afg
association française du gaz

The gas union in France

- ► AFG is the union of the whole gas industry (natural gas, biomethane & liquefied petroleum gas)

- ► All business activities of the gas chain are represented: infrastructure operators, equipment & appliance manufacturers, installers, gas supply companies, etc.

- ► AFG aims to:
  - ✓ Promote the use of gas in France and the development of the industry
  - ✓ Represent its members besides French public bodies (Government, legislative bodies, regulator)
  - ✓ Add value to legislation, regulation and standardisation by taking part in drafting
  - ✓ Ensure international representation (IGU, Eurogas, Marcogaz)

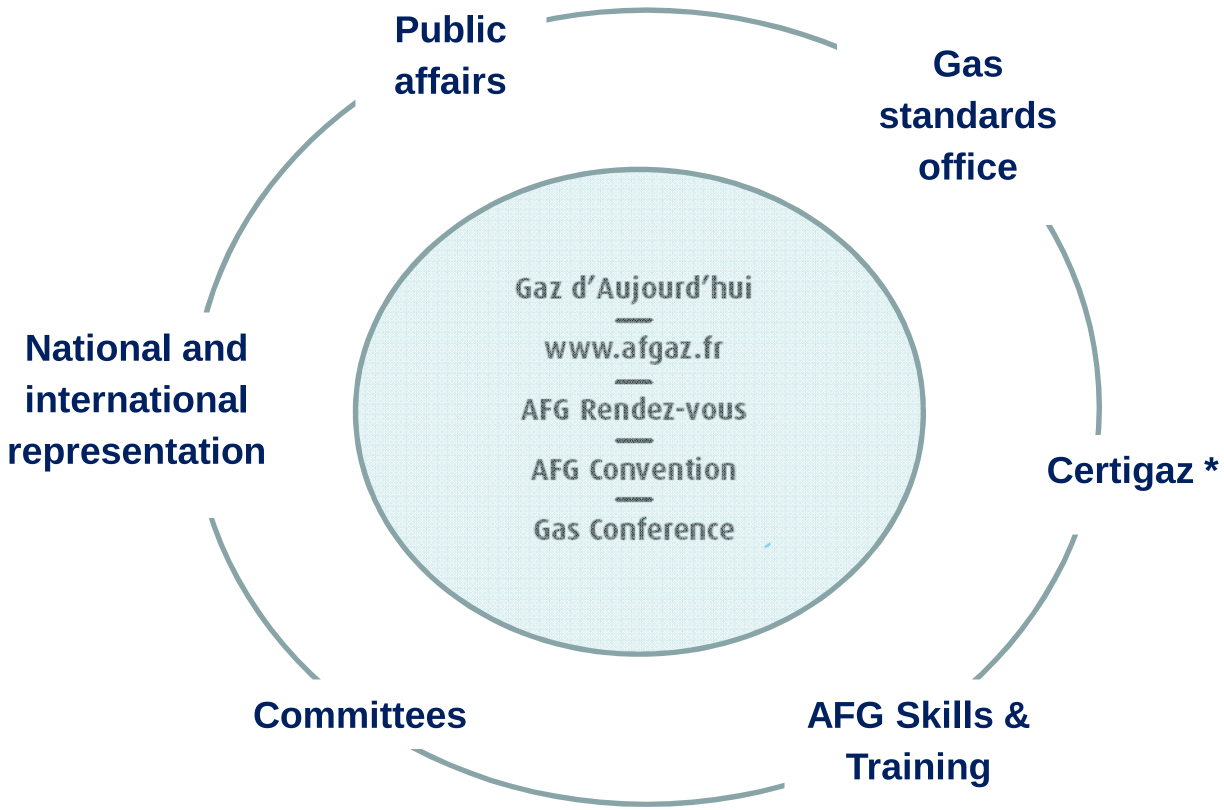
Our members

7 standing members

26 associated members

About 1000 individual members

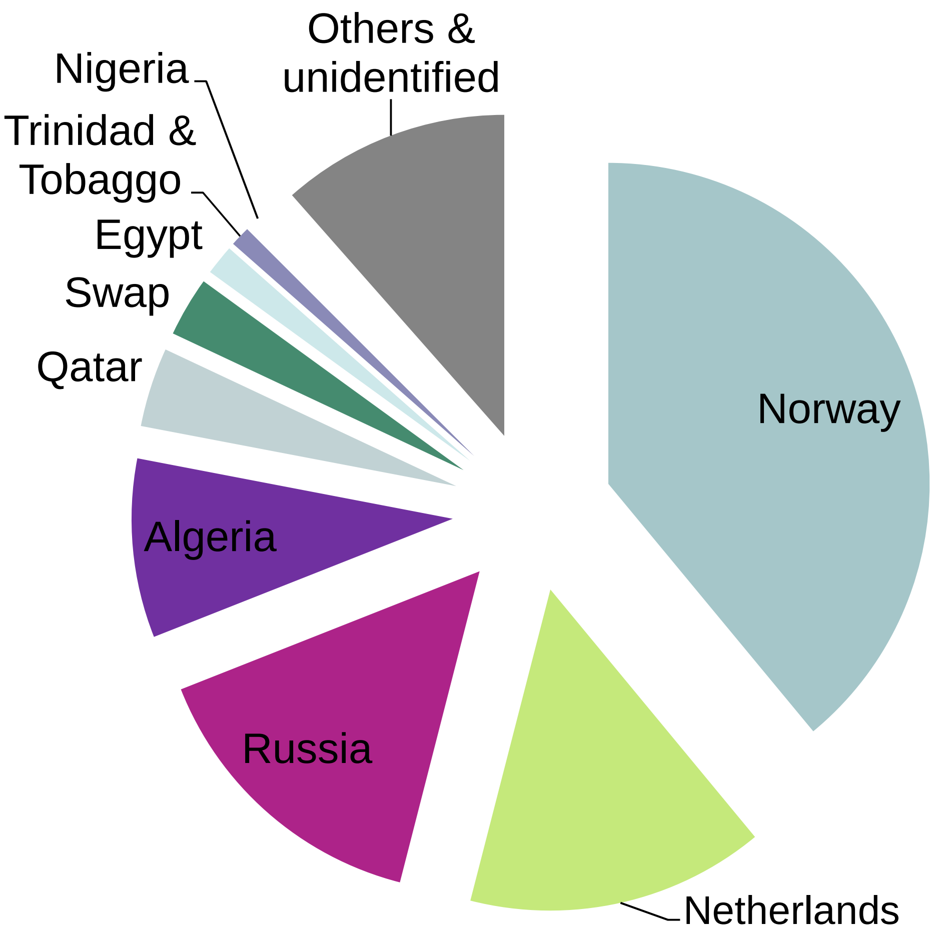
AFG's branches and subsidiairies



* Company jointly owned in equal shares with Afnor Certification

Gas supply in France

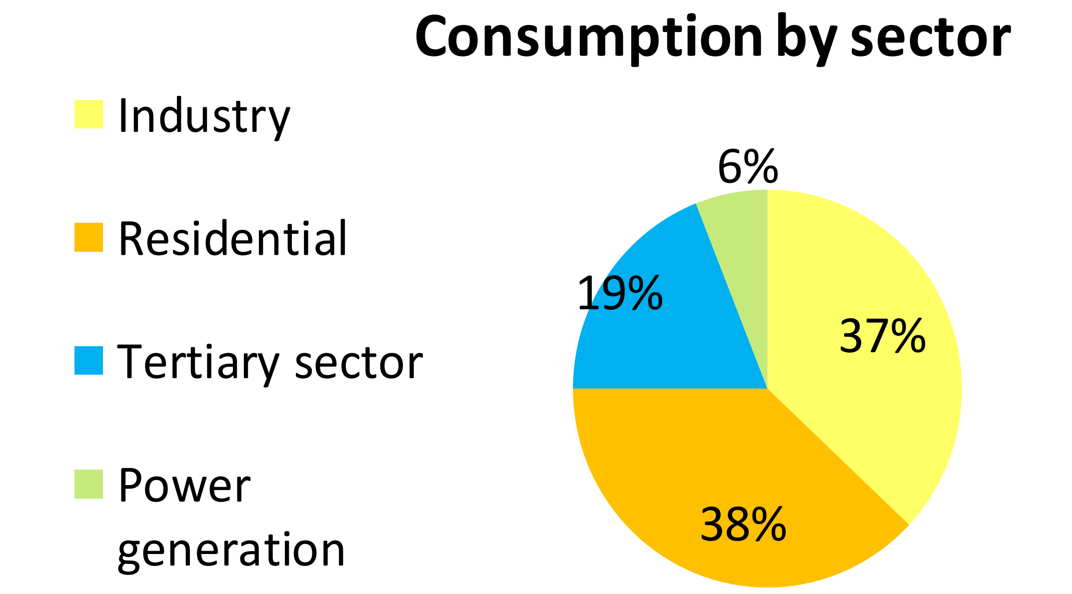
Origin of Gas in France 2012



- **Almost of the gas is imported**
- **Strong diversity of supply**
- **20% of LNG imports**
- **Long term and medium term contracts equal to 80% of the imports**

Gas consumption in France

- Gross consumption in 2012: 500 TWh *(source Soes)*
- Gas represents 15% of the primary energy-mix and 22% of the final consumption
- Due to the importance of the residential- and commercial sector, French gas demand is very sensitive to weather conditions.



(2011)

Gas market opening

- In France, gas supply mainly was ensured by Gaz de France from 1946 till 2007.
- Two major Directives : Directive 98/30 of 22 June 1998 + Directive 2003/55 of 26 June 2003 set up a large market for natural gas.
- These directives have been transposed into National Law (cf January 3, 2003 / August 9, 2004). Amendments introduced 7 December 2006.

- **Gradual market opening:**

Août 2000	**Août 2003**	**Juillet 2004**	**Since July 2007**
20% of the market, 600 sites (consumption > 237 GWh/year) ;	**37% of the market**, 1200 sites (consumption > 83 GWh/year ;	**70% of the market**, 640000 professional sites	**French market is completely open** (more than 11 million customers)

(source DGEC)

The gas market in France

- French market is **fully open since July 2007**

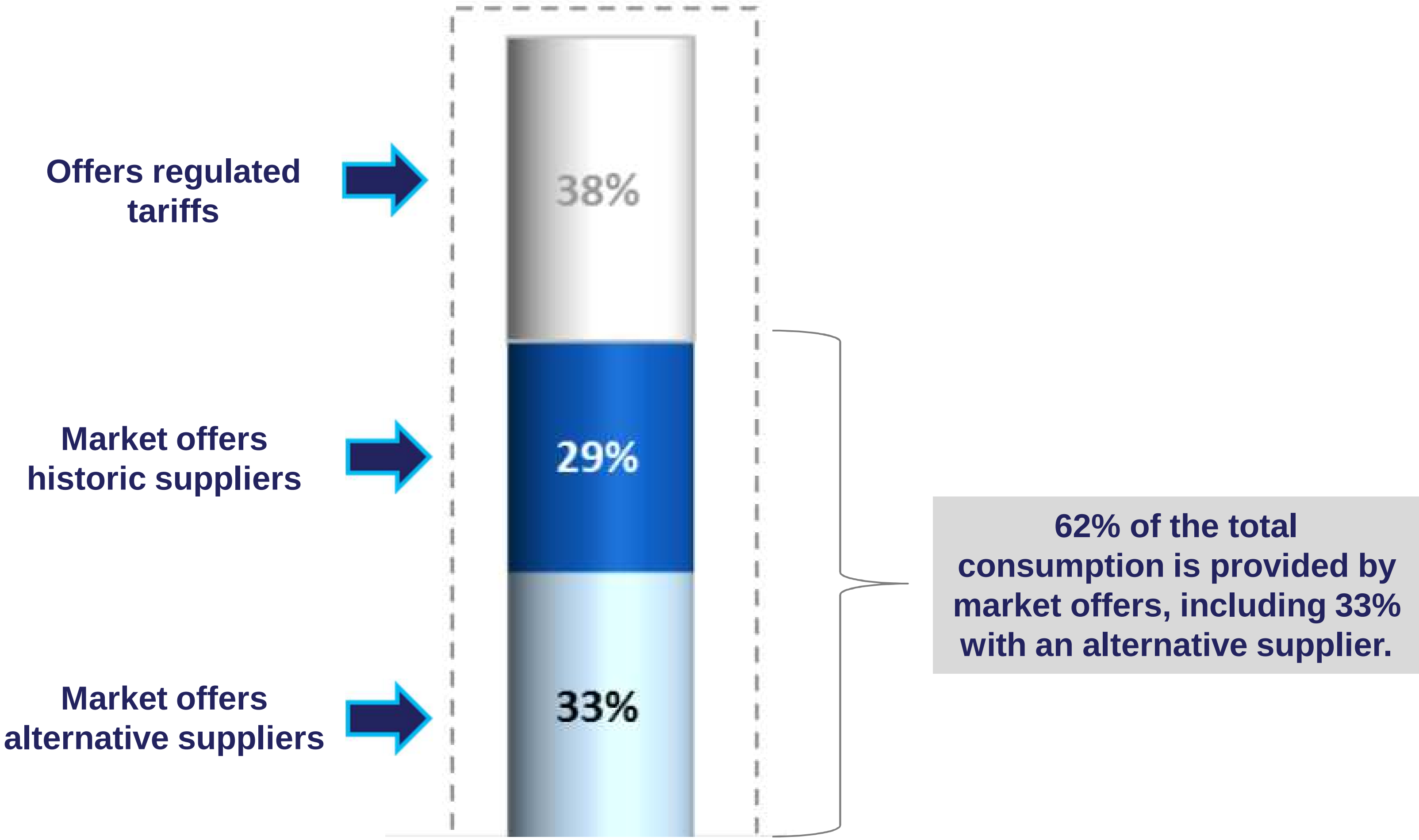
- **11,5 million consumers** can choose their gas supplier.

- In France, the share of residential is 10,632,000 sites and the share of non-residential accounts 675,000 sites.

(source CNDD - 2012)

The gas market in France

Share of annualized consumption for each contract on 31 December 2012



All sites (511 TWh)

(source CRE - 2013)

Actors and competition: Overview

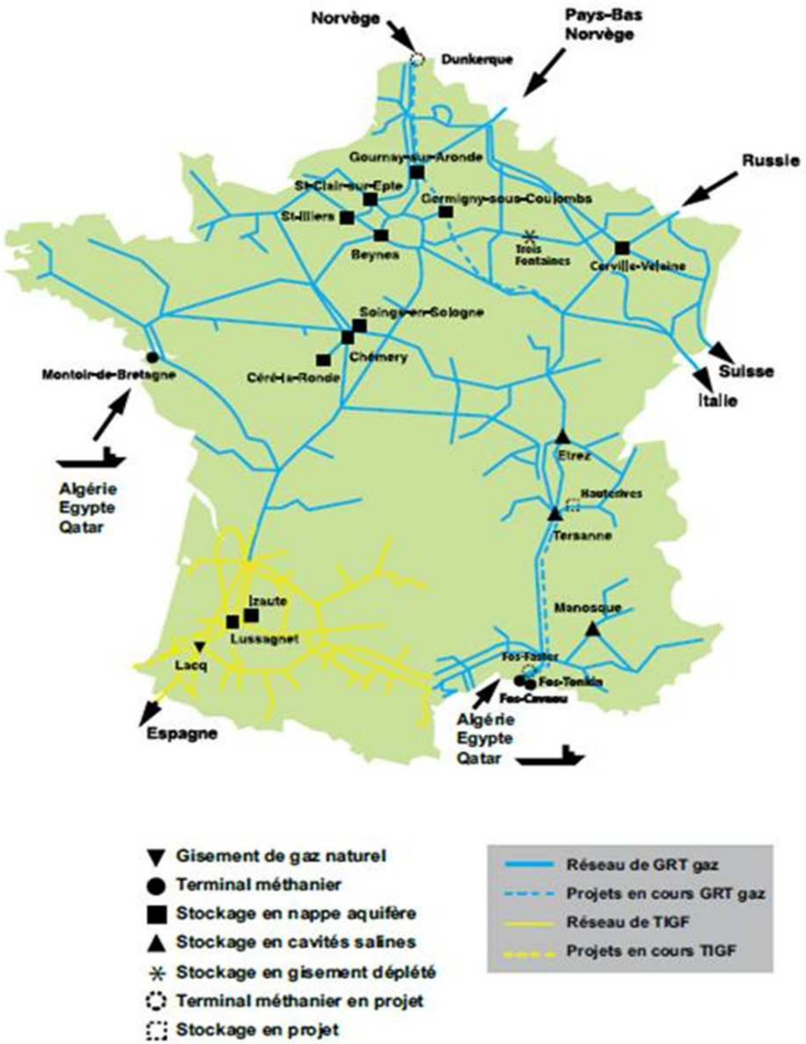
- **124 suppliers** are registered with the French Ministry of Energy (including GDF Suez and 22 local distribution companies);

- **According to the french regulator** :18 active suppliers cover the French territory;

- **Suppliers** can provide several segments (individual clients and professionals).

(source DGEC, CRE)

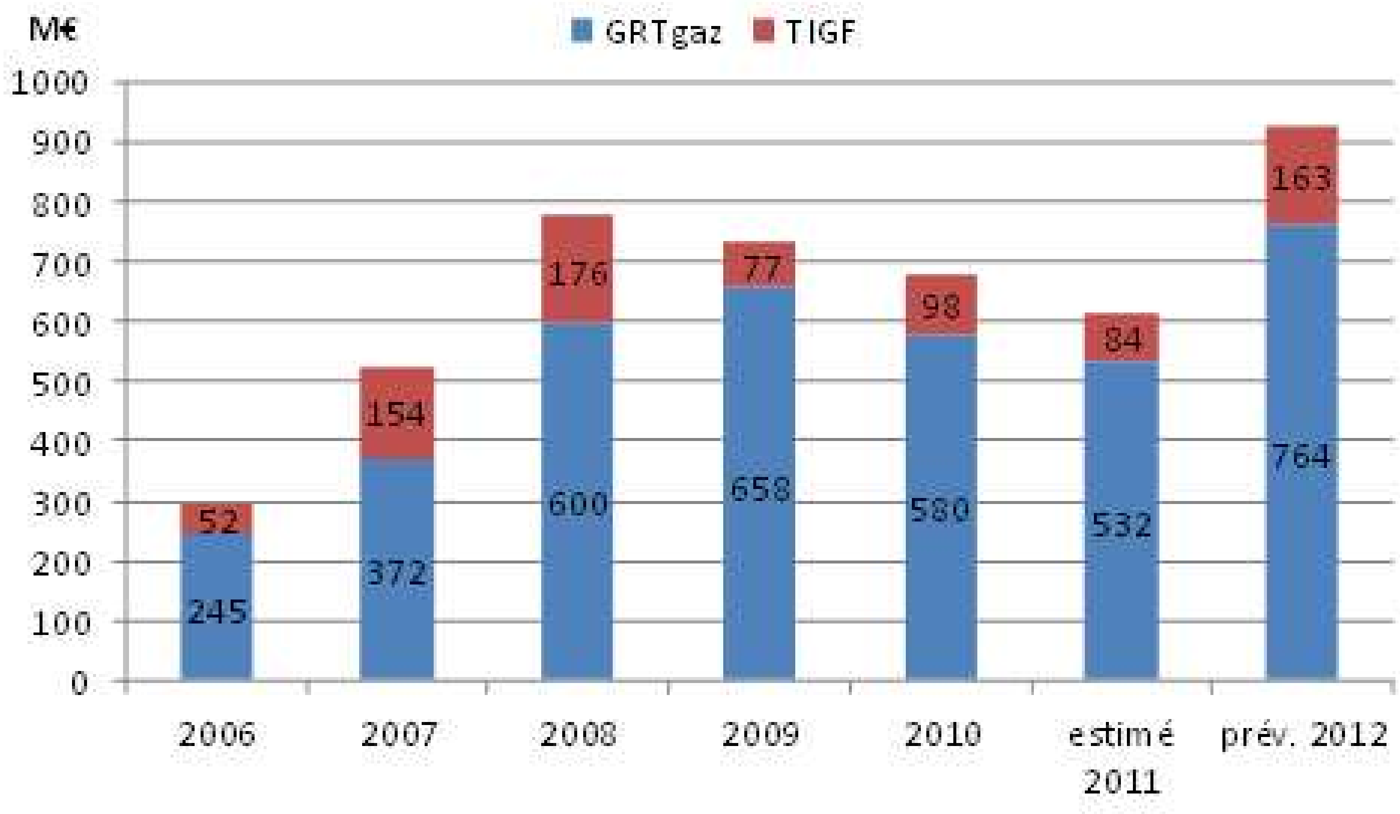
Transmission network



- 2 operators: GRTgaz and TIGF
- 37 000 km in France
- 31 compressor stations
- 3 balancing zones
- 7 points of input - output

TSO's investments

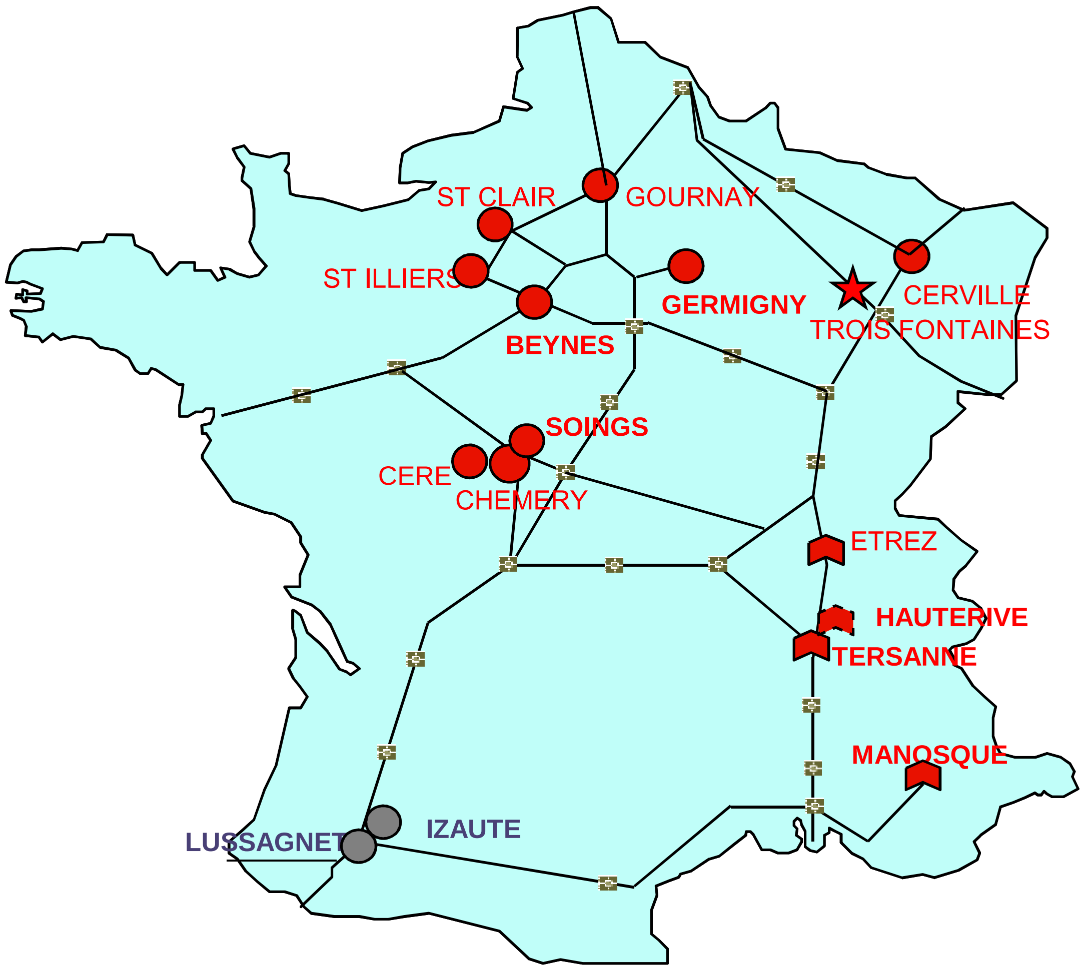
Evolution of annual programs



(source CRE)

Storage in France

- 15 sites in operation
- 1 project (Hauterive)
- 12 bcm working volume which represents 25% of French consumption
- 2 operators: Storengy and TIGF



Aquifer storage
Storage in salt caverns
Depleted reservoir storage
STORENGY
TIGF

Distribution in France

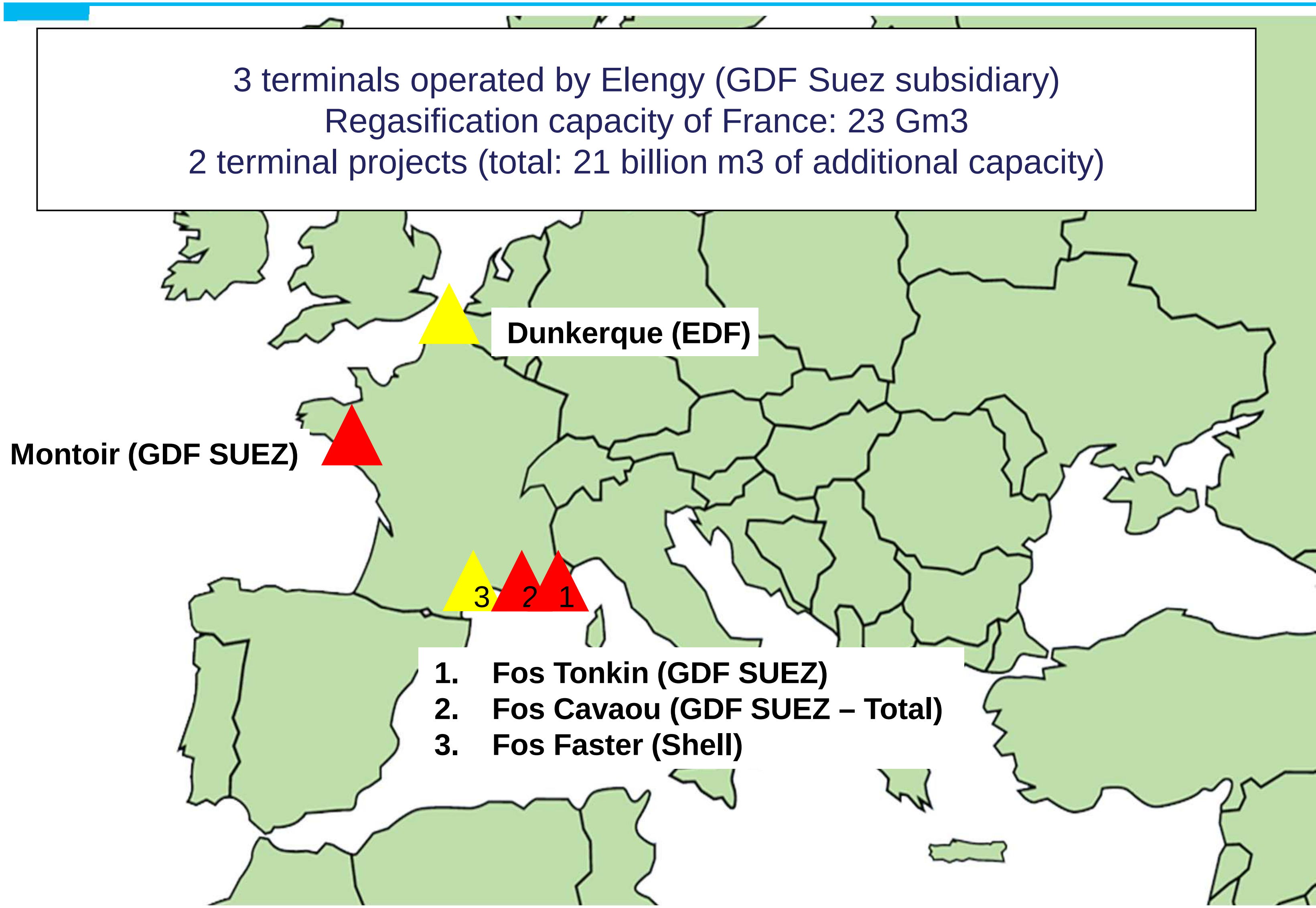
- **NATURAL GAS**
  - 195,000 km
  - Pipe to medium or low pressure
  - 9550 towns are connected (80% of the French population)
  - GrDF subsidiary of GDF SUEZ operates 96% of the distribution market
  - 22 local distribution companies share the rest of the market
  - A new comer : Antargaz
  - GrDF spends 1M€ per day for network safety,

- **LPG**
  - Nearly 100 communities fueled by LPG networks (150 000 people)

(source AFG)

LNG in France

3 terminals operated by Elengy (GDF Suez subsidiary)
Regasification capacity of France: 23 Gm3
2 terminal projects (total: 21 billion m3 of additional capacity)



LNG terminal projects

► Dunkerque LNG - under construction

- ✓ Start at the end of 2015
- ✓ The second largest French ind
  site
- ✓ EDF, Fluxys et TOTAL
- ✓ Commissioning into 2015.
- ✓ Volume: 13 bcm
- ✓ Investment: 1,5 billion €

► Fos Faster

- ✓ Shell - Vopak
- ✓ Implementation scheduled for late 2016
- ✓ Volume: 8 bcm (or 16 bcm)
- ✓ Investment : 800 M €

French gas industry challenges

- **Coal competitiveness:**
  - Use of gas in power generation slump in all Europe and in France (from 30.5 to 23.2 TWh in 2012)
  - Due to cheap coal exported from the US where cheap gas is now used in power generation, and weak CO_2 signal on ETS.

- **Gas in the future energy mix:** energy transition trajectory. The gas must make its case as :
  - A back up to the development of the renewables (backup in power generation, micro generation)
  - An asset to the decarbonisation of the energy mix (biomethane),

- **Energy efficiency:**
  - New European regulatory context: European directive on Energy efficiency
  - French legislation : energy saving certificates, RT 2012, old building renovation

association française du gaz

Thank you for your attention