France

Key aspects:
- Gas demand has reduced by 17.6% between 2010 & 2015
- 99% of gas is imported from a wide range of suppliers
- Discussion to ban import of US LNG and slow down of infrastructure developments
- French investments in renewable energy have taken a hit recently

I. Gas demand

According to EU data:\(^1\)
- Gas represented 13.8% of France’s energy mix in 2015.
- France consumed 42.47 bcm of gas in 2015: Gas demand dropped by 17.5% since 2010.
- France represents 9.5% of European gas demand (ranks 4\(^{th}\) in EU 28)
  - Industrial gas demand dropped by -5.2% between 2010 and 2014
  - Power sector gas demand dropped by -59.8% between 2010 and 2014
  - Residential gas demand dropped by -22.3% between 2010 and 2014

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\(^1\) E3G compilation of data extracted from Eurostat
II. Gas supply

France has a very marginal domestic production of gas (0.02 bcm per year) which accounted in 2015 for only 0.1% of the national consumption of gas.2 While the gas industry believes France owns important resources of shale gas3, this potential remains very uncertain and, most of all, unproven. Even more importantly, the decade of shale gas production in the US have provided a catastrophic environmental record.4 This was at the origin of an important mobilization in France which pushed the country to ban shale gas exploration and exploitation in 2011, citing environmental concerns.5 Up to now, almost the entire gas demand in France is therefore imported. French gas imports are relatively well diversified. In 2014, gas was mostly provided by Norway (38% of the total imports), the Netherlands (10.8%), the Russian Federation (12%) and Algeria (9.5%) – See graph.6 This distribution could change in the future, notably after two French companies, Electricité de France (EDF) and gas utility Engie signed contracts with Chenière7 to buy fracked gas from the US, via LNG. This contradiction with the domestic ban on fracking raised controversies, especially as the French state has a large interest in both companies, including a 75% ownership stake in EDF. That’s why in May 2016, the French energy minister Ségolène Royal said France is investigating options to ban shale gas imports from the United States. However, this may be against both World Trade Organization (WTO) rules and EU law.8

III. Gas infrastructure

Gas infrastructures in France are considered as well-developed to ensure security and diversity of its supplies. According to French authorities, the French gas network meets the N-1 standard of the European regulation (Regulation 994/2010) at a level of 130%. This means that it has the resilience to satisfy total gas demand even in the event of an outage of the single largest gas infrastructure, during a day of exceptionally high gas demand.9 The maximum gas supply capacity of France’s gas infrastructure (pipeline imports, LNG regasification and peak storage output) is 528mcm/d, while peak daily gas demand was some 340mcm/d. This leaves over 180mcm/d (or 35%) “spare” capacity in the gas network.10

4 http://concernedhealthy.org/compendium/
5 http://interfaxenergy.com/gasdaily/article/20286/french-us-shale-ban-would-clash-with-trade-law
8 http://www.lemonde.fr/planete/article/2016/05/11/segolene-royal-peut-elle-faire-barrage-au-gaz-de-schiste-americain_4917678_3244.html
France has a 193,700 km gas distribution network that is owned by local communities and managed by 26 operators. In 2014, it had already numerous cross-border gas pipelines, with a total import capacity of 68.5 bcm/y and has total gas storage capacity is approximately 13 bcm (12 bcm in aquifers, 1 bcm in salt caverns and 0.1 bcm in a depleted reservoir).11

There are four LNG port terminals in France: Fos Cavaou and Fos Tonkin near Marseilles, Montoir-de-Bretagne on the Atlantic coast and new one in Dunkirk on the North Sea. Their combined regasification capacity in 2016 was 34.7 bcm/y, which represents around 58% of the annual fossil gas consumption of France, Belgium and Luxembourg combined.12 The new Dunkirk Terminal more especially has a regasification capacity of 13 bcm/y of gas, representing around 30% of France’s annual fossil gas consumption.13 This makes it the largest terminal in continental Europe.14 There are also plans to expand the capacity of the existing terminals at Fos Tonkin (1.5 bcm/y) and Montoir (2.5-6.5 bcm/y).15 The construction of this new terminal however looks seriously questionable: In 2015, the three existing LNG terminals were only used at less than 30% of its capacity16 and, end of 2016, while the Dunkirk terminal was just about to be commissioned, Engie, its main operator, announced it would cut 1,150 jobs in the French LNG sector.17

Despite these more than sufficient infrastructures, especially in a context of important gas demand reduction, France receives significant support (notably via the List of Projects of Common Interest) to further develop its gas network and transmission capacity:

In May 2016, France and Belgium launched a €1.2 billion bidirectional gas transmission pipeline, connecting the Dunkirk and the Zeebrugge LNG terminals, and allowing the LNG Dunkirk terminal to access the German, Dutch and UK gas market. The pipeline has an 8 bcm/y transport capacity.18

France is the partner of a bidirectional pipeline project heavily requested by Spain which would connect the Iberian Peninsula to France and which received, under the name of MIDCAT pipeline, PCI status.19 While this €2 billion project, with an export capacity of 8 bcm/y SP→FR and 3 bcm/y FR→SP, could be a solution for Spain to share its important excess of LNG imports, the project would clearly not answer to the “diversification” objective. Pipelines/interconnectors already exist between Spain and France (5.4 bcm/y via two interconnectors)20. That’s one of the reasons which recently pushed the French regulator CRE to state that a new gas pipeline between France and Spain would not boost the security of French or European gas supply and could raise gas prices for consumers.21 Moreover, Spain has already many opportunities to share these excesses through existing LNG reloading systems. The MIDCAT project would “just” allow Spain to reduce the costs for exports, but the added value in terms of diversification is extremely dubious.

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17 http://uk.reuters.com/article/uk-engie-redundancies-lng-idUKKCN11P0RV