



**Key figures  
2016**

**GRTgaz** is one of the European leaders of natural gas transmission and a world expert of gas transmission networks and systems. In France, GRTgaz owns and operates 32,456 km of buried pipes and 28 compression stations to ship gas between suppliers and consumers (distributors or industrial companies directly connected to the transmission network). GRTgaz fulfils public service missions to ensure the continuity of supply to consumers and sells transmission services to users of the network.

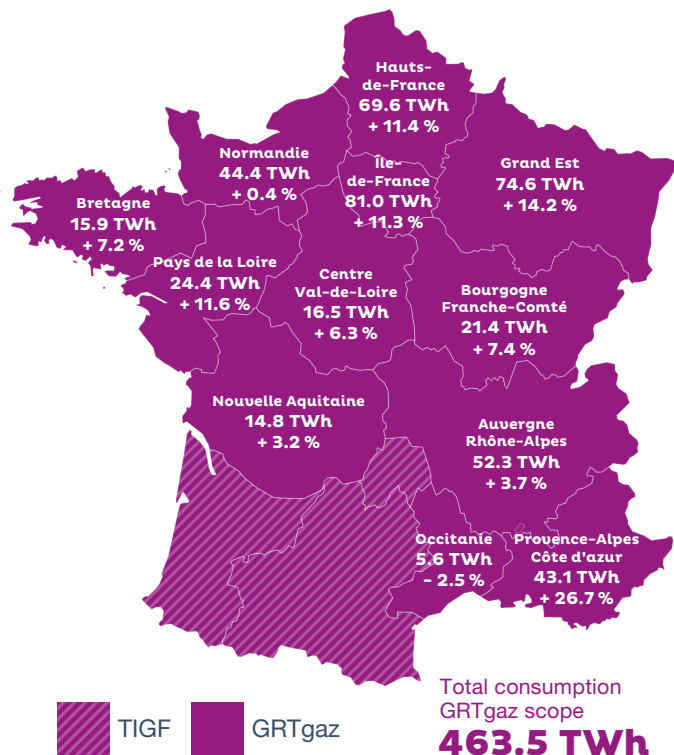
An actor of the energy transition, GRTgaz invests in innovative solutions to adapt its network and reconcile competitiveness with security of supply and preservation of the environment.

[www.grtgaz.com](http://www.grtgaz.com)



### Gas consumption in the administrative regions

In TWh  
2016 us 2015 in %



### Main facilities commissioned in 2016

- + Pipes**
  - \_ Santerre Artery: 33 km in DN\* 900
  - \_ Arc de Dierrey: commissioning of the Dierrey-Voisines 120 km segment in DN\* 1200
- + Interconnection stations**
  - \_ Voisines (52)
  - \_ Méry-sur-Cher (18)
- + Connection** of the public distribution of Villers-Faucon (80)

\* Nominal Diameter

# + The network

## Pipes

Total length  
**32,456 km**

Main network  
**7,477 km**

Regional network  
**24,979 km**

Minimum diameter  
**DN 80 mm**

Maximum diameter  
**DN 1,200 mm**

## Network pressure

**74 %** of the transmission network is operated at a maximum pressure of  
**67.7 bars**

Maximum network pressure:  
**95 bars**

Minimum network pressure:  
**16 bars**

## Odorisation

**26** odorisation facilities (THT injection + control) on **19 sites** of which 6 sites operated by GRTgaz

**31** odorisation control sites on the network of which 29 sites operated by GRTgaz

## Stations

Delivery stations  
**3,391** public distribution stations  
**1,016** industrial consumer stations

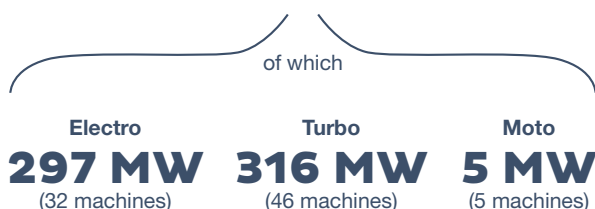
Pressure reduction stations  
**783**

Shut-off stations  
**4,833**

## Compression

**28** compression stations

Total installed power (elec/gas):  
**616 MW**



## Quantities of natural gas consumed

| Consumption in GRTgaz areas <sup>4</sup> | 2016      | 2015      | 2016 / 2015 |
|--|-----------|-----------|-------------|
| Direct customers                         | 179.8 TWh | 154.6 TWh | + 16.3 %    |
| Raw public distrib.                      | 283.7 TWh | 266.7 TWh | + 6.4 %     |
| Public distrib. corrected for weather    | 277.6 TWh | 278.4 TWh | - 0.3 %     |
| Raw total                                | 463.5 TWh | 421.3 TWh | + 9.9 %     |
| Total corrected for weather              | 457.4 TWh | 433.1 TWh | + 5.7 %     |

4 - Excluding maintenance and self-consumption activities of the GRTgaz network.

## Consumption of industrial customers

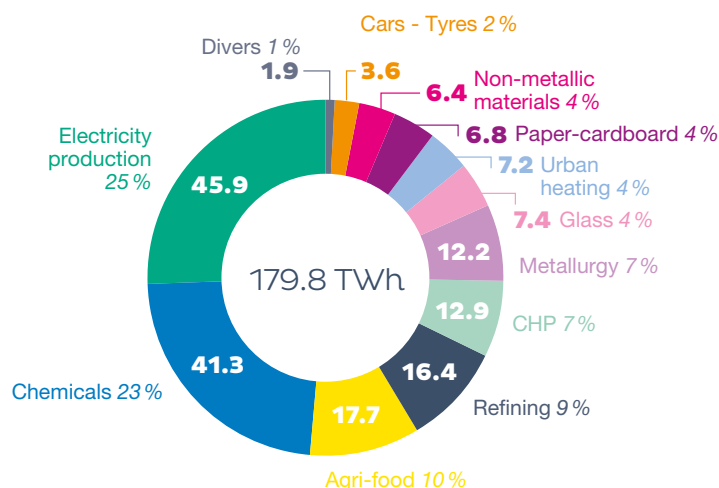
**179.8 TWh**

**+ 16.3 %**

Compared to 2015

### Distribution of consumption of industrial customers in 2016

(In TWh, all regions, sectors of activity in %)



# Quantities of natural gas transported

Raw data, i.e. not corrected for weather vagaries

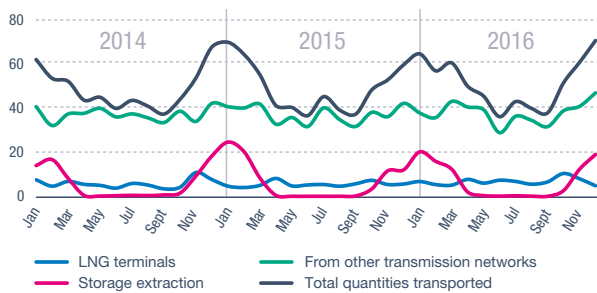
The quantities of natural gas transported by GRTgaz are calculated:

- either as the sum of inputs into the network (LNG terminals, other transmission networks, storage extraction),
- or as the sum of the outputs from the network (other transmission networks, consumption, injections into storage).

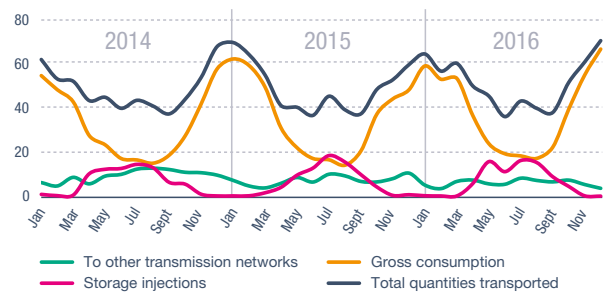
| Period      | Inputs into the GRTgaz network |                                  |                    | Outputs from the GRTgaz network |                            |                    | Total quantities transported |
|-------------|--------------------------------|----------------------------------|--------------------|---------------------------------|----------------------------|--------------------|------------------------------|
|             | LNG terminals                  | From other transmission networks | Storage extraction | To other transmission networks  | Consumption <sup>(3)</sup> | Storage injections |                              |
| 2016        | 79.5 TWh                       | 452.9 TWh                        | 84.7 TWh           | 72.7 TWh                        | 465.3 TWh                  | 79.1 TWh           | 617.1 TWh                    |
| 2015        | 64.9 TWh                       | 444.4 TWh                        | 80.7 TWh           | 88.4 TWh                        | 423.2 TWh                  | 78.3 TWh           | 589.9 TWh                    |
| 2016 / 2015 | + 22.4%                        | + 1.9%                           | + 5.0%             | - 17.8%                         | + 9.9%                     | + 1.1%             | + 4.6%                       |

3- These are quantities consumed by the large consumers connected directly to the GRTgaz network, by consumers connected to the public distribution networks supplied by GRTgaz and by GRTgaz itself for its own needs, in particular the operation of its compression stations.

## Inputs into the GRTgaz network



## Outputs from the GRTgaz network



## Safety of the pipelines

### + Monitoring

- \_ Network visible by road: from once a week to once a month
- \_ Network visible by air: once or twice a month
- \_ Network visible only on foot: once a year

### + Control of third-party work

- \_ Number of DTs<sup>1</sup> + DICTs<sup>2</sup> received and processed by GRTgaz in 2016: **76,082**
- \_ Number of DTs + DICTs regarding GRTgaz: **69,960**

1- Declaration of Work Projects

2- Declaration of Intention to Start Work

### Incidents due to third-party work:

**9** in 2014 / **7** in 2015 / **4** in 2016



## New gas uses

**1.4 million tonnes of CO<sub>2</sub>** avoided by conversions of industrial sites from fuel oil to gas



**82,000 tonnes of CO<sub>2</sub>** avoided by gas transport

**44,800 tonnes of CO<sub>2</sub>** avoided by the use of renewable gas



i.e. a contribution equivalent to that of more than **8,000 wind turbines of 2 MW** in the French electric mix (2015 mix).



## Customers

**131** shipper customers  
at the end of 2016

**19** distribution network  
managers connected

**764** active industrial  
customers in 2016, including  
13 electricity production plants  
using natural gas at the end  
of 2016



## Traded on the French market

**906 TWh**

traded through gas hubs  
(PEG Nord and TRS)



## Financial results 2016

Consolidated data, IFRS standards

Sales revenue **€1,993m**

EBITDA **€1,159m**

Net recurring income **€384m**



## Human resources

**2,916** GRTgaz  
France employees  
as at 31/12/2016

**2,274** Men  
**642** Women

of which ..... Operatives ..... Supervisors ..... Executives  
352 1,388 1,176



## Health and safety at work

Frequency rate: **0.7**

Expanded  
frequency index: **8.3**

Severity rate: **0.02**

Frequency rate of external  
companies providing  
services for GRTgaz: **4.8**



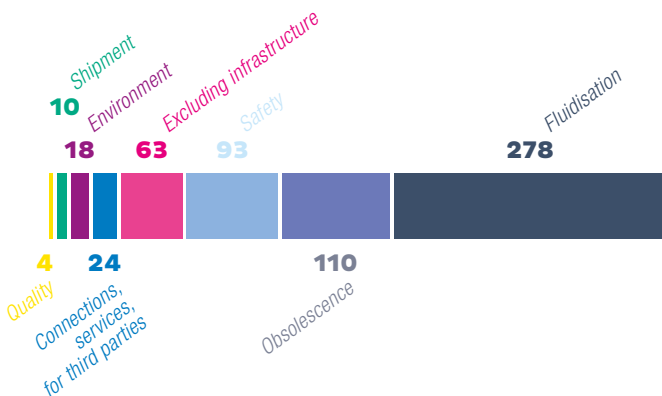
## 2016 investments

**€600m**

**€304m**  
for maintenance  
of facilities

**€296m**  
for development  
of facilities

Distribution per  
investment purpose  
(In €m)



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