanks to the dedicated IT platform.

The transportation capacity of the network again covered all user demand in 2019. In addition to the average transport capacity offered at entry points connected with foreign countries and with LNG terminals equal to 362.9 million cubic metres/day; Snam has made further transport capacities available at entry points interconnected with national producers for a total of 20.7 million cubic metres average/day and with the production of biomethane for a total of 0.3 million of cubic metres average/day.

Over the last 16 years transport operators have been constantly increasing, going from around 30 operators in 2003 to around 210 operators in 2019 (including shippers and traders).

In 2019, 123 connection agreements were entered into for the creation of new delivery/redelivery points or for upgrading existing ones, including 26 contracts for the injection of biomethane and 61 relating to CNG service areas.

KEY PERFORMANCE INDICATORS

The natural gas transportation sector information includes figures for Snam Rete Gas, Infrastrutture Trasporto and Enura.

(millions of €)	2017	2018	2019	Change	% change %
Total revenue (a)	2,039	2,118	**2,168**	50	2.4
- of which regulated revenues [a]	*1.981*	*2.041*	***2.106***	*65*	*3,2*
Total revenues net of pass-through items [a]	1,874	1,984	**2,031**	47	2.4
Operating costs [a]	452	479	**383**	(96)	(20.0)
Adjusted operating costs [a]	441	462	**418**	(44)	(9.5)
Adjusted operating costs net of pass-through items (*) [a]	276	328	**281**	(47)	(14.3)
EBIT	1,037	1,064	**1,122**	58	5.5
Adjusted EBIT(*)	1,048	1,081	**1,157**	76	7.0
Technical investments	917	764	**813**	49	6.4
- of which with a greater return	*383*	*280*	***249***	*(31)*	*(11,1)*
- of which with basic remuneration [b]	*534*	*485*	***564***	*79*	*16,3*
Net invested capital at 31 December	12,542	12,551	**12,932**	381	3.0
Natural gas injected into the national gas transportation network (billions of cubic metres) [c]	**74.59**	**72.82**	**75.37**	**2.55**	**3.5**
Transportation network (kilometres in use) [d]	32,584	32,625	**32,727**	102	0.3
- of which national network [d]	9,704	9,697	**9,727**	30	0.3
- of which regional network	*22.880*	*22.928*	***23.000***	*72*	*0,3*
Installed power in the compression stations (MW)	902	961	**961**		
Employees in service at year end (number)	1,972	1,915	**1,945**	30	1.6

(*) The figures reported in the adjusted configuration exclude the costs relating to the early retirement costs of €11 million and €17 million for 2017 and 2018, respectively. With reference to 2019, the value exclude the effects of the release to the income statement of the provision for impairment losses following the receivables related to balancing activities (€35 million). More information concerning the adjusted result measures and related special items that are recognised at the consolidated level are provided in the chapter "Comment on the financial results - Non-GAAP measures".
(a) Before consolidation adjustments.
(b) To a pre-tax actual basic WAAC of 5.4% for 2018 an 5.7% for 2019.
(c) The data for 2019 were updated at 27 January 2020. The 2018 figures have been definitively updated and are consistent with those published by the Ministry of Economic Development. With reference to 2019, gas volumes are expressed in standard cubic metres (SCM) with an average traditional higher heating value (HHV) conventionally of 38.1 MJ/SCM (10,572 kWh/SCM).
(d) The figure includes 84 Km of network that refers to Infrastrutture Trasporto Gas.

RESULTS

Total revenue amounted to €2,168 million, up by €50 million, or 2.4%, compared with 2018 (€ 2,118 million). Net of components offset in costs[10], total revenue amounted to €2,031 million, up by €47 million, or 2.4%, compared with the previous year.

Revenue from regulated activities (€2,106 million, largely related to fees for the natural gas transportation service (€2,087 million) and incentives recognised to the Balancing Manager (€16 million) as set forth in Resolution 554/2016/R/gas. Regulated revenue, net of components that are offset in costs, amounted to € 1,969 million, up by €62 million, or 3.3%, compared with 2018. The increase is essentially due to greater transport revenues (+€61 million) main attributable to the tariff updating mechanisms (+€69

10 The main revenue items offset in costs relate to modulation and interconnection.

million) which refer, specifically, to the increase in the WAAC, which rose from 5.4% in 2018 to 5.7% in 2019.

Revenue from non-regulated activities (€62 million) fell by €15 million or 19.5% compared with the 2018, due mainly to few charge backs for technical services provided to other group companies (-€17 million). The reduction corresponds to the lower costs incurred for the provision of related services, with no impact on the operating profit.

Adjusted EBIT amounted to €1,122 million, up by €41 million, or 3.8% compared with the adjusted EBIT for 2018 (€1,081 million). The greater revenue from regulated activities (+€62 million net of components offset in costs) together with the reduction in operating costs (+€32 million compared with the adjusted operating costs in 2018, net of components offset in revenues and service costs subject to recharging within the group), were partly absorbed by the greater depreciation and amortisation (-€30 million) due to new infrastructures coming into service and the greater impairment of works in progress relating to projects in previous years (-€23 million).
Specifically, the reduction in operating costs is mainly due to the lower costs related to the use of gas (+€20 million), also thanks to the recognition, in 2019, by the regulatory authority, of several expenses relating to 2018[11], as well as lower costs for services recharged by the subsidiary Snam S.p.A., also thanks to the management optimisation actions that were implemented for the IT infrastructures.

Technical investments

		2017		2018		2019
Type of investment	Greater remuneration (%) (*)	millions of €	Type of investment	Greater remuneration (%) (**)	millions of €	millions of €
Development of new import capacity	2.0%	276	Development	1.0%	**279**	**249**
Development of the national network	1.0%	10				
Development of the regional network	1.0%	97				
Replacement and other		534	Replacement and other		**485**	**564**
		917			**764**	**813**

(*) Compared with a pre-tax actual basic WAAC of 5.4%.
(**) Compared with a pre-tax actual basic WAAC of 5.4% for 2018 an 5.7% for 2019, applied to investments in a new transport capacity and with a cost/benefit analysis of more than 1.5 pursuant to the ARERA resolution 575/2017/R/Gas.

Technical investments in 2019 amounted to €813 million, an increase of €49 million, or 6.4%, compared with 2018 (€764 million).
The investments were classified in accordance with Resolution 575/2017/R/gas with reference to 2018 and 2019 and 514/2013/R/gas for investments in 2017 whereby the Energy, Networks and Environment Regulatory Authority (hereinafter ARERA or the Authority) identified different categories of projects with different rates of return.

The main investments in new transport capacity **Development** (€249 million), for which a **greater return of 1%** is planned, mainly involve:

- investments in the **development of new transport capacity in the National Network function to the import and export capacity** (€142 million) under the scope of transport network upgrading projects in southern Italy including, specifically, connection with TAP (€95 million) and the ongoing construction works for connection to the Massafra-Biccari pipeline (€13 million), the initiative supporting the market in the north-eastern part of the country and to allow the reversal of physical transport flows at the connection points with northern Europe in the area of the Po Valley (€32 million) due to the continuation of the complementary construction works for the Cervignano-Mortara pipeline and the Sergnano and Minerbio compression plants that came into service from October 2018;
- Investments in the **development of new transportation capacity in the Regional Network and the National Network** (€107 million), including: (i) the works relating to the connection of Italgas Storage S.r.l. of Cornegliano Laudense; (ii) the continuation of the construction and connection works related to the gas conversion of the Calabria Region, including, specifically, the construction activity of the S. Andrea

11 The costs associated with the use of gas are reported excluding the amounts recognised by the Authority following the greater costs for the purchase of gas for the years 2018 and 2019. Taking into account the calculation mechanism used by the Authority for recognising the costs relating to 2018, in July 2019, the company quantified the amount recognised for 2019.

Apostolo-Caulonia pipeline; (iii) the continuation of the construction activities for certain biomethane and CNG connections; (iv) the completion of the complementary construction activities relating to the upgrading of the Gavi-Pietralavezzara pipeline;

Replacement investments and other investments with a **basic rate of return**[12] (€564 million) relate mainly to: (i) works aimed at maintaining the security and quality levels of the plants (€418 million), some of the main ones being the "pipeline replacement" initiative (€126 million), including the ongoing delivery of materials and the start of construction activities for the reconstruction of the Ravenna-Recanati section of the Ravenna-Chieti pipeline (€49 million); (ii) projects relating to the development of new information systems, as well as the implementation of existing ones (€100 million); (iii) works recharged to third-parties (€19 million); (iv) the purchase of key operating assets (€18 million); (v) redelivery facilities upgrading projects (€6 million).

NFS Progress of work to obtain permits

To develop new sites, in addition to the technical-economic feasibility criteria, Snam adopts procedures that respond to stringent environmental and safety compatibility assessments.
The assessments of environmental effects involve all phases of the work life cycle, site selection, planning, construction, operation and decommissioning. These assessments are made within the purview of the Environmental Impact Assessment (EIA) procedure and the procedures of the Integrated Environment Authority (AIA), at the end of which the central and local administrations issue the permits required under current law.

EIA decrees obtained during the year

Name	Length (km)	Regions involved	Competent agencies	Date of decree
Pipelines				
San Salvo-Biccari pipeline overhauling	87.000	Apulia	Ministry of the Environment and Protection of Land and Sea	08/11/2019
Overhauling of Mestre-Gonas pipeline and downgrading	80.200	Veneto-Friuli Venezia Giulia	Ministry of the Environment and Protection of Land and Sea	05/11/2019
Overhauling of the Ravenna Mare-Ravenna Terra pipeline	25.980	Emilia-Romagna	Ministry of the Environment and Protection of Land and Sea	29/10/2019
Overhauling of the Campodarsego-Castelfranco Veneto pipeline	23.360	Veneto	Ministry of the Environment and Protection of Land and Sea	26/09/2019
Overhauling of the Pieve di Soligo-San Polo di Piave-Salgareda pipeline	34.700	Veneto	Ministry of the Environment and Protection of Land and Sea	05/09/2019
Gagliano Termini Imerese pipeline	38.340	Sicily	Ministry of the Environment and Protection of Land and Sea	06/03/2019
Overhauling of the Rimini San Sepolcro pipeline and associated works	91.915	Emilia-Romagna and Tuscany	Emilia-Romagna Region	25/03/2019

12 For the investments of 2019, the basic rate of return includes the rate of return on net invested capital (real pre-tax WACC) of 5.7%.

Integrated Environmental Authorisation decrees obtained during the year

Name	Length (km)	Regions involved	Competent agencies	Date of order
Pipelines				
Variant crossing the Trigno River By-pass for Trivento-Agnone	0.977	Molise	Ministry of the Environment and Protection of Land and Sea	21/11/2019
By-pass for Altino 2nd Tronco Variant construction Secco River hydraulic works	0.07	Abruzzo	Ministry of the Environment and Protection of Land and Sea	02/04/2019
Tortona-Alessandria-Asti-Turin Overhaul FR 39.1	3.68	Piedmont	Ministry of the Environment and Protection of Land and Sea	06/03/2019
Variant for PIDI insertion no. 18.2 at Chieti-San Salvo (CH)	1.132	Abruzzo	Ministry of the Environment and Protection of Land and Sea	26/02/2019
Variants S. Eufemia-Crotone Overhaul of Anna River crossing (KR)	0.64	Calabria	Ministry of the Environment and Protection of Land and Sea	15/02/2019
Plants				
HPRS IS64/24 bar Castellana Grotte system on Castellaneta-Castellana Grotte pipeline		Apulia	Ministry of the Environment and Protection of Land and Sea	16/01/2019

EIA applications submitted to Ministry of the Environment and Ministry of Cultural Heritage

	Length (km)	Regions involved	Date of submission
Pipelines			
Variants S. Eufemia-Crotone Overhaul of Anna River crossing (KR)	0.64	Calabria	25/10/2019
All. BIO ECOAGRIM S.r.l. of Lucera	1.052	Apulia	13/06/2019
Sestri Levante-Recco pipeline	47.8	Liguria	23/05/2019

Applications submitted to the Ministry of the Environment to check EIA requirements

Name	Length (km)	Regions – Provinces involved	Date of submission
Pipelines			
By-pass for Matera in the Municipality of Lauria	21.8	Basilicata	02/12/2019
Optimisation of the Recanati-Foligno Frazione Colfiorito layout	16.96	Marche-Umbria	28/10/2019
Benevento-Cisterna lowering variants	2.097	Campania	03/10/2019
Pessano-Calolziocorte variants	5.185	Lombardy	25/06/2019
Plants			
Alessandria-Cairo Montenotte-Savona Trappole		Piedmont-Liguria	19/12/2019

OPERATING REVIEW

Gas balance on the National Transportation Network

Gas volumes are expressed in standard cubic metres (SCM) with a traditional higher heating value (HHV) of 38.1 MJ/SCM (10,572 kWh/SCM). The basic figure is measured in energy (MJ) and obtained by multiplying the physical cubic metres actually measured by the relative heating value.

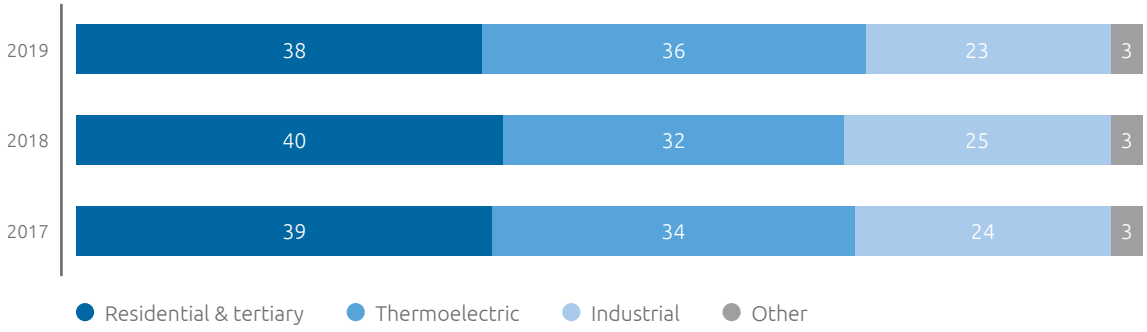
Demand for gas in Italy

(billions of m³)	2017	2018 (a)	2019	Change	% change % (b)
Residential and tertiary	29.48	28.76	**28.15**	(0.61)	(2.1)
Thermoelectric	25.36	24.19	**26.64**	2.45	10.1
Industrial (c)	17.8	17.39	**17.14**	(0.25)	(1.4)
Other (d)	2.51	2.33	**2.41**	0.08	3.4
Total	**75.15**	**72.67**	**74.34**	**1.67**	**2.3**

(a) The 2018 figures have been definitively updated and are consistent with those published by the Ministry of Economic Development.
(b) The percentage change is calculated with reference to the figures in cubic metres.
(c) Includes the consumption of the Industrial, Agricultural and Fishing, Chemical Synthesis and Automotive sectors.
(d) Consumption and losses relating mainly to the natural gas transportation system, the energy system, the upstream sector, storage and LNG plants.

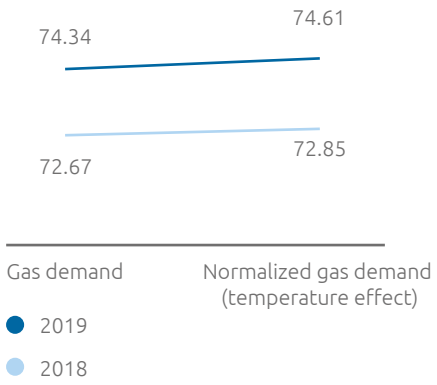
Gas demand in Italy in 2019 was **74.34 billion cubic metres**, up 1.67 billion cubic metres (2.3%) compared with 2018. The increase is mainly attributable to the higher consumption in the thermoelectric power generation sector (+2.45 billion cubic metres; +10.1%) and benefited from the greater use of natural gas in the generation of electricity, the reduction in electricity imports and the smaller production from renewable sources as hydroelectric power generation has decreased, despite the growth in wind and solar power. Greater recourse to natural gas in the generation of electricity is also attributable, as well as to the greater competitiveness of the price of natural gas at the virtual exchange point, down by around 37% compared with 2018, to an increase in the costs of the emission of CO_2 (+50% compared with 2018) that penalises generation from coal.
The increase in consumption recorded in the thermoelectric sector was partly offset by lower consumption in the residential and tertiary sector (-0.61 billion cubic metres or -2.1%) attributable to the weather and, to a lesser extent, the industrial sector (-0.25 billion cubic metres or -1.4%).

Gas demand by sector (% of total gas demand)



Adjusted for the weather effect, gas demand came to 74.61 billion cubic metres, up 1.76 billion cubic metres (+2.4%) compared with the same figure in 2018 (72.85 billion cubic metres), also following the greater use of energy efficiency enhancing measures by the residential and tertiary sector.

Gas demand (Bcm)



Availability of natural gas

(billions of m³)	2017	2018 (*)	2019	Change	% change % (b)
From gas injected into the network by entry point	69.35	67.70	**70.86**	3.16	4.7
From domestic output	5.24	5.12	**4.51**	(0.61)	(11.9)
Total gas injected into the network	**74.59**	**72.82**	**75.37**	**2.55**	**3.5**
Net balance of withdrawal/injection into storage (**)	0.23	(0.43)	**(1.39)**	(0.96)	
Total availability of natural gas	**74.82**	**72.39**	**73.98**	**1.59**	**2.2**

(*) The 2018 figures have been definitively updated and are consistent with those published by the Ministry of Economic Development.
(**) Understood as the balance between the withdrawals from (+) and injections into (-) the storage system expressed gross of consumption per injection/withdrawal.

The **availability of natural gas** in Italy (73.98 billion cubic metres) is equal to the sum of gas injected into the National Transportation Network and the net balance of withdrawals from and injections into the storage system, and was up by 1.59 billion cubic metres (+2.2%) compared with 2018. The increase is due to greater volumes of gas injected into the network per point of entry (+3.16 billion cubic metres or +4.7%), in spite of the reduction in domestic production (-0.61 billion cubic metres or -11.9%), partly offset by the greater net injections into storage compared with the previous year (-0.96 billion cubic metres).

Gas injected into the network (*)

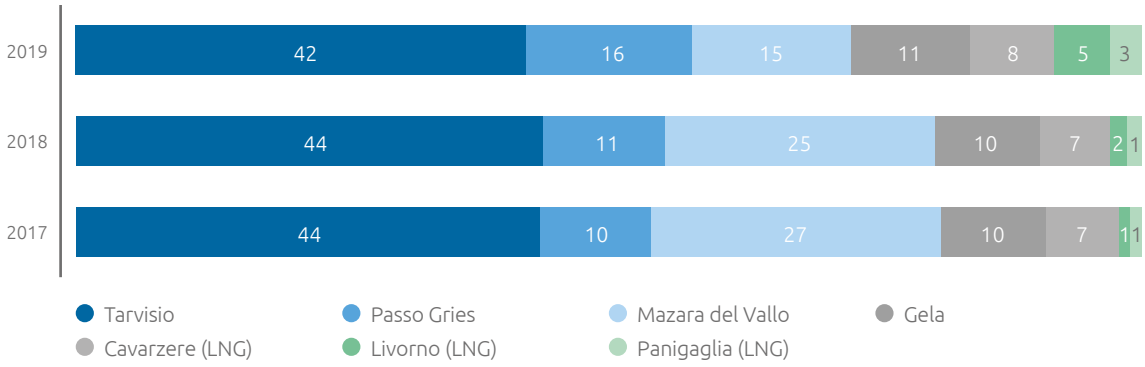
(billions of m³)	2017	2018	2019	Change	% change %
Domestic output	5.24	5.12	**4.51**	(0.61)	(11.9)
Entry points (**)	69.35	67.70	**70.86**	3.16	4.7
Tarvisio	30.18	29.69	**29.85**	0.16	0.5
Gries Pass	7.25	7.76	**11.13**	3.37	43.4
Mazara del Vallo	18.88	17.09	**10.21**	(6.88)	(40.3)
Cavarzere (LNG)	6.85	6.71	**7.91**	1.20	17.9
Gela	4.64	4.47	**5.70**	1.23	27.5
Livorno (LNG)	0.91	1.07	**3.62**	2.55	
Panigaglia (LNG)	0.62	0.88	**2.42**	1.54	
Gorizia	0.02	0.03	**0.02**	(0.01)	(33.3)
	74.59	**72.82**	**75.37**	**2.55**	**3.5**

(*) The data for 2019 were updated at 27 January 2020. The 2018 figures have been definitively updated and are consistent with those published by the Ministry of Economic Development.
(**) Entry points connected with other countries or with LNG regasification plants.

Injections and withdrawals of gas in the transportation network

In 2019, a total of 75.37 billion cubic metres of gas was injected into the network, an increase of 2.55 billion cubic metres (+3.5%) compared with 2018.
Injections into the network from domestic production fields or their collection and treatment centres totalled 4.51 billion cubic metres, down by 0.61 billion cubic metres (-11.9%) compared with 2018.
Volumes injected at entry points connected with other countries and with regasification plants, overall equal to 70.86 billion cubic metres, rose by 3.16 billion cubic metres (+4.7%) compared with 2018.
The greater volumes injected by the LNG regasification terminals (+5.29 billion cubic metres or +61.1%), also thanks to the new auction-based capacity allocation mechanisms, as well as the entry points of Passo Gries (+3.37 billion cubic metres or +43.4%) and Gela (+1.23 billion cubic metres or +27.5%), partly offset by lower volumes injected by the entry point Mazara del Vallo (-6.88 billion cubic metres or -40.3%).

Natural gas injected into the import point (% of total gas injected)



Withdrawals of natural gas

(billions of m³)	2017	2018	2019	Change	% change %
Redelivery to the domestic market	73.97	71.48	**73.03**	1.55	2.2
Exports and transit (*)	0.33	0.45	**0.38**	(0.07)	(15.6)
Consumption and emissions attributable to Snam Rete Gas	0.28	0.27	**0.23**	(0.04)	(14.8)
Gas not accounted for and other changes (**)	0.24	0.19	**0.34**	0.15	78.9
Total withdrawals of natural gas	**74.82**	**72.39**	**73.98**	**1.59**	**2.2**

(*) Includes exports to the Republic of San Marino.
(**) Includes variations in network capacity. In the energy report compiled by Snam Rete Gas, the natural difference between the quantity of gas metered at the entrance to the network and the quantity of gas metered at the exit, due to the technical tolerance of the metering devices, is traditionally defined as unaccounted-for gas (UFG).

The natural gas withdrawn from the National Transportation Network in 2019 (73.98 billion cubic metres) is mainly: (i) redelivery to users at network exit points (73.03 billion cubic metres; +2.2%); (ii) exports and transit (0.38 billion cubic metres or -15.6%); and (iii) consumption by the compression stations and gas emissions from the network and from Snam Rete Gas plants (0.23 billion cubic metres or -14.8%).

Reconciliation of the gas withdrawn from the network and Italian demand

(billions of m³)	2017	2018 (a)	2019	Change	% change % (b)
Total gas injected into the network	**74.59**	**72.82**	**75.37**	**2.55**	**3.5**
Net balance of withdrawal/injection into storage (c)	0.23	**(0.43)**	**(1.39)**	(0.96)	
Total withdrawals of natural gas	**74.82**	**72.39**	**73.98**	**1.59**	**2.2**
Exports (-) (d)	(0.33)	**(0.45)**	**(0.38)**	0.07	(15.6)
Gas injected into the regional networks of other operators	0.03	**0.03**	**0.03**		
Other consumption (e)	0.63	**0.69**	**0.71**	0.02	2.9
Total Italian demand	**75.15**	**72.66**	**74.34**	**1.68**	**2.3**

(a) The 2018 figures have been definitively updated and are consistent with those published by the Ministry of Economic Development.
(b) The percentage change is calculated with reference to the figures in cubic metres.
(c) Understood as the balance between the withdrawals from (+) and injections into (-) the storage system expressed gross of consumption per injection/withdrawal.
(d) Includes transit and exports to the Republic of San Marino.
(e) Includes the consumption of the LNG regasification terminals, the consumption of the compression stations for storage and the production treatment stations.

Transportation capacity

(millions of m³/day)	Calendar year 2017			Calendar year 2018			Calendar year 2019		
Entry points	Transportation capacity	Allocated capacity	Saturation (%)	Transportation capacity	Allocated capacity	Saturation (%)	Transportation capacity	Allocated capacity	Saturation (%)
Tarvisio (**)	111.4	94.6	84.9	111.1	107.4	96.7	**110.6**	**98.3**	**88.9**
Mazara del Vallo (*) (**)	84.4	78.3	92.8	82.0	81.2	99.0	**86.7**	**36.1**	**41.6**
Passo Gries	64.4	22.4	34.7	64.4	34.8	54.0	**64.4**	**31.3**	**48.6**
Cavarzere (LNG)	26.4	24.4	92.5	26.4	24.4	92.4	**26.4**	**24.9**	**94.3**
Gela (*)	23.8	22.0	92.4	20.3	20.1	99.0	**22.9**	**19.0**	**83.0**
Livorno (LNG)	15.0	15.0	100.0	15.0	15.0	100.0	**15.0**	**14.3**	**95.3**
Panigaglia (LNG)	13.0	2.0	15.5	13.0	4.0	30.8	**13.0**	**7.4**	**56.9**
Gorizia	4.6	0.1		4.2	0.1	2.4	**4.0**	**0.1**	**2.5**
Competing capacity (*)	21.2			24.4			**19.9**		
	364.2	**258.8**	**71.0**	**360.8**	**287.0**	**79.5**	**362.9**	**231.4**	**63.8**

(*) The capacities at the Mazara del Vallo and Gela entry points do not include competing capacity. This capacity, pursuant to Regulation (EU) No 984/2013 in force as of 1 November 2015, represents the transportation capacity available at one point, the allocation of which fully or partly reduces the capacity available for allocation at another point in the transportation system.
(**) The capacity values at the Marzara del Vallo and Tarvisio entry points include the capacity shares pursuant to ARERA Resolution 666/2017/R/GAS.

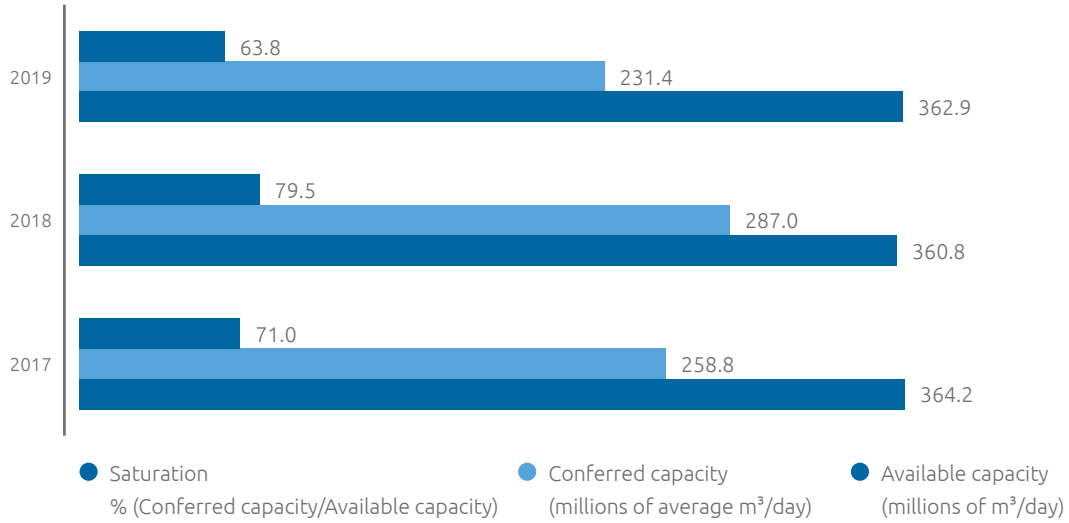
The transportation capacity of the network again covered all user demand in 2019. Average transportation capacity provided in 2019 at the entry points connected with foreign pipes and at regasification facilities was 362.9 million cubic metres on average per day, 19.9 of which were offered as competing capacities between the Mazara del Vallo and Gela entry points. In addition to the aforementioned capacities which concern the entry points interconnected with foreign countries and the LNG terminals, a transportation capacity is available at the domestic production entry points:

- national production at a total of 20.7 million cubic metres/day;
- the production of biomethane at a total of 0.3 million cubic metres/day.

Snam Rete Gas has prepared a long-term plan for available transportation capacity, which was sent to the Ministry of

Economic Development on 28 June 2019 and published on the Snam website at www.snam.it/it/trasporto in the online services/capacity section.
The document shows data about capacity at all entry points interconnected with foreign countries and with LNG terminals for the thermal year 2019-2020 and subsequent years up to 30 September 2034.
Also shown for the thermal year 2019-2020 are the transport capacities of the interconnected exit points with the foreign countries of Passo Gries, Gorizia, Bizzarone and San Marino at a total of 46 million cubic metres/day.
As a result of all the infrastructures of the "Supporting the north-west market and two-way cross-border flows" project coming into service, a total capacity of 40 million cubic metres/day became available simultaneously at the Passo Gries and Tarvisio exit points. The maximum capacity of the Passo Gries exit point is 40 million cubic metres/day, while the maximum capacity of the Tarvisio exit point is 18 million cubic metres/day, therefore there is a "competing capacity" pursuant to chapter 5, paragraph 3 of the Network Code available at the two points.
Over the last 16 years transport operators have been constantly increasing, going from around 30 operators in 2003 to around 210 operators in 2019 (including shippers and traders), with the number of customers (shippers) standing at 150 (136 in 2018).
In 2019 there was an increase in the number of Traders at PSV (Virtual Trading Points), which went from 52 Traders operating at the end of the 2017-2018 thermal year to 69 Traders operating at the end of the 2018 – 2019 thermal year.
In 2019, 123 connection agreements were entered into for the creation of new delivery/redelivery points or for upgrading existing ones, including 26 contracts for the injection of biomethane and 61 relating to CNG service areas.

Transportation capacity and saturation



Provision and development of transportation services

	2017	2018	2019
Active customers (shippers)	128	136	**150**
New connection agreements for delivery/redelivery points	78	88	**123**

Thanks to the development of Snam services over the last 15 years, the Italian gas market has seen constant growth in transportation operators, passing from 30 in 2003 to around 210 in 2019, with 150 shippers.
In 2019, 123 connection contracts were signed for the construction of new delivery/redelivery points (of which 26 were for biomethane injection and 61 for the CNG Service areas) or the upgrading of existing points.
In 2019, the integration process through which the commercial management activities of the 3 businesses - transportation, storage and regasification - merged into a single organisation continued, allowing the optimisation of the processes within Snam. The creation of a single commercial control room for the management of daily gas deliveries and movements, the balancing of the network (activities that define Snam's responsibilities to the market), integrating the know-how of the 3 businesses managed by Snam, has led to an improvement in performance in this area.
From the point of view of services, on 22 May 2019 Snam opened the new Jarvis commercial platform of integrated

services to its customers, implemented in 2018 and developed in conjunction with market operators. The platform, which actively involves customers, is designed to adopt a process for the renewal of services and technologies to support all commercial transportation, storage and regasification processes based on the feedback received from customers and also proposes to promote the range of integrated services offered on the Italian market possibly also enabling services for the foreign market. The platform provides customers with the possibility of:

- viewing its active contracts and having access to the documentation;
- accessing the transactions, in detail, for calculating the balancing credit limit;
- independently managing their user profiles.

To facilitate the transition to the new platform, from July 2019, Snam made a simulator of the new functionalities featured available to the market operators.
In September 2019, with the release of the Trading PSV system for gas trading activities, the new Jarvis platform came into force, at the same time as the progressive shutting down of the functionalities in the PSV system used previously.
Network codes list a number of indicators for monitoring the quality of service offered by the companies. When compared against these indicators, the Snam companies maintained a high level of performance in 2019 as well. One part of these indicators, which refer to specific levels of commercial quality, gives rise to the automatic indemnification of customers in the event of failure to comply with the service quality standard.

(%)	2017	2018	2019
Contracted transport capacity/Available transport capacity (foreign entry/interconnection points)	71	79	**64**
Compliance with deadlines for issuing offers for connection	100	100	**100**
Compliance with time frames for providing services subject to specific commercial quality standards	100	100	**100**

Organisational changes

During the course of 2019, the recorded number of personnel in servic 018 to 1,945 resources at 31 December 2019.
The organisational structure of group companies operating in the transportation and dispatching business was redesigned with a view to greater consistency with the Snam guidelines of streamlining the organisation and processes, aimed specifically at reducing duplications with Snam units dedicated to commercial and technical activities, and integration of transportation and storage activities.
Specifically, with reference to the transportation sector, note:

- the redesigning of the structure of the plant area with a view to increasing integration between transportation and storage activities, strengthening of the oversight of the area (creation of a Northern Facilities Area and Central-Southern Facilities Area) and a more comprehensive structuring of the centralised support service, in close conjunction with the Snam Technologies & Industrial Innovation unit BUAIT (creation of the Facilities Support unit and the BUAIT Technical Facilities unit);
- the redefinition of part of the organisation dedicated to Engineering and Construction activities with the definition of structures dedicated to the creation of Facilities and the establishment of integrated oversight support dedicated to engineering and authorisation activities;
- the move to Snam Rete Gas of all commercial activities, previously monitored by Snam, with a view to the full integration of all activities in the regulated sector and simplification of the organisational model, with the creation, at the same time, of a Commercial and Dispatching unit, in which all physical dispatching and gas measurement activities have been incorporated, previously the responsibility of the gas operations unit.

In relation to the opportunity to pursue economies of experience and scope that develop Group best practices, and to the specific requirements of other operating companies, several Snam Rete Gas structures provide technical services (for example, with regard to engineering and project management activities aimed at large investments). In addition, in relation to the organisational changes listed above, Snam Rete Gas also guarantees the supply to Stogit and LNG Italia of the commercial services previously delivery by Snam.

Accidents

In 2019 the number of accidents was 0 for employees and 5 for contractors (compared with 4 and 3 in 2018).

Accidents at work (no)

	2017	2018	2019
Total employee accidents	2	4	**0**
Total contract worker accidents	4	3	**5**

Accident indices

	2017	2018	2019
Employees			
Frequency index (*)	0.66	1.29	**0**
Severity index (**)	0.03	0.03	**0**
Contract workers			
Frequency index (*)	0.47	0.46	**0.83**
Severity index (**)	0.90	0.03	**0.08**

(*) Number of accidents at work resulting in absence of at least one day, per million hours worked.
(**) Number of working days lost (calendar days) due to accidents at work resulting in absence of at least one day per thousand hours worked. These data have been calculated taking fatal accidents into consideration.

Energy consumption and emissions

The company, in accordance with its sustainable growth model, updated and set new voluntary targets, valid objectives for all Snam businesses (transportation, storage, regasification):

- to reduce its natural gas emissions by 2022 and 2025, respectively by 15% an 40%, excluding emergencies, compared with the 2016 figures;
- to reduce its scope 1 and scope 2 emissions by 2030 by 40%, excluding emergencies, compared with the 2016 figures;
- to increase the ratio between green electricity bought and the total to reach 55% by 2030.

In 2019 the emission into the atmosphere of 9.4 million cubic metres of natural gas was prevented, equal to around 165,000 tonnes of CO_{2eq} (16% compared with 142,000 tonnes of CO_{2eq} in 2018). These performances were made possible by the on-line gas compression interventions and the interventions with tapping machines, technology that makes it possible to disconnect pipelines in operation for new connections without an interruption to the service. These results led to a reduction in natural gas emissions of 11.7% compared with 2018, a trend completely in line with the general targets.

Total emissions of CO_{2eq} avoided in 2019 resulting from the various initiatives adopted by the company (missing natural gas emissions, production of electricity from photovoltaic plants, purchase of green electricity, installation of LED bulbs to replace other tradition bulbs, smart working) have globally made it possible to prevent the emission into the atmosphere of 181,800 tonnes of CO_{2eq}.
Energy consumption for transport, equal to 6,123 Terajoule (TJ), decreased by around 18% compared with 2018 in spite of an overall increase in gas injected into the network (+3.5%). This result was promoted by the difference provenance of the gas from import points (less use of the back-up network from North Africa more energy-intensive than the other ones).
In 2019, nitrogen oxide emissions totalled around 286 tonnes (-6.2% compared with 2018). To contain emissions, a programme that calls for modifying certain turbines already in operation and the installation of new units with low emission combustion systems (Dry Low Emissions) has been in progress for years. In 2019 the percentage of DLE turbines operating in transportation stood at around 95%.

Energy consumption

	2017	2018	2019
Energy consumption (TJ)	7,459	7,463	**6,123**
Emissions of CO_{2eq} - scope1 (ton) (*)	1,008,051	981,866	**838,326**
Emissions of natural gas (106 m^3)	34.4	32.8	**28.7**
Natural gas recovered (106 m^3)	4.1	8.2	**9.4**
NOx emissions (tonnes)	342	305	**286**

(*) The CO_{2eq} emissions were calculated with a methane Global Warming Potential (GWP) of 28, as indicated in the Intergovernmental Panel on Climate Change (IPCC) scientific study the "Fifth Assessment Report IPCC".

REGULATIONS CONCERNING THE BUSINESS SEGMENT

Relations with the regulatory authority

Over the years Snam has established a constructive relationship and effective cooperation with the Italian Regulatory Authority for Energy, Networks and the Environment – ARERA.

Relations with the regulatory authority (no.)

	2017	2018	2019
Responses to consultation documents and service proposals	8	10	**5**
Tariff proposals	4	3	**4**
Data collections	129	143	**137**
Preliminary investigations (*)	3	2	**0**
Proposal to amend/update contractual documents and codes (**)	14	12	**6**
Proposal to amend/update contractual documents and codes (approved)	12	10	**6**

(*) Information sent to the Authority during 2019 with reference to investigations in the context of the sector. This includes exploratory investigations.
(**) Also includes proposals still being evaluated by the Authority, including contractual documents and agreements with operators in the context of regulated services.

GAS MARKET MONITORING

As part of its evaluations of the gas wholesale markets, the Authority gave Snam the mandate, as a leading transportation business, together with Gestore dei Mercati Energetici, to support it in monitoring activities through: (i) the preparation of a transportation and balancing, storage and regasification services integrated data base, made available by the Regulator and supplied daily; (ii) providing indices and reports on a regular basis under the scope of the balancing function, the balancing of the system and the flexibility of procurement sources; (iii) further specific analyses at the request of the Authority.

Relations with the regulatory authority under the scope of Gas Market Monitoring (no.)

	2019
Relations/analyses (with reference to all businesses)	6
Agreements, manuals and specific details on monitoring (with reference to all businesses)	14
Reports and data flows	13,423

Regulation transition period 2018-2019

Criteria for adjusting the tariffs for natural gas transport services for the transition period in the years 2018 and 2019

By means of Resolution 575/2017/R/gas, which was issued on 4 August 2017, the Authority approved the tariffs for the transport, dispatch and metering service for 2018 -2019. The resolution confirms the main criteria of the previous regulation, with several amendments:

- The asset β parameter was confirmed for the 2018-2019 Transition Period. The value of the WACC equal to 5.4% in pre-tax real terms was therefore confirmed for 2018 and was recalculated for 2019 through the updating of the basic parameters.
- From 2018 the investments made in the year t-1 were included in the investment capital for the purpose of determining the tariffs for year t, replacing the 1% increase in the WACC to cover the regulatory time-lag. The 1% increase in the WACC covering the regulatory time lag was applied to investments made in the period 1 January 2014 - 31 December 2016;
- The input-based incentive scheme (1-2% for 7/10 years for regional and national networks respectively) was applied to new development investments that have entered into service by 31 December 2017;
- An input-based incentive scheme (1% for 12 years for regional and national networks) was applied to investments for the construction of new transportation capacity, launched as of 31 December 2017, which will start operating in the years 2018 and 2019. The incentive was also recognised for investments that start operating during the transition period after 1 January 2018, included in the Development Plan and with a benefit-cost ratio higher than 1.5;
- The operating costs recognised in the fourth regulatory period were updated according to inflation, and a productivity recovery factor (X-factor). The variable unit price (CV) was calculated for the years 2018 and 2019 using a reference volume of 67.2 billion cubic metres.

Tariff regulations for 2019

By means of Resolution 280/2018/R/gas, published on 10 May 2018, the Authority approved the revenue recognised for the natural gas transportation, dispatching and metering service for 2019, which totalled €1,964 million. The RAB used to calculate 2019 revenue for transportation, dispatching and metering amounts to €16.2 billion and includes estimated investments for the year 2018.
By means of Resolution 306/2018/R/gas, published on 01 June 2018, the Authority approved the proposed revenue for the natural gas transportation and dispatching service for 2019.

Updating of the remuneration rate of the capital invested for regulatory purposes (WACC) for 2019

Through resolution 639/2018/R/gas, published on 6 December 2018, the Authority carried out an interim updating of the WACC basic parameters common to all electricity and gas sector regulated infrastructure services, pursuant to the provisions of Article 5 of the TIWACC and the gearing level, according to the forecasts of Article 6 of the TIWACC.
In the resolution the Authority confirmed the level of the risk free rate parameter (rf) equal to 0.5% (the floor) as the average return rate in real terms of EU country government bonds with ratings of at least AA in the period 1 October 2017-30 September 2018 was lower than this figure.
The Authority also set the other parameters as follows:

- Country Risk Premium (CRP), at 1.4%;
- Tax shield, equal to 24% and taxation level at 31%;
- Future inflation at 1.7%.

For infrastructure services other than those of gas distribution and metering, the Authority set a D/E gearing level of 1, while the calculation of the Beta parameter was carried out during the tariff regulation of the individual businesses starting from 2020.
Based on the parameter values reported above, the Authority set the return rate on invested capital for the natural gas transportation service at 5.7% in real pre-tax terms in 2019 (5.4% for the years 2016-2018). The WACC for 2020 was calculated following the setting of the Beta parameter for the 5th regulatory period, outlined in the next section.

Regulation for the fifth regulatory period 2020-2023

Tariff adjustment criteria for the natural gas transportation and metering service for the fifth regulatory period (2020-2023)

Through resolution 114/2019/R/gas, published on 29 March 2019, the Authority defined the regulation criteria of the natural gas transportation tariffs for the fifth regulatory period (1 January 2020-31 December 2023).
The duration of the regulatory period was confirmed as 4 years. The valuation of the net capital invested (RAB) is based on the revalued historical cost method. The net invested capital remuneration rate Beta parameter (WACC) remains fixed at 0.364, with the WACC remaining unchanged at 5.7% before tax for the years 2020-2021, in line with the TIWACC framework. Works in progress are included in the calculation of the RAB predicting a real pre-tax return of 5.3%. The inclusion in the RAB of investments made in the year t-1 for the purpose of remuneration to compensate the regulatory time-lag is also confirmed. Limited to the interventions included in the Development Plans that will come into operation in the years 2020-2021-2022 with a cost/benefit ratio of more than 1.5, a greater WACC of +1.5% for 10 years is applied.
The revenue component relating to the return and amortisation and depreciation is updated on the basis of an annual recalculation of net invested capital (RAB) and additional revenue from the higher rate of return for investments realised in prior regulatory periods. Amortisation and depreciation are calculated based on the useful economic and technical life of the transportation infrastructure.
Operating costs recognised for 2020 are calculated based on effective recurring costs for 2017, increased by the greater efficiency achieved in the current period (50% profit sharing), with the possibility of including any recurring costs for 2018 if adequately justified. The application of the price-cap method for the purpose of updating operating costs is confirmed, envisaging an X-factor to return the greater efficiency achieved in the fourth regulatory period to users in 4 years.
It is expected that the largest transportation business will procure quantities of gas to cover self-consumption, leaks and unaccounted for gas (GNC) under the scope of the centralised market. The quantities of gas recognised are assessed based on the weighted average price of forward products with delivery to the PSV (Virtual Trading Point) in the reference tariff year. The resolution includes the recognition of the difference between the price recognised for these volumes and the effective procurement price, deferring the definition of the detail mechanism to the next provision.
With regard to tariff structure, the current methodology for determining the capacity/commodity split was confirmed, providing for capacity revenue to cover capital costs (return and amortisation and depreciation) and commodity revenue to cover recognised operating costs. The current revenue correction factor applied to the capacity component (100% guaranteed) and to the component related to transported volumes (allowance ±4%) is confirmed. With reference to the metering service, a mechanism to cover revenues similar to that of the transportation service (100% guaranteed) was introduced.
The tariff structure based on the entry/exit model is confirmed, including not only the domestic network but also the regional network in the reference price methodology. The entry and exit capacity fees are calculated using the capacity weighted distance methodology (CWD) with the revenues distributed between the entry and exit points 28/72.
A variable fee was introduced, applied to volumes transported, intended to cover the operating costs recognised, the costs relating to the Emission Trading system, ratifying the principle of neutrality adopted by the business in relation to price risk and incentivising virtuous behaviour aimed at reducing CO^2 emissions, and the costs of procurement of quantities to cover self-consumption, leaks and CNG. This fee is applied to the transportation network entry points and is calculated annually based on the volumes effectively withdrawn in the year t-2.
Lastly, there are plans for the definition of the regulation criteria for the quality of the natural gas transportation service for the fifth regulatory period to be deferred, trialling the innovative use of transportation networks, as well as the restructuring of the metering service, following specific consultations carried out in 2019. In this regard, through resolution 554/2019/R/gas, published on 23 December 2019, the Authority approved the new Consolidated Act for the regulation of the quality of the gas transportation service which contains provisions on the continuity of the service, security and commercial quality, valid for the fifth regulatory period 2020-2023
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Approval of 2020 revenues

By means of Resolution 201/2019/R/gas, published on 28 May 2019, the Authority approved the revenue recognised and fees for the natural gas transportation and dispatching service for 2020. Revenue recognised for the natural gas storage service for 2020 amounted to € 2,096 million. The RAB used to calculate 2020 revenue for transportation, dispatching and metering amounts to €16.4 billion and includes estimated investments for the year 2019.

Settlement and balancing

Approval of the Snam Rete Gas S.p.A. proposal relating to the improvement and efficiency improvement targets subject to the incentive, pursuant to point 5 of the Authority resolution 480/2018/R/gas

Through resolution 57/2019/R/gas, published on 22 February 2019, the Authority approved the proposal of further improvement and efficiency objectives for settlement and balancing presented by Snam Rete Gas pursuant to resolution 480/2018/R/gas, point 5, functional to the recognition of the incentive of around €2.5 million set out in this resolution. Specifically, the objectives consist of the commitment to: (i) bringing forward the times for the completion of the activities of checking new dynamic profiling mechanisms function to the launch of the settlement reform pursuant to resolution 72/2018/R/gas of the Authority; (ii) ensuring greater transparency of these methods through disclosure and sharing with the operators involve as well as (iii) launching a trial in the period June-December 2019 to restrict the use of the storage capacity by the Balancing Manager, function to the implementation of the reform outlined by the Authority in previous consultations. The incentive is distributed equally between the objectives proposed by Snam Rete Gas and the recognition that will be modulated according to the activities concluded.

Regulation of previous corrective factors

In a letter dated 26 June 2019, the regulatory authority notified Snam Rete Gas, of the amount of the corrective factors relating to previous years to be paid to the CSEA by 31 July 2019, under the "Transport expenses account" as required by Article 4.3 of the resolution 114/2019/R/gas of the same Authority.
The amount of €180 million (€154 million net of activities compensated), calculated based on the reported revenues relating to 2018 sent to the Authority pursuant to Article 4 of resolution 114/2019/R/gas, refers to the corrective factors for 2018, net of deviation revenues and residual corrective factors for previous years (2016-2017). Snam Rete Gas made the relative payment on 30 July 2019.

Liquefied Natural Gas (LNG) regasification

17,500 m³

Daily regasification capacity maximum of LNG of the plant in Panigaglia

3.5 bn m³

Maximum annual quantity of natural gas that can be released into the network for transmission

2.,40 bn m³

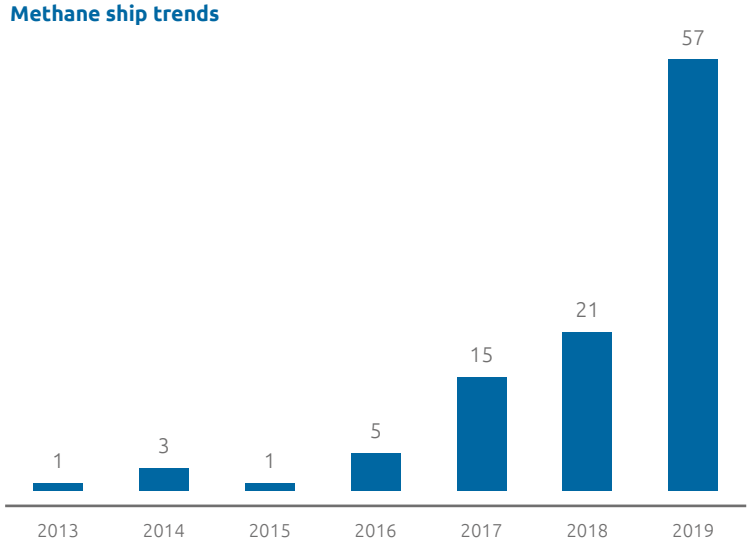
Quantity of LNG regasified in 2019 in Panigaglia (1.49 bn m³ in 2018)

57 (+36% compared with 2018) Methane tanker loads

LNG Italia plays a key role in ensuring adequate diversification and flexibility of supplies to the gas system

The Panigaglia plant, built in 1971 and owned by LNG Italia, is able to regasify 17,500 m³ of LNG every day; under conditions of maximum efficiency, it can supply more than 3.5 billion cubic metres of natural gas into the transport network every year.
The total amount of gas regasified at the Panigaglia plant in 2019 was 2.40 billion m³ (0.91 billion m³ in 2018; +1.49 billion m³).
The significant increase in volumes of activities compared with last year, is mainly due to the greater competitiveness of the cost of LNG compared with natural gas, as well as the new regasification capacity allocation mechanisms through dedicated auctions.
In 2019 57 methane tankers were unloaded (+36 compared with 2018).
The new capacity allocation mechanisms based on auctions as well as the new businesses in the SSLNG sector, linked specifically to the possible future uses in heavy transport and maritime transport, will lead to a scenario of further growth in the consumption of LNG in future years.

Methane ship trends



The regasification service can be continuous for the entire thermal year or the spot type. Moreover, from October 2018 the regasification capacity was awarded through dedicated auctions. Lastly, the regasification service includes the ancillary service, which consists of correcting the heating power of the natural gas to comply with quality requirements for its injection into the transportation network (correction of the Wobbe index).
During the course of 2019, LNG Italia provided regasification services to 6 active customers (2 customers in 2018).

Key performance indicators

(millions of €)	2017	2018	2019	Change	% change %
Total revenue (a)	22	24	**32**	8	33.3
- of which regulated revenues (a)	*21*	*20*	***27***	*7*	*35.0*
Total revenues net of pass-through items (a)	19	21	**22**	1	4.8
Operating costs (a)	15	17	**26**	9	52.9
Operating costs net of pass-through items (a)	12	14	**16**	2	14.3
EBIT	2	2	**1**	(1)	(50.0)
Technical investments (b)	5	9	**19**	10	
Net invested capital at 31 December	89	86	**95**	9	10.5
Volumes of regasified LNG (billions of cubic metres) (c) (d)	0.63	0.91	**2.40**	1.49	
Tanker loads (number)	**15**	**21**	**57**	**36**	
Employees in service at 31 December (number)	63	64	**65**	1	1.6

(a) Before consolidation adjustments.
(b) Investments remunerated at the pre-tax real base WACC, amounting to 6.8% for 2019, 6.6% for 2017 and for 2018.
(c) With reference to 2019, gas volumes are expressed in standard cubic metres (SCM) with an average traditional higher heating value (HHV) conventionally of 38.1 MJ/SCM (10,572 kWh/SCM).
(d) The regasified quantities are shown gross of self-consumption and losses (QCP component), equal to 1.7% for the Panigaglia terminal.

RESULTS

Total revenue amounted to €32 million, an increase of €8 million, or 33.3%, compared with 2018. Excluding the items offset in costs[13], total revenue amounted to €22 million, essentially in line with 2018 (+€1 million or 4.8%).

Regulated revenues, amounting to €27 million, include the fees for the regasification service (€17 million, unchanged from 2018) essentially relating to the share of the guarantee factor for the year 2018, provided for in art. 18 of Annex A to Resolution 438/2013/R/gas, and the chargeback to users of charges relating to the natural gas transportation service provided by Snam Rete Gas S.p.A. (€10 million +€7 million compared with 2018).[14]

EBIT totalled €1 million (€2 million in 2018). The greater revenue coming from sales of natural gas were offset by the greater operating costs following withdrawals from storage.

TECHNICAL INVESTMENTS

Technical investments for 2019 stood at €19 million, more than double the figure for the previous year (€9 million in 2018), and included investments in maintenance, aimed at the modernisation, technological adaptation and security of plant systems.

13 Revenues offset in costs refer to the costs that LNG charges back to its customers for use of the transportation service provided by Snam Rete Gas.
14 For the purposes of the consolidated financial statements, this revenue is eliminated, together with transportation costs, within LNG Italia S.p.A. in order to represent the substance of the operation.

These include: (i) engineering activities and general interventions on tanks (€6 million); (ii) revamping operations on systems (€2 million); (iii) various IT and property interventions (more than €2 million).

Operating review

In 2019, 2.40 billion cubic metres of LNG were regasified at the LNG terminal in Panigaglia (SP) (compared with 0.91 billion cubic metres in 2018, +1.49 billion cubic metres), with 57 methane tankers unloaded (+36 compared with 2018), also thanks to the new mechanisms used to allocate capacity through auctions. With reference to the number of employees, this figure stood at 65 resources, essentially in line with the previous year. Under the scope of the process of integrating Snam's Italian assets, the strengthening of the organisational oversight dedicated to operating activities continued in 2019 as well, aimed at upgrading the direct oversight of the core regasification activities, as against the staff processes where activities were provided centrally by Snam.
On 26 February 2020, Snam acquired a 49.07% stake in the share capital of OLT (Offshore LNG Toscana), the company that built and manages the offshore regasification terminal (FSRU - Floating Storage and Regasification Unit) located offshore of the Tuscan coast between Livorno and Pisa. With a maximum annual regasification capacity of 3.75 billion cubic meters, OLT is the second largest Italian liquefied natural gas (LNG) terminal.

Provision and development of regasification services

	2017	2018	2019
Active customers (shippers)	4	2	**6**
Compliance with the maximum period to accept proposals for monthly scheduling of deliveries (%)	100	100	**100**
Compliance with maximum period of interruption/reduction of capacity at the terminal due to maintance works (%)	100	100	**100**

In 2018 the Company implemented a digital platform (Jarvis) aimed at improving commercial operations.
The Jarvis platform, which actively involves customers, is designed to adopt a process for the renewal of services and technologies to support all commercial transportation, storage and regasification processes based on the feedback received from customers and also proposes to promote the range of integrated services offered on the Italian market possibly also enabling services for the foreign market.
From the point of view of services, on 22 May 2019 Snam opened the new Jarvis commercial platform of integrated services to its customers, implemented in 2018 and developed in conjunction with market operators. More information with regard to the new services introduced in 2019 are given in the section "Provision and development of services - Transportation of natural gas" in this Report, also on the basis of the implementation and integrated management of the platform for all the regulated businesses in which Snam operates.

Accidents

In 2019, there were no accidents involving either employees or contract workers.

Accidents at work (no)

	2017	2018	2019
Total employee accidents	1	0	**0**
Total contract worker accidents	0	0	**0**

Accident indices

	2017	2018	2019
Employees			
Frequency index (*)	9.31	0	**0**
Severity index (**)	0.17	0	**0**
Contract workers			
Frequency index (*)	0	0	**0**
Severity index (**)	0	0	**0**

(*) Number of accidents at work resulting in absence of at least one day, per million hours worked.
(**) Number of working days lost (calendar days) due to accidents at work resulting in absence of at least one day per thousand hours worked. These data have been calculated taking fatal accidents into consideration.

Energy consumption and emissions

The company, in accordance with its sustainable growth model, updated and set new voluntary targets, valid objectives for all Snam businesses (transportation, storage, regasification):

- to reduce its natural gas emissions by 2022 and 2025, respectively by 15% an 40%, excluding emergencies, compared with the 2016 figures;
- to reduce its scope 1 and scope 2 emissions by 2030 by 40%, excluding emergencies, compared with the 2016 figures;
- to increase the ratio between green electricity bought and the total to reach 55% by 2030.

Energy consumption

	2017	2018	2019
Energy consumption (TJ)	325	462	**1.217**
Emissions of CO_{2eq} – scope1 (t) (*)	44,421	41,407	**83,452**
Natural gas emission (106 m^3)	1.7	1.2	**1.3**
NOx emissions (tonnes)	14.8	22.4	**49.8**

(*) The CO_{2eq} emissions were calculated with a methane Global Warming Potential (GWP) of 28, as indicated in the Intergovernmental Panel on Climate Change (IPCC) scientific study the "Fifth Assessment Report IPCC".

In 2019 energy consumption for the regasification of gas increased by around 163%, in line with the increase in the quantities of regasified gas (+170%). Total emissions of nitrogen oxide in 2019 amounted to around 50 tonnes compared with 22 in 2018, a development in line with the growth of the gas treated. Natural gas emissions were in line with those of 2018, standing at 1.3 million m³.

Regulations concerning the business segment

Relations with the regulatory authority (no.)

	2017	2018	2019
Responses to reference documents	2	1	**2**
Tariff proposals	1	2	**2**
Data collections	28	34	**24**
Proposals to amend/update contractual documents and codes (*)	0	3	**0**
Proposal to amend/update contractual documents and codes (approved)	0	3	**0**

(*) Also includes proposals still being evaluated by the Authority, including contractual documents and agreements with operators in the context of regulated services.

Relations with the regulatory authority under the scope of Gas Market Monitoring (no.)

	2019
Relations/analyses (with reference to all businesses)	**6**
Agreements, manuals and specific details on monitoring (with reference to all businesses)	**14**
Reports and data flows	**234**

Regulation transition period 2018-2019

Criteria for adjusting the tariffs for the natural gas transport service for the transition period in the years 2018 and 2019

By means of Resolution 653/2017/R/gas, published on 2 October 2017, the Authority approved tariffs for the LNG regasification service for 2018-2019. The resolution confirms the main criteria of the previous regulation, with several amendments:

- The asset β parameter was confirmed for the 2018-2019 Transition Period. The value of the WACC equal to 6.6% in pre-tax real terms was therefore confirmed for 2018 and was recalculated for 2019 through the updating of the basic parameters.
- The investments made in the year t-1 were included in the invested capital recognised for the purpose of calculating the tariffs for the year t, replacing the 1% increase in the WACC covering the regulatory time lag. The 1% increase in the WACC covering the regulatory time lag was applied to investments made in the period 1 January 2014 - 31 December 2016.
- The input-based incentive scheme (2% for 16 years for the upgrading of regasification capacity) was applied to new development investments that come into service by 31 December 2017;
- An input-based incentive scheme (1.5% for 12 years) was applied to investments for constructing new regasification capacities that became operational in the years 2018 and 2019;
- The operating costs recognised in the fourth regulatory period were updated according to inflation, and a productivity recovery factor (X-factor).
- The current provisions relating to the revenue coverage factor were confirmed.

Updating of the remuneration rate of the capital invested for regulatory purposes (WACC) for 2019

Through resolution 639/2018/R/gas, published on 6 December 2018, the Authority carried out an interim update of the basic WACC parameters, shared by all regulated infrastructure services of the electricity sectors, for the three-year period 2019-2021, and for regulated

infrastructure services of the gas sector, for 2019, setting this value at 6.8% for regasification activities (6.6% for the years 2016-2018).
For infrastructure services other than those of gas distribution and metering, the Authority set a D/E gearing level of 1, while the calculation of the Beta parameter was carried out during the tariff regulation of the individual businesses starting from 2020. The WACC for 2020 was calculated following the setting of the Beta parameter for the 5th regulatory period.
For more information on the parameter values used by the Authority for calculating the value for 2019, please refer to the section "Regulation of activity sector - Natural gas transportation" of this Report.

Tariff regulations for 2019

Through resolution 695/2018/R/gas "Approval of the tariffs for the LNG regasification service for 2019 and amendments and supplements to the RTRG" published on 20 December 2018, the Authority approved the revenues recognised for the regasification service for 2019 based on the proposal submitted by LNG Italia. The tariffs were set on the basis of reference revenue of €26.7 million.
The revenue coverage factor has been set at 64% of the reference revenue. The RAB for LNG regasification activities was €108.7 million.
At the same time, the Authority published the definitive 2018 revenues based on the final 2017 balance sheet data, which stood at €26.7 million.

Regulation for the fifth regulatory period 2020-2023

Criteria for adjusting the tariffs for the liquefied natural gas regasification service for the fifth regulatory period (2020-2023)

Through resolution 474/2019/R/gas, published on 21 November 2019, the Authority defined the criteria for calculating the revenues recognised and the tariffs for the regasification service for the fifth regulatory period (1 January 2020-31 December 2023).
The duration of the regulatory period was confirmed as 4 years. The valuation of the net capital invested (RAB) is based on the revalued historical cost method.
The net invested capital remuneration rate Beta parameter (WACC) remains fixed at 0.524, with the WACC remaining unchanged at 6.8% before tax for the years 2020-2021, in line with the TIWACC framework.
Works in progress (LIC) remain excluded from the calculation of the RAB, at the same time as the recognition of financing expenses (IPCO). The operating costs recognised are calculated based on the recurring effective costs for the last available year (2018), plus the greater efficiencies achieved in the current period (50% profit sharing), with the size of the efficiency factor (X factor) designed to restore the greater efficiencies achieved in the fourth period to consumers in the fifth regulatory period. The revenue guarantee mechanism is confirmed as 64% of revenues recognised for a duration of 20 years starting from the first year in which the business offers the regasification service or, if prior to that, from the first year of ownership of the guarantee factor pursuant to resolution ARG/gas 92/08.
In order to incentivise the range of flexible services offered, there are plans that a share of 40% of revenues from the offering of these services can be retained by the regasification business to cover the revenues not subject to the revenue guarantee factor, up to the recognised revenues.
Recognition of variable electricity costs will be introduced (dependent on the unloading of ships and regasification of LNG) through a fee applied to users. Costs relating to electricity for the basic operation of the terminal continue to be recognised in the reference revenues.
There are plans to recognise the costs relating to the Emission Trading System (ETS), ratifying the neutrality principle of the business in relation to the price risk and incentivising virtuous behaviour aimed at reducing CO^2 emissions.

2020 revenue approval

With resolution 43/2020 / R / gas "Approval of the tariffs for the LNG regasification service for 2020 and amendments and additions to the RTRG", published on 19 February 2020, the Authority approved the revenues recognized for the service of regasification for 2020 on the basis of the proposal presented by LNG Italia. The tariffs were determined on the basis of reference revenues of € 25.1 million and on energy costs of approximately € 3.1 million.
The revenue coverage factor is 64% of the reference revenue. The RAB for the LNG regasification activity is € 121.8 million.
At the same time, the Authority published the definitive 2019 revenues with a total amount of 26.8 million euros, based on the final 2018 balance sheet data.

Storage of natural gas

Total 2019 storage capacity reaches, including strategic storage, about 17.0 BCM: the European highest capacity

The storage system makes it possible to compensate for the different requirements for gas supply and consumption: whilst supply has a substantially constant flow throughout the year, the demand for gas is concentrated mainly in the winter period. Storage also ensures that quantities of strategic gas are available to compensate for any lack of or reduction in non-EU supply or crises in the gas system.

The storage business makes use of an integrated group of infrastructure comprising deposits, wells, gas treatment plants, compression plants and the operational dispatching system. Snam has nine storage concessions located in Lombardy (five), Emilia-Romagna (three) and Abruzzo (one). In 2015, the new Bordolano site came into operation gradually increasing the capacity offered to a total of 1,050 million SMC +10.5% compared with the end of 2018).

Stogit provides its storage services (peak modulation, uniform modulation, strategic, transporter balancing, mining, short-term allocation services and, from 2018, the new Fast Cycle[15] service, to 90 operators based on the Storage Code approved by the Italian Regulatory Authority for Energy, Networks and the Environment (hereinafter also ARERA).

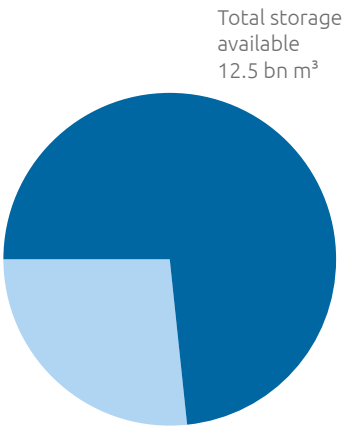
In 2019 Snam took action to promote the replenishment of national storage facilities for the purpose of being able to manage seasonal peaks in demand. The replenishment level at the end of the injection campaign (October 2019) was 99%, in line with the European average.

The market oriented approach adopted in 2019 allowed the Company to increase the mix of customers owing a Storage contract (not only shippers serving end users but also traders who maximise revenues from buying and selling gas to the PSV - virtual trading point) as well as attracting major European players.

Thanks to the investments made to develop new deposits and upgrade existing ones, the total storage capacity at the end of 2019, on a like-for-like basis with strategic storage, reached 17.0 billion cubic metres (+0.1 billion cubic metres compared with 2018), following the Bordolano field gradually coming into operation.

A result that attests to Stogit's ability to respond to both the needs of the national market as well as the contingent dynamics linked to international markets and policies, which can significantly modify demand by increasing the value of business with policies to support the security of supplies.

17.0 bn m³
Total storage capacity



19.33 bn m³
Gas moved through the storage system

9 operating concessions

15 The storage service involves constant injection services and supply availability during the Thermal Year.

Main performance indicators

(millions of €)	2017	2018	2019	Change	% change %
Total revenue (a)	601	603	**598**	(5)	(0.8)
- of which regulated revenues (a)	*598*	*599*	***595***	*(4)*	*(0,7)*
Total revenues net of pass-through items (a)	511	507	**506**	(1)	(0.2)
Operating costs (a)	165	168	**156**	(12)	(7.1)
Operating costs net of pass-through items (a)	75	72	**64**	(8)	(11.1)
EBIT	339	335	**337**	2	0.6
Technical investments (b)	101	99	**112**	13	13.1
Net invested capital at 31 December	3,429	3,397	**3,421**	24	0.7
Concessions (number)	**10**	**10**	**10**		
- of which operational (c)	*9*	*9*	***9***		
Natural gas moved through the storage system(billions of cubic metres) (d)	19,92	21,07	**19,33**	(1,74)	(8,3)
- of which injected	*9.80*	*10.64*	***10.16***	*(0.48)*	*(4.5)*
- of which withdrawn	*10,12*	*10,43*	***9,17***	*(1,26)*	*(12,1)*
Total storage capacity (billions of cubic metres)	**16,7**	**16,9**	***17,0***	**0,1**	**0,6**
- of which available (e)	*12.2*	*12.4*	***12.5***	*0.1*	*0.8*
- of which strategic	*4,5*	*4,5*	**4,5**		
Employees in service at 31 December (number)	*60*	*59*	**61**	*2*	*3,4*

(a) Before consolidation adjustments.
(b) Investments remunerated at the pre-tax real base WACC, amounting to 6.7% for 2019, 6.5% for 2016-2018.
(c) Working gas capacity for modulation services.
(d) The volumes of gas are expressed in Standard cubic metres (SCM) with an average higher heating value (HHV) conventionally equal to 39.23 MJ/Smc (10.895 kWh/SCM) for natural gas storage activities for the thermal year 2019-2020 (39.29 MJ/SCM, 10.914 kWh/SCM, for the thermal year 2018-2019).
(e) Working gas capacity for modulation, mining and balancing services. The figure indicated represents the maximum available capacity, which was allocated in full for the 2019-2020 thermal year.

RESULTS

Total revenue amounted to €598 million, down by €5 million (0.8%) compared with 2018. Total revenue, excluding the items offset in costs[16], amount to €506 million, essentially in line with 2018 (-€1 million -0.2%).

Regulated revenue (€595 million) mainly comprised fees for the natural gas storage service (€508 million) and the fees charged back relating to the natural gas transportation service provided by Snam Rete Gas S.p.A. (€83 million)[17], plus output-based incentives connected to the offering of new storage services (€2 million)[18]. Regulated revenue, excluding components that are offset in costs, amounted to €503 million, which was unchanged when compared to 2018. The increase in the WAAC, which increased from 6.5% in 2018 to 6.7% in 2019, was absorbed by the tariff updating mechanisms.
With reference to the considerations for the storage service, note that 2019 featured an increase in the prices of auctions which meant that the amounts billed to users made it possible to reach the level of revenue recognised without recourse to the compensation mechanisms provided by the rate regulations.
Unregulated revenues equal to €3 million (€4 million in 2018) mainly refer to income derived from insurance

16 These components refer mainly to revenue from the redebiting to storage users of charges relating to the natural gas transportation service provided by Snam Rete Gas S.p.A. For the purposes of the consolidated financial statements, this revenue is eliminated in relation to Stogit S.p.A., together with transportation costs, in order to represent the substance of the operation.
17 Resolution 64/2017/R/gas of 16 February 2017 established that, from 1 April 2017, almost all expenses relating to the natural gas transportation service should no longer be charged to users of the storage service, but settled directly by the CSEA.
18 Through Resolution 614/2018/R/gas of 30 November 2018, with reference to the 2018-2019 thermal year, the Authority introduced an incentive system for Stogit to offer additional storage capacity compared with the capacity planned under the scope of the "basic" storage services. The same mechanism was also confirmed for the 2019-2020 thermal year through the subsequent resolution 153/2019/R/gas of 16 April 2019.

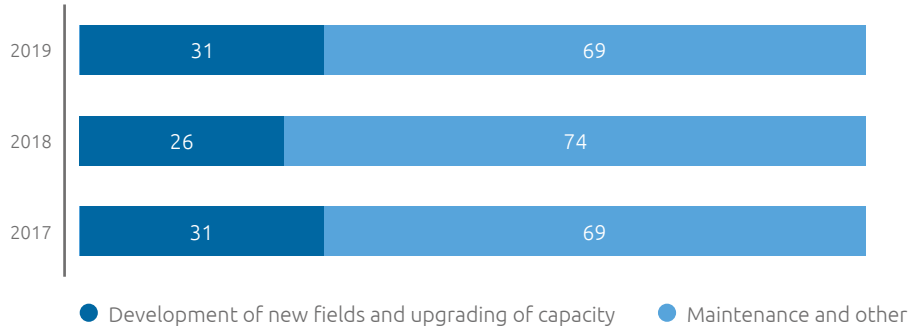
reimbursements.
Operating profit in 2018 stood at €337 million, an increase of €2 million or 0.6% compared with 2018, thanks to the stability of revenues and the reduction in operating costs (+€7 million excluding the components that have a matching entry in revenues), partly offset by greater depreciation and amortisation (-€5 million or 5.0%) due to the new infrastructures coming into operation, specifically the Bordolano site. With reference to operating costs, the reduction is mainly due to the lower costs for CO_2 emission rights, bought on the market to hedge the requirements for 2019, as well as lower costs for redundancy packages.

TECHNICAL INVESTMENTS

Technical investments made by the Company in 2019 totalled €112 million, an increase of €13 million (approximately +13%) compared with the previous year and refer to the development of new fields and upgrading of capacity (€35 million) and maintenance and other investments (€77 million).
The main investments in the **development of new fields and upgrading of capacity** (€35 million) primarily concerned the following initiatives:

- Cortemaggiore (€19 million), for well drilling activities and for the upgrading of storage activities (peak services);
- Minerbio (€13 million), mainly for the completion of the activities related to the finalisation of the installation and start-up of the new TC7 compression unit;
- Sabbioncello (€1 million), for activities related to the installation of the new ESD system (Emergency Shut Down).

Investment proportions by type (% of total investments)



Maintenance and other investments (€77 million) mainly relate to the provision of materials for operations at the Cortemaggiore plants, including commissioning and start-up (€11 million), risk analysis of the wells (€4 million), security at the Minerbio plant (€3 million) and Sergnano plant (€1 million), as well as IT and property activities (€16 million in total).
Thanks to the significant investments made to develop new deposits and upgrade existing ones, Stogit exceeded the previous maximum quantity of gas deposits in its storage systems, thereby increasing its volume and peak capacity.

Total storage capacity as at 31 December 2019, including strategic storage, was 17.0 billion cubic metres (+0.1 billion cubic metres compared with 2018, made available by the gradual entry into operation of the new Bordolano deposit), of which 12.5 billion cubic metres related to available capacity fully allocated for the thermal year 2019-2020 and 4.5 billion cubic metres related to strategic storage (unchanged compared with thermal year 2018-2019, as established by the Ministry of Economic Development by means of the notice dated 8 January 2019)[19].

19 By means of the circular of 8 January 2019, the Ministry of Economic Development confirmed that the strategic gas storage volume for thermal storage year 2019-2020 (1 April 2019-31 March 2020) would remain at 4.62 billion standard cubic metres, 4.5 billion standard cubic metres of which was allocated to Stogit. By means of the announcement of 17 January 2020, the Ministry confirmed the strategic gas storage volume for the thermal year 2020-2021 (1 April 2020-31 March 2021) as 4.62 billion cubic metres, 4.5 billion cubic metres of which was allocated to Stogit

Progress of work to obtain permits

To develop new settlements, in addition to the technical-economic feasibility criteria, Snam adopts procedures that respond to stringent environmental and safety compatibility assessments.
The assessments of environmental effects involve all phases of the work life cycle, site selection, planning, construction, operation and decommissioning. These assessments are made within the purview of the Environmental Impact Assessment (EIA) procedure and the procedures of the Integrated Environment Authority (AIA), at the end of which the central and local administrations issue the permits required under current law.

Applications submitted to the Ministry of the Environment to check EIA requirements)

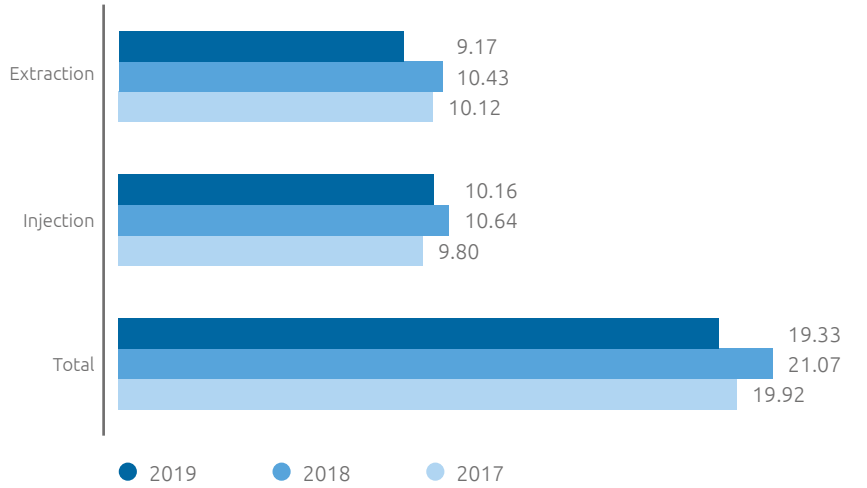
Name	Capacity (MW)	Regions – Provinces involved	Date of submission
"Sergnano Storage" concession Installation TC1	25 (mechanical capacity) 66,9 (thermal capacity)"	Lombardy	03/07/19

OPERATING REVIEW

Gas moved through the storage system

Volumes of gas moved through the storage system in 2019 amounted to 19.33 billion cubic metres, a fall of 1.74 billion cubic metres, or 8.3%, compared with 2018.
The reduction was mainly attributable to lower withdrawals from storage (-1.26 billion cubic metres; -12.1%), mainly as a result of weather conditions.

Natural gas moved through the storage system (billions of cubic metres)



Provision and development of storage services

	2017	2018	2019
Active customers (shippers)	89	91	**90**

In 2018 the Company implemented a digital platform (Jarvis) aimed at improving commercial operations.
The Jarvis platform, which actively involves customers, is designed to adopt a process for the renewal of services and technologies to support all commercial transportation, storage and regasification processes based on the feedback received from customers and also proposes to promote the range of integrated services offered on the Italian market possibly also enabling services for the foreign market.
From the point of view of services, on 22 May 2019 Snam opened the new Jarvis commercial platform of integrated services to its customers, implemented in 2018 and developed in conjunction with market operators. More information with regard to the new services introduced in 2019 are given in the section "Provision and development of services - Transportation of natural gas" in this Report, also on the basis of the implementation and integrated management of the platform for all the regulated businesses in which Snam operates.

(%)	2017	2018	2019
Contracted storage capacity/Available storage capacity	99.9	99.7	**100**
Compliance with time frames for providing services subject to specific commercial quality standards	100	100	**100**
Connection flow lines subject to supervision	100	100	**100**
Total capacity not made available following interruptions/reductions to the service	0	0	**0**

Organisational changes

At the end of 2019, the number of personnel in service totalled 61, essentially in line compared with 31 December 2018 (59).
Following the conclusion of the integration project, transportation-storage dispatching operations are managed through an integrated procedure.
Under the project for the rationalisation and simplification of the current Snam regulatory framework the process for issuing rules to simplify and standardise operating processes was completed, including the document for the management of the availability and traceability of operating personnel.
Lastly, the project for the activation of the centres dedicated to the well and deposits area was finalised in 2019.

Accidents

In 2019, there were no accidents involving either employees or contract workers.

Accidents at work (no)

	2017	2018	2019
Total employee accidents	2	0	**0**
Total contract worker accidents	0	0	**0**

Accident indices

	2017	2018	2019
Employees			
Frequency index (*)	6.71	0	**0**
Severity index (**)	0.43	0	**0**
Contract workers			
Frequency index (*)	0	0	**0**
Severity index (**)	0	0	**0**

(*) Number of accidents at work resulting in absence of at least one day, per million hours worked.
(**) Number of working days lost (calendar days) due to accidents at work resulting in absence of at least one day per thousand hours worked. These data have been calculated taking fatal accidents into consideration.

Energy consumption and emissions

The company, in accordance with its sustainable growth model, updated and set new voluntary targets, valid objectives for all Snam businesses (transportation, storage, regasification):

- to reduce its natural gas emissions by 2022 and 2025, respectively by 15% an 40%, excluding emergencies, compared with the 2016 figures;
- to reduce its scope 1 and scope 2 emissions by 2030 by 40%, excluding emergencies, compared with the 2016 figures;
- to increase the ratio between green electricity bought and the total to reach 55% by 2030.

In 2019 energy consumption for gas storage fell by 10% compared with 2018, also thanks to the reduction in gas injected into the deposits (-4.5%). In 2019, nitrogen oxide emissions totalled around 116 tonnes (-51% compared with 2018). This decrease is mainly attributable to the reduction in consumption and use of DLE dry low emission turbines. Specifically, with the DLE turbine coming into operation in 2019 in the Minerbio storage plant as well, all the storage sites were operating with low emission units for 100% of operating hours.

Energy consumption

	2017	2018	2019
Energy consumption (TJ)	4,787	5,337	**4,784**
Emissions of CO_{2eq} – scope1 (t) (*)	447,662	473,206	**423,630**
Emissions of natural gas (106 m^3)	10.7	10.5	**9.2**
NOx emissions (t)	175	236	**115.9**

(*) The CO_{2eq} emissions were calculated with a methane Global Warming Potential (GWP) of 28, as indicated in the Intergovernmental Panel on Climate Change (IPCC) scientific study the "Fifth Assessment Report IPCC".

REGULATIONS CONCERNING THE BUSINESS SEGMENT

Relations with the regulatory authority

Over the years Snam has established a constructive relationship and effective cooperation with the Italian Regulatory Authority for Energy, Networks and the Environment – ARERA.

Relations with the regulatory authority (no.)

	2017	2018	2019
Responses to reference documents	0	1	**2**
Tariff proposals	5	3	**3**
Data collections	91	122	**45**
Preliminary investigations (*)	2	0	**0**
Proposals to amend/update contractual documents and codes (**)	4	3	**4**
Proposal to amend/update contractual documents and codes (approved)	2	2	**4**

(*) Information sent to the Authority during 2019 with reference to investigations in the context of the sector. This includes exploratory investigations.
(**) Also includes proposals still being evaluated by the Authority, including contractual documents and agreements with operators in the context of regulated services.

Relations with the regulatory authority under the scope of Gas Market Monitoring (no.)

	2019
Relations/analyses (with reference to all businesses)	**6**
Agreements, manuals and specific details on monitoring (with reference to all businesses)	**14**
Reports and data flows	**1,975**

Temporary period regulations for 2019

Through resolution 68/208/R/gas "Start of the procedure for the definition of provisions elated to the tariffs and quality of natural gas storage service for the fifth regulatory period (5PRS) and extension of the current provisions to the year 2019", published on 9 February 2018" the Authority extended the tariff criteria for the Storage service in force in the period 2015-2018 to cover 2019 confirming the value of the asset β parameter. The process was also launched for the revision of the criteria for the 5th regulatory period, which runs from 2020, similar to the transportation and regasification businesses, during which the opportunity of implementing a "totex" type regulatory approach will be evaluated.
The Authority also extended the regulation on the subject of the quality of the natural gas storage service for the period 2015-2018 to cover 2019.

Updating of the remuneration rate of the capital invested for regulatory purposes (WACC) for 2019

Through resolution 639/2018/R/gas, published on 6 December 2018, the Authority carried out an interim update of the basic WACC parameters, shared by all regulated infrastructure services of the electricity sectors, for the three-year period 2019-2021, and for regulated infrastructure services of the gas sector, for 2019, setting this value at 6.7% for storage activities compared with the previous figure of 6.5% (6.5% for the years 2016-2018).
For infrastructure services other than those of gas distribution and metering, the Authority set a D/E gearing level of 1, while the calculation of the Beta parameter was carried out during the tariff regulation of the individual businesses starting from 2020. The WACC for 2020 was calculated following the setting of the Beta parameter for the 5th regulatory period.
For more information on the parameter values used by the Authority for calculating the value indicated above, please

refer to the section "Regulation of activity sector - Natural gas transportation" of this Report.

Tariff regulations for 2019

By means of Resolution 696/2018/R/gas, published on 20 December 2018, the Authority provisionally approved the corporate base revenue for the storage service for 2019, as per the tariff proposal presented by Stogit. This revenue of €499.5 million was later updated using the total annual increases in assets relating to 2018. Specifically, through resolution 297/2019/R/gas - the definitive calculation of the business revenues for the storage service for 2019, published on 10 July 2019, the Authority approved the revenues recognised definitively for the storage service for 2019. The recognised revenues amounted to €499 million. The RAB for storage activities was €4.0 billion.

Regulation for the fifth regulatory period 2020-2023

Through resolution 419/2019/R/gas, published on 23 October 2019, the Authority defined the criteria for calculating the revenues recognised for the storage service for the fifth regulatory period (1 January 2020-31 December 2025).
The duration of the regulatory period will be extended from 4 to 6 years. The valuation of the net capital invested (RAB) is based on the revalued historical cost method. The net invested capital remuneration rate Beta parameter (WACC) remains fixed at 0.506, with the WACC remaining unchanged at 6.7% before tax for the years 2020-2021, in line with the TIWACC framework.
Works in progress (LIC) remain excluded from the calculation of the RAV, at the same time as the recognition of financing expenses (IPCO). The operating costs recognised are calculated based on the recurring effective costs for the last available year (2018), plus the greater efficiencies achieved in the current period (50% profit sharing), with the size of the efficiency factor (X factor) designed to restore the greater efficiencies achieved in the fourth period to consumers in the fifth regulatory period.
The mechanism for hedging revenues will be extended to cover 100% of the reference revenues, also predicting the storage businesses can optionally access an updated incentive system following the remodelling of the share of revenue recognised subject to the hedge factor. The methods for recognising renewal costs are confirmed.
There are plans to recognise the costs relating to the Emission Trading System (ETS), ratifying the neutrality principle of the business in relation to the price risk and incentivising virtuous behaviour aimed at reducing CO_2 emissions.
Lastly the resolution approves the regulatory provisions for the quality of the storage service for the period 2020-2025.

Approval of 2020 revenues

By means of Resolution 535/2019/R/gas, published on 19 December 2019, the Authority approved the revenue recognised for the storage service for 2020. The recognised revenues amounted to €491 million. The RAB for storage activities was €4.0 billion.

Other provisions

Resolution 67/2019/R/gas - Regulation of access to storage services and their provision. Provisions for the allocation of storage capacities for the thermal year 2019/2020

Through this resolution, published on 27 February 2019, the Authority rationalised and integrated the provisions related to access to and the provision of storage services in a Consolidated Act (RAST). With specific reference to the methods for calculating the regulated fees, the RAST involves the sterilisation of the effects resulting from the allocation of capacities with market mechanisms at fees lower than the tariff as well as incentivisation criteria for maximising the range of storage services offers.
Specifically, the resolution involves the compensation via the CSEA of the difference in price between the storage tariff and the allocation price at auction applied to the allocated capacity, as well as the compensation of the costs for the purchase of the transportation capacity incurred by the storage businesses.