TIGF

TIGF transport grid
10-year development plan
2013-2022

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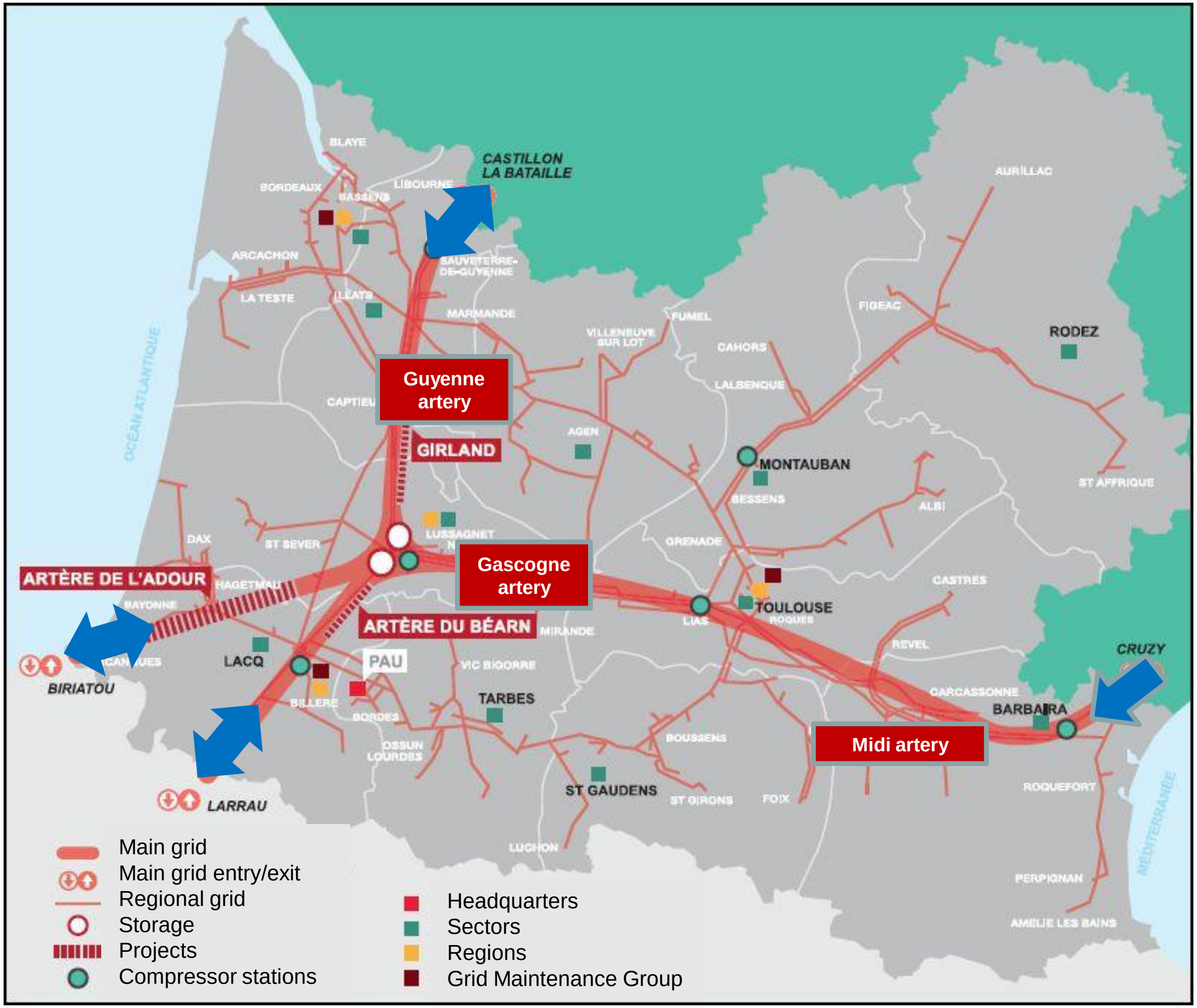
  - The GRT gaz Nord/TIGF gas spot prices spread
  - TIGF zone supply
- **Assessment of the 2010-2013 period**
- **The TIGF development plan**
  - Fluidity investments
  - Public service obligation investments
  - Plan overview

The TIGF grid

- 5000 Km of pipes
- 6 compressor stations (70 MW)
- 2 interconnections with Spain:
  - Larrau
  - Biriatou
- 2 interconnections with GRTgaz:
  - Castillon-La-Bataille
  - Cruzy

- 135 Industrial sites connected
- 339 Delivery points to public distributions
- 35 Supplier and shipper customers



TIGF transport grid development plan 2013-2022

The GRT gaz Nord /TIGF gas spot prices spread

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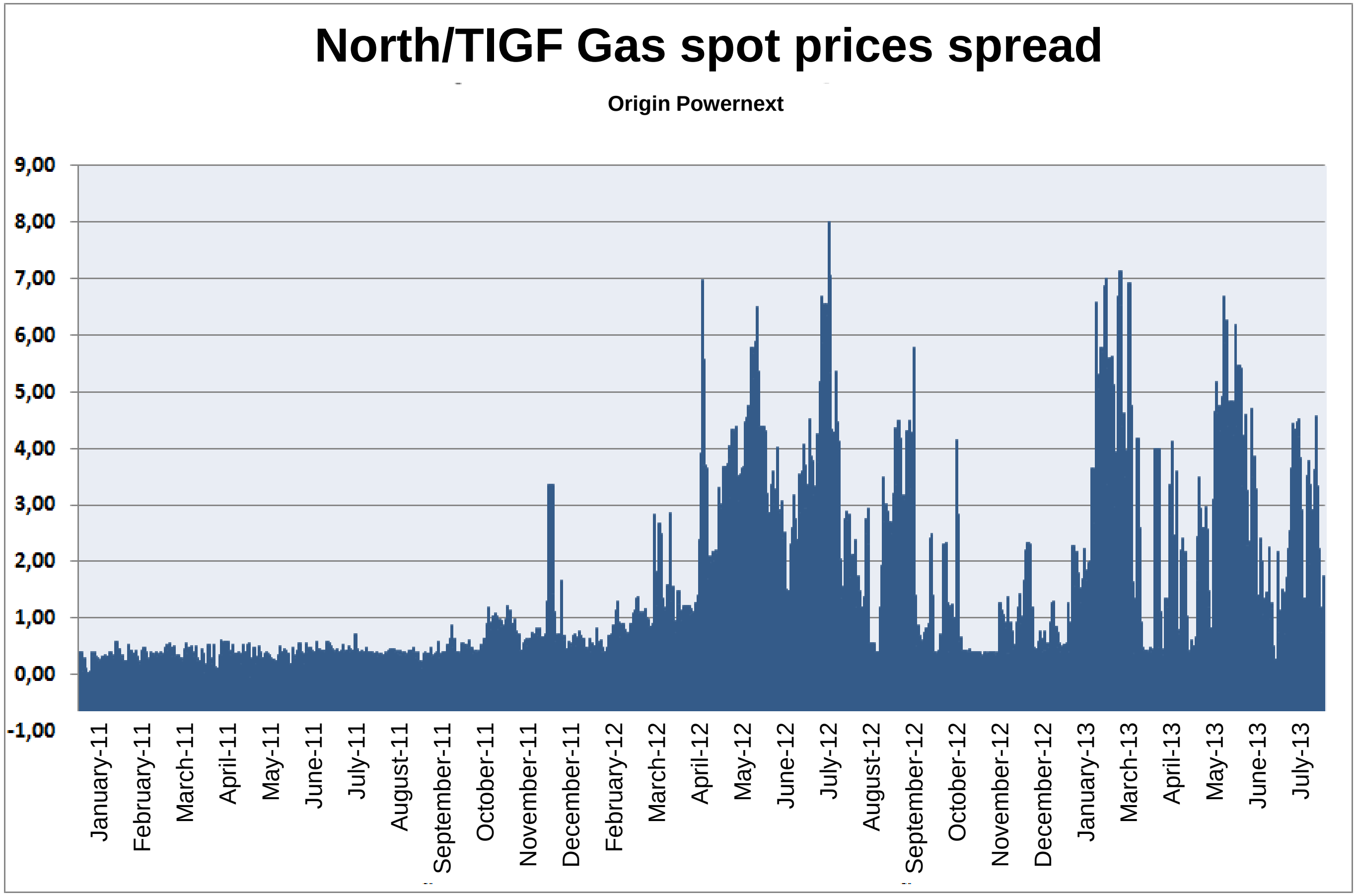
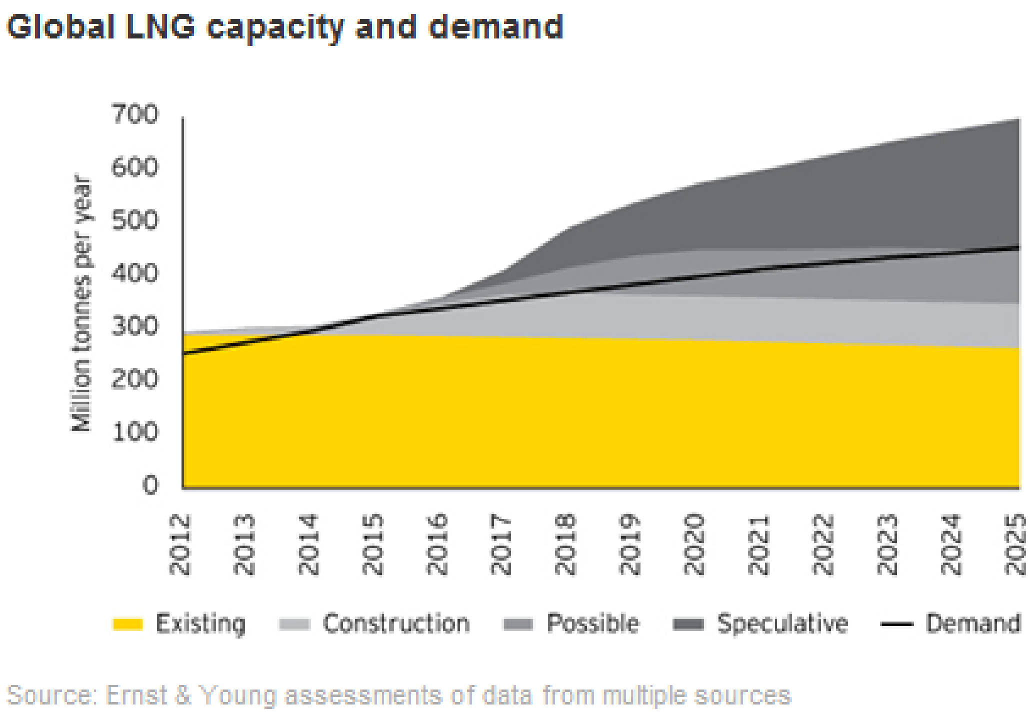
Since November 2011, gas spot prices in the TIGF zone have been unpredictable and uncorrelated with regards to GRT gaz Nord Gas Exchange Point market prices.



TIGF zone supply

It is likely that the global LNG offer will remain below demand in the medium to long term. In these conditions, strain on the price of LNG means that it cannot compete with « pipe gas » to supply the TIGF zone.



The level and stability of prices in the TIGF zone depend on the access that market players have to pipe gas supply sources in the North and South (MEDGAZ) as well as the use of storage facilities.

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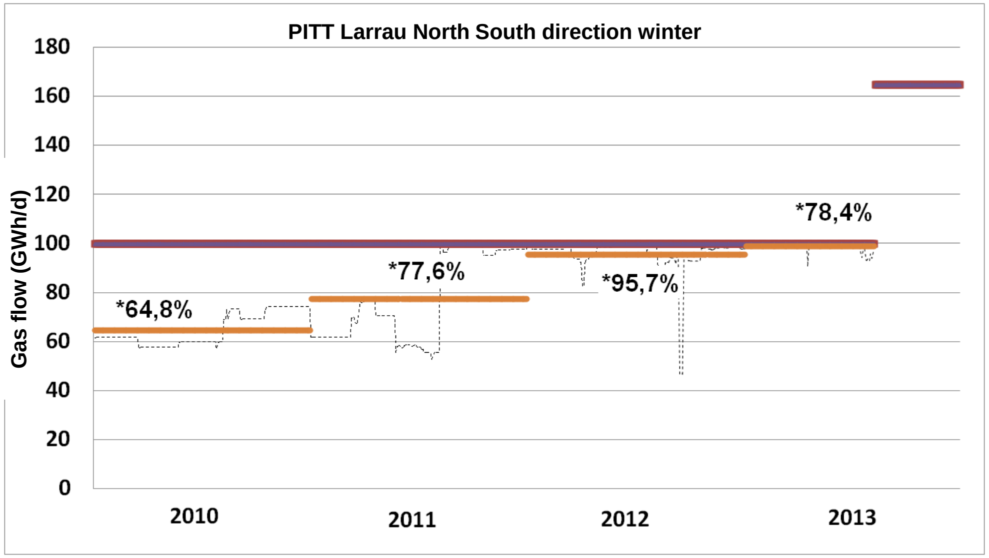
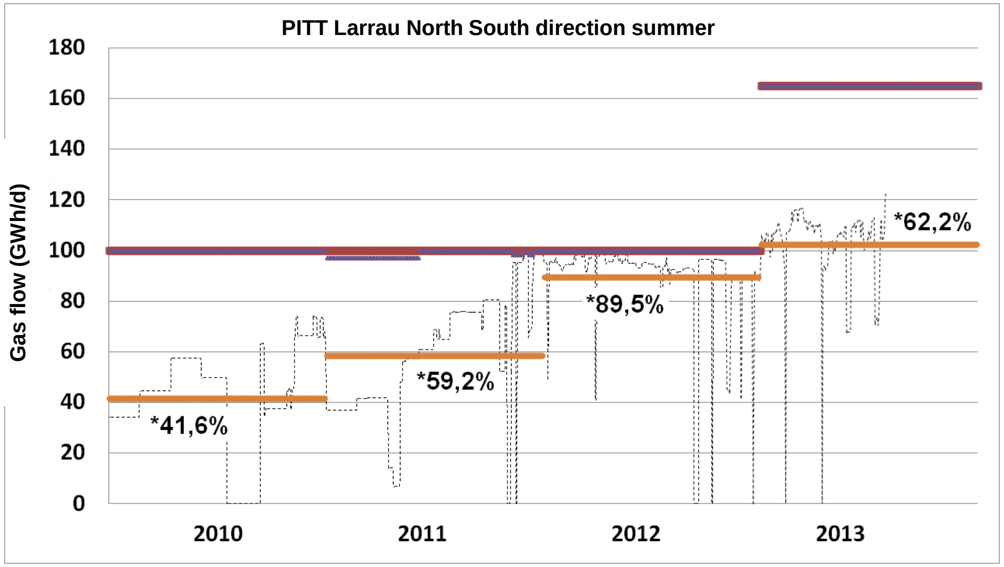
- **The TIGF development plan**

TIGF interconnection with ENAGAS





Marketable firm capacities
Subscribed capacities
Average nominations
Actual nominations

*** Usage rate of subscribed capacities**

April 2013, availability of new capacities in Larrau (65 GWh/d).

2012-2013: Development of transits to Spain in the North-South direction.

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Gas supplies to Spain

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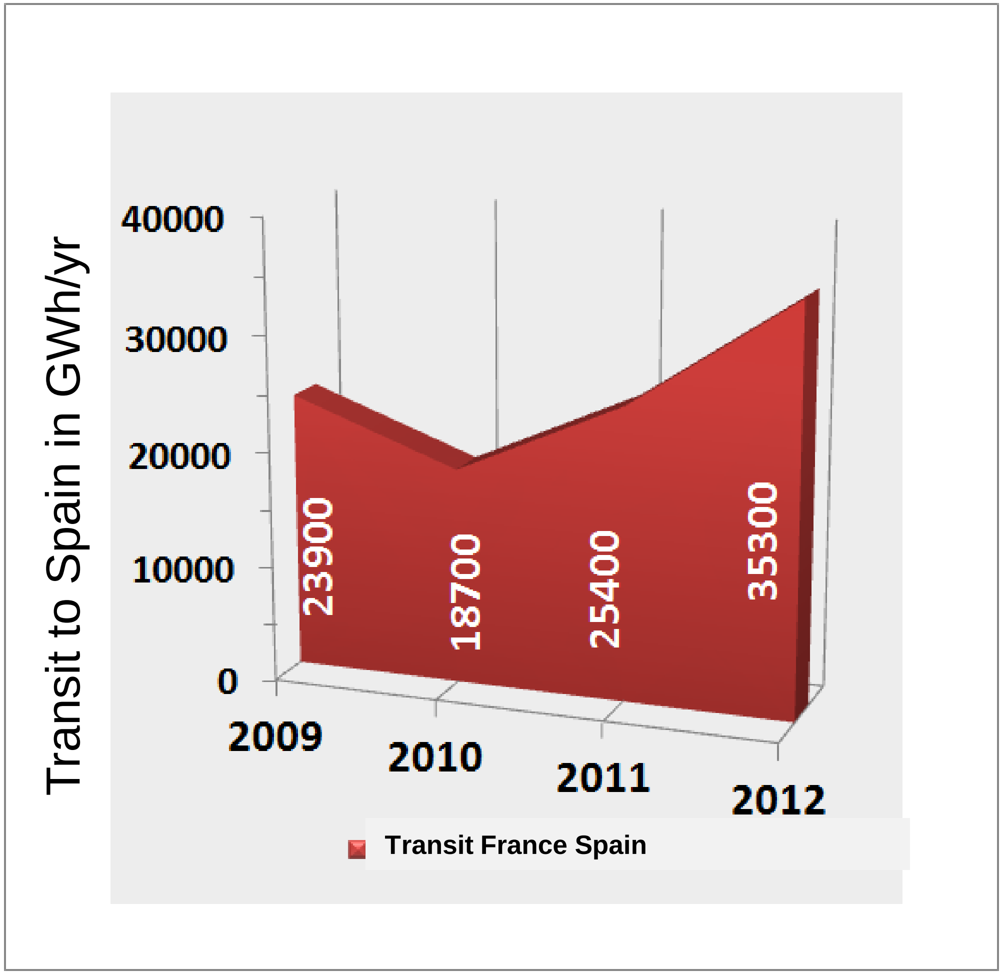

2010: Appearance of a transit in the Spain France direction in counter flow on the LACAL pipeline => Less gas supplied to Spain.

mid-2011: Disappearance of counter flow (40 GWh/d on average) from Spain.

2012: Gas transits between France and Spain via the TIGF grid represent 10% of Spanish market supply.

GRTgaz interconnection with TIGF

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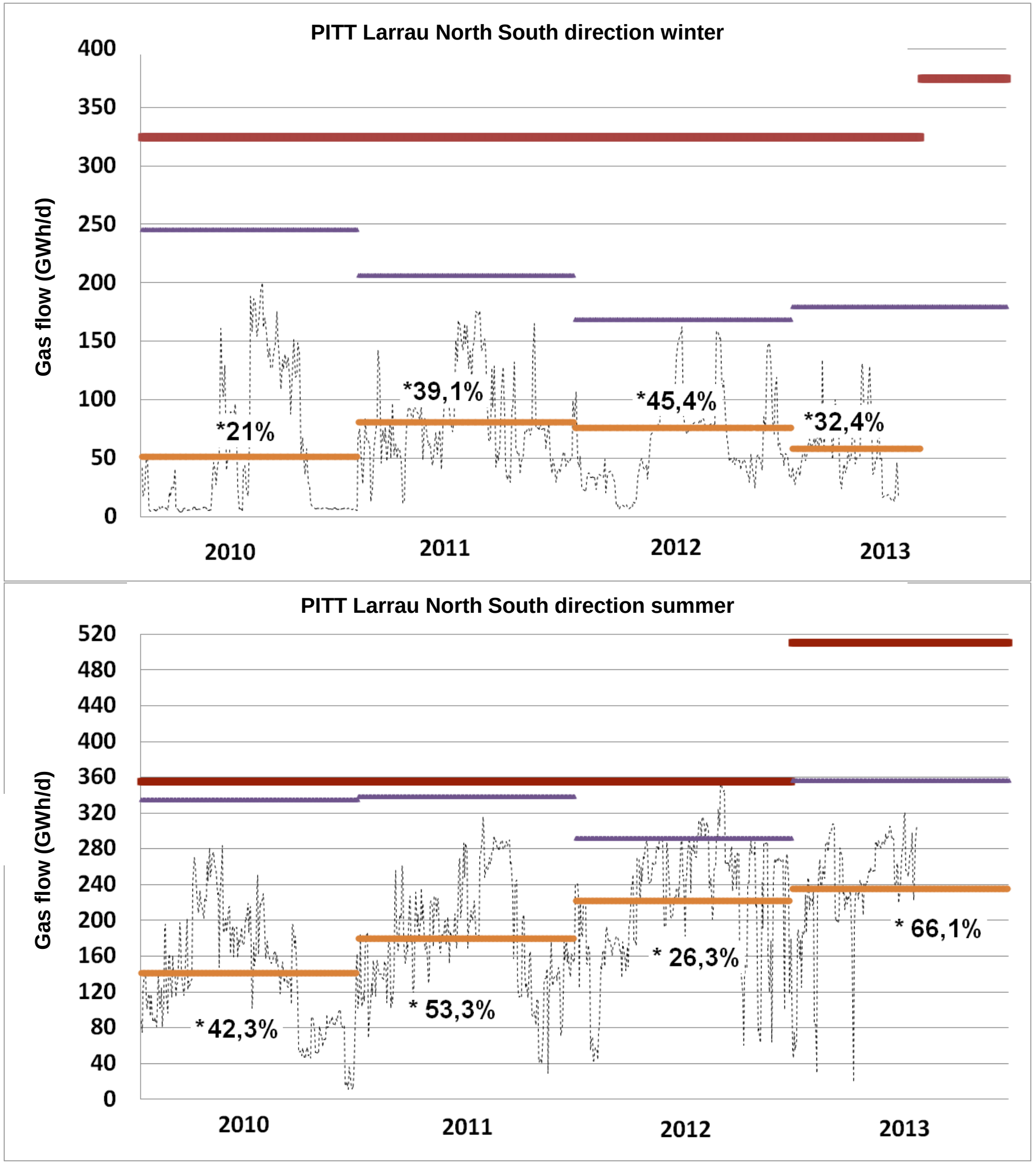
Marketable firm capacities
Subscribed capacities
Average nominations
Actual nominations

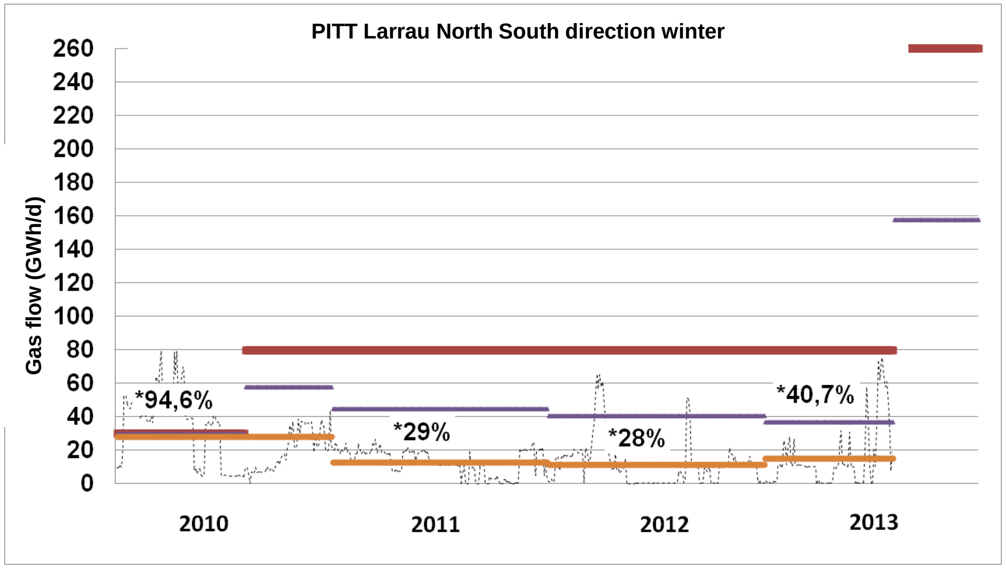
* Usage rate of subscribed capacities

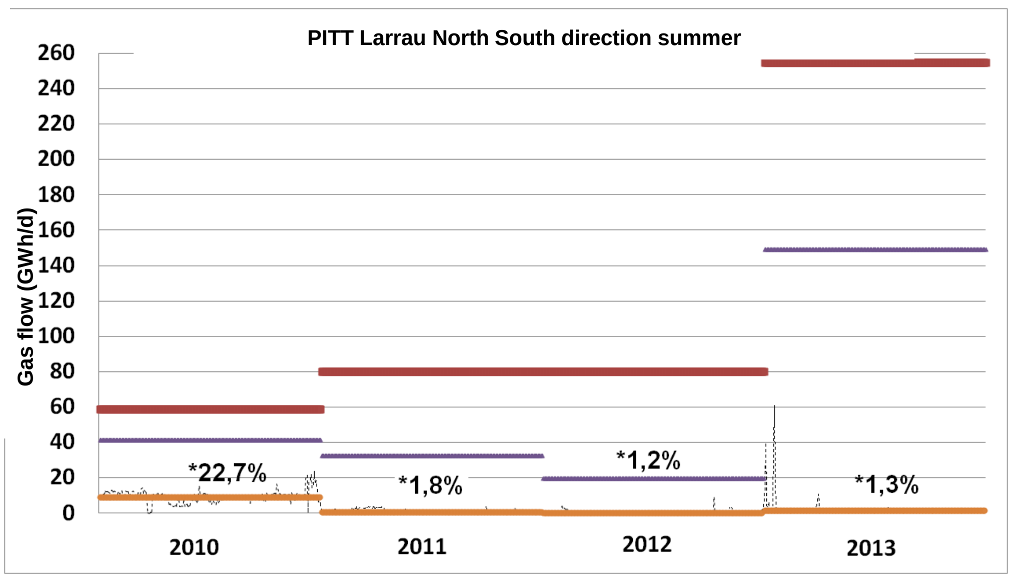


April 2013, availability of new capacities at the GRTgaz network interconnection point (50 GWh/d in the North-South direction in winter and 155 GWh/d in summer).

The average level of technical capacities usage in the North-South direction is around 30% in winter and 50% in summer.

TIGF interconnection with GRTgaz





Marketable firm capacities
Subscribed capacities
Average nominations
Actual nominations

*** Usage rate of subscribed capacities**

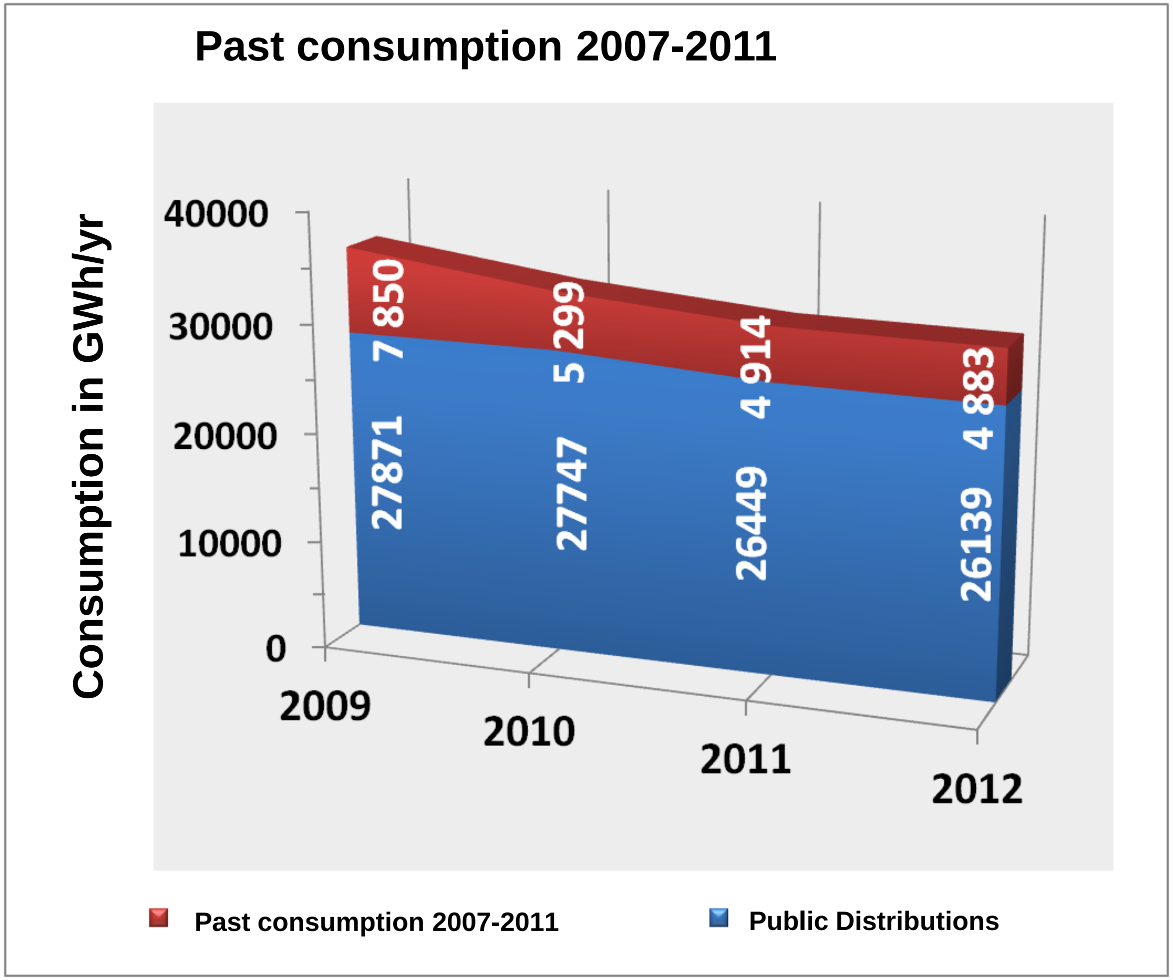
April 2013, making new capacities available at the GRTgaz network interconnection point (180 GWh/d in the South-North direction).

The interconnection between TIGF and GRTgaz is mainly used in the North-South direction.

In winter, the direction changes to South-North during harsh climatic conditions (peak cold weather in 2012, long period of cold weather at the end of winter 2013).

TIGF zone consumption

In 2011-2012, the internal demand on the TIGF zone was stable at 31-32 Twh/yr



Public Distributions: Temperature data corrected

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    - Results of OS 2013-2015
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Fluidity investments

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Hypotheses

Over the short and medium term, TIGF is implementing the necessary improvements on its grid in order to offer the capacities reserved by shippers during the 2013 and 2015 Open Seasons (established in 2009 and 2010 respectively).

- Commissioning of the Lussagnet-Captieux pipeline (GIRLAND project at the end of 2013).
- Commissioning of the Adour Artery in December 2015.

Between now and 2021, TIGF plans to establish a new connection between France and Spain (MIDCAT) with ENAGAS and GRTgaz. This project constitutes one of the European Community's "Projects of Interest to the Community". A definitive decision whether or not to establish this new connection will be made after discussions with all parties involved.

In addition, TIGF and GRTgaz are both looking into the development of infrastructures associated with the implementation of a single french gas exchange point in 2018. After discussion with market players and the French Energy Regulation Commission (CRE), these investments will be incorporated in the next TIGF investment plan if they are considered to be relevant.

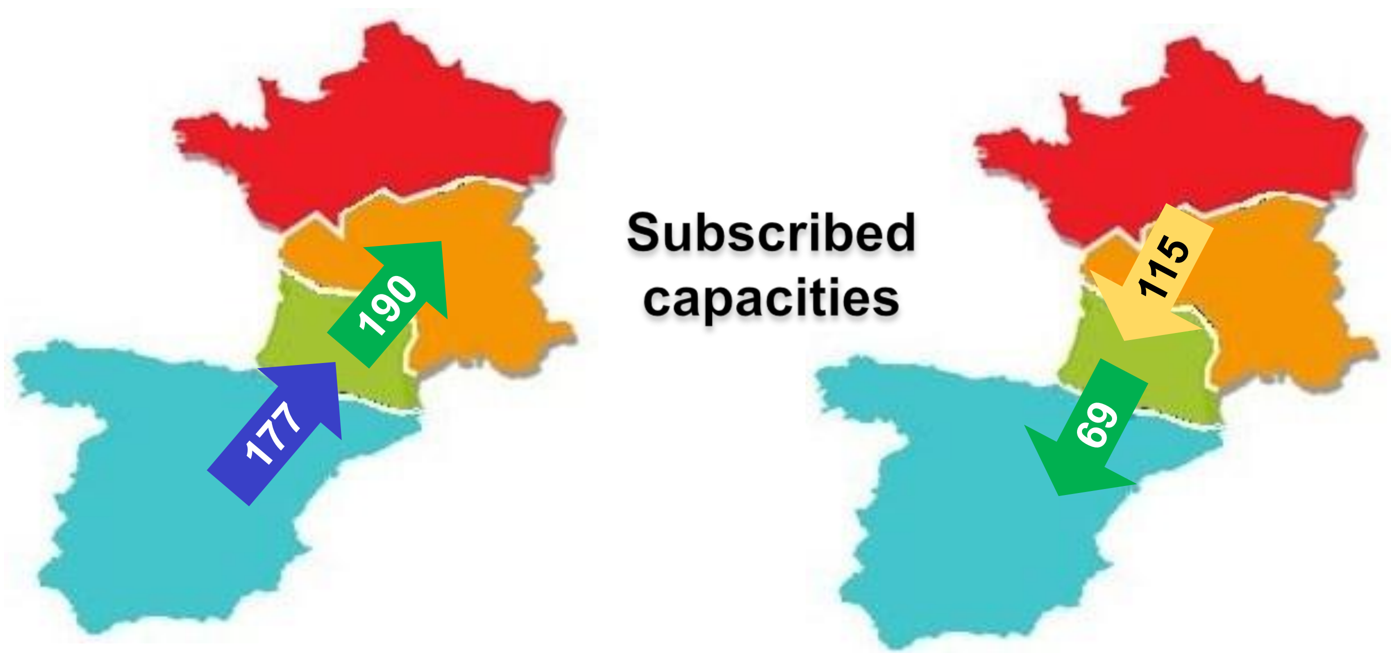
Fluidity investments

OPEN SEASONS 2013 and 2015

Objective of plan: to develop the capacities subscribed by shippers during the 2013 and 2015 Open Seasons

From Spain to France

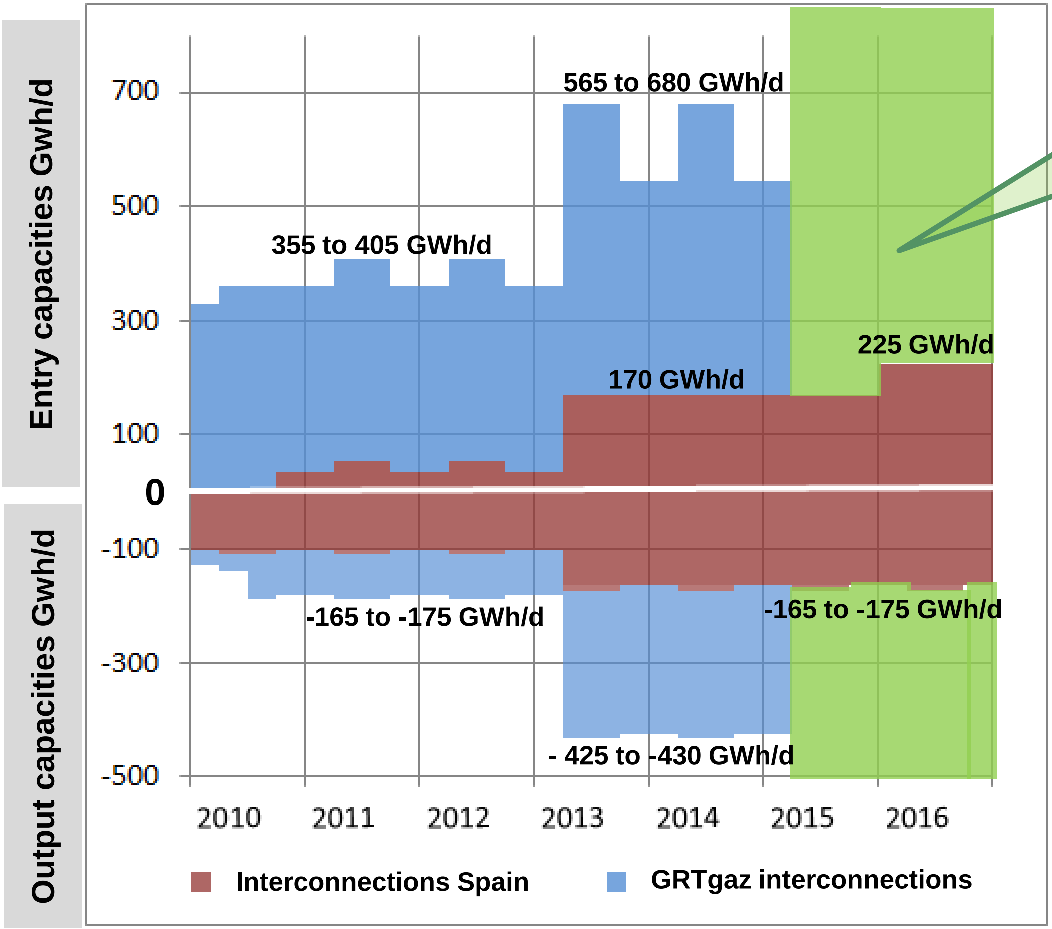
From France to Spain



PM: These capacities subscribed during the 2013 and 2015 Open Seasons have recently been added to the 77 GWh/day of capacities already subscribed in the North-South direction (historical supply contract for Spain by Norwegian gas).

Recent projects and an investment programme in line with the commitments undertaken by TIGF

Fluidity investments



April 1st 2015
Merging of the TIGF and GRTgaz Sud gas exchange points.
End of marketing of capacities at the TIGF-GRTgaz Sud interface

April 1st 2013 - Market provision

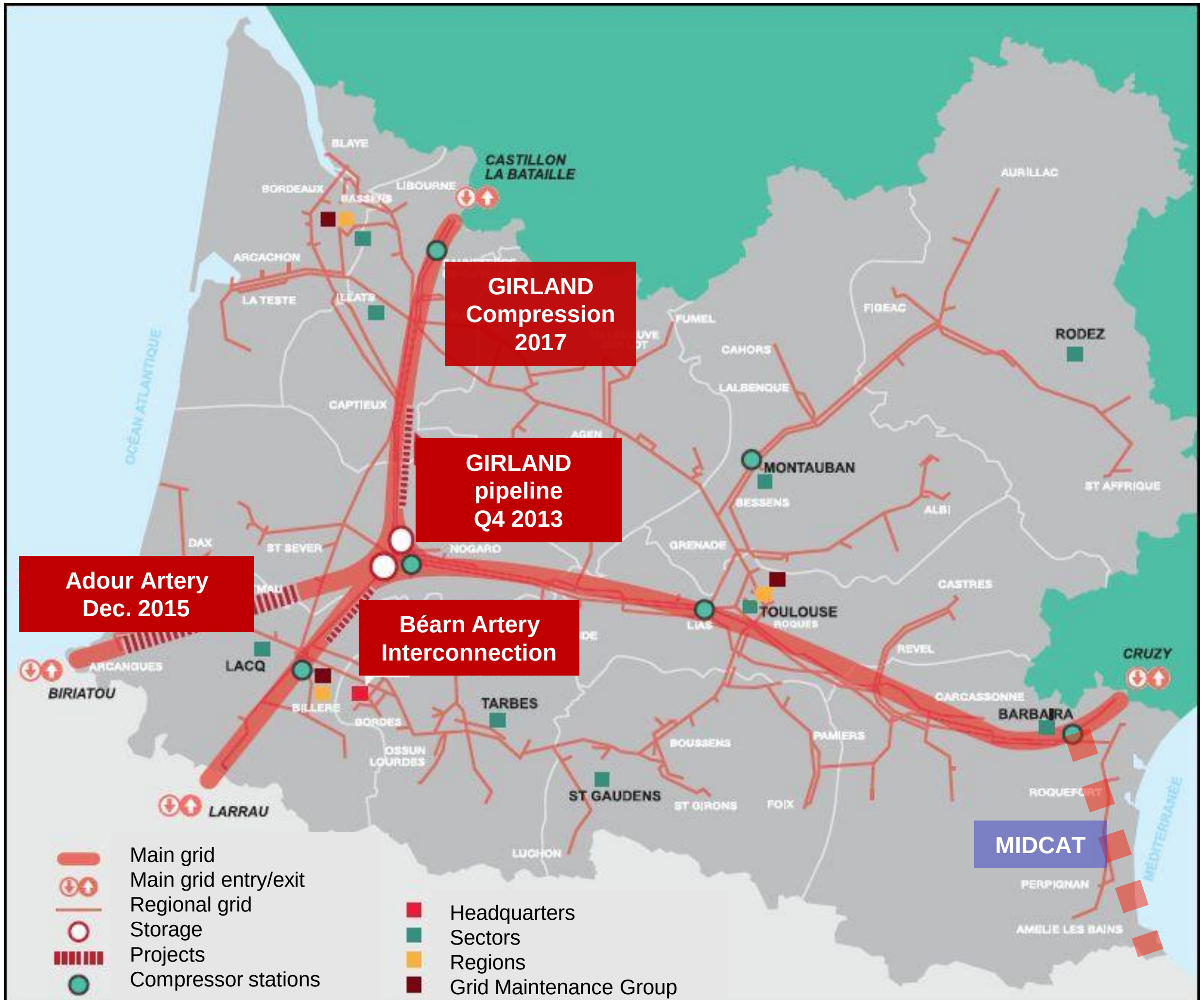
- 65 GWh/d additional output to Spain and 135 GWh/d entry.
- 70 to 155GWh/d additional entry from GRTgaz Sud and 80 GWh/day output.

December 1st 2015 - Market provision

- 60 GWh/d additional entry from Spain

Fluidity investments

Interconnection development plans



Approved projects €200M

- Béarn Artery (interconnection)
- Girland (pipeline)
- Girland (additional compression)
- Adour Artery

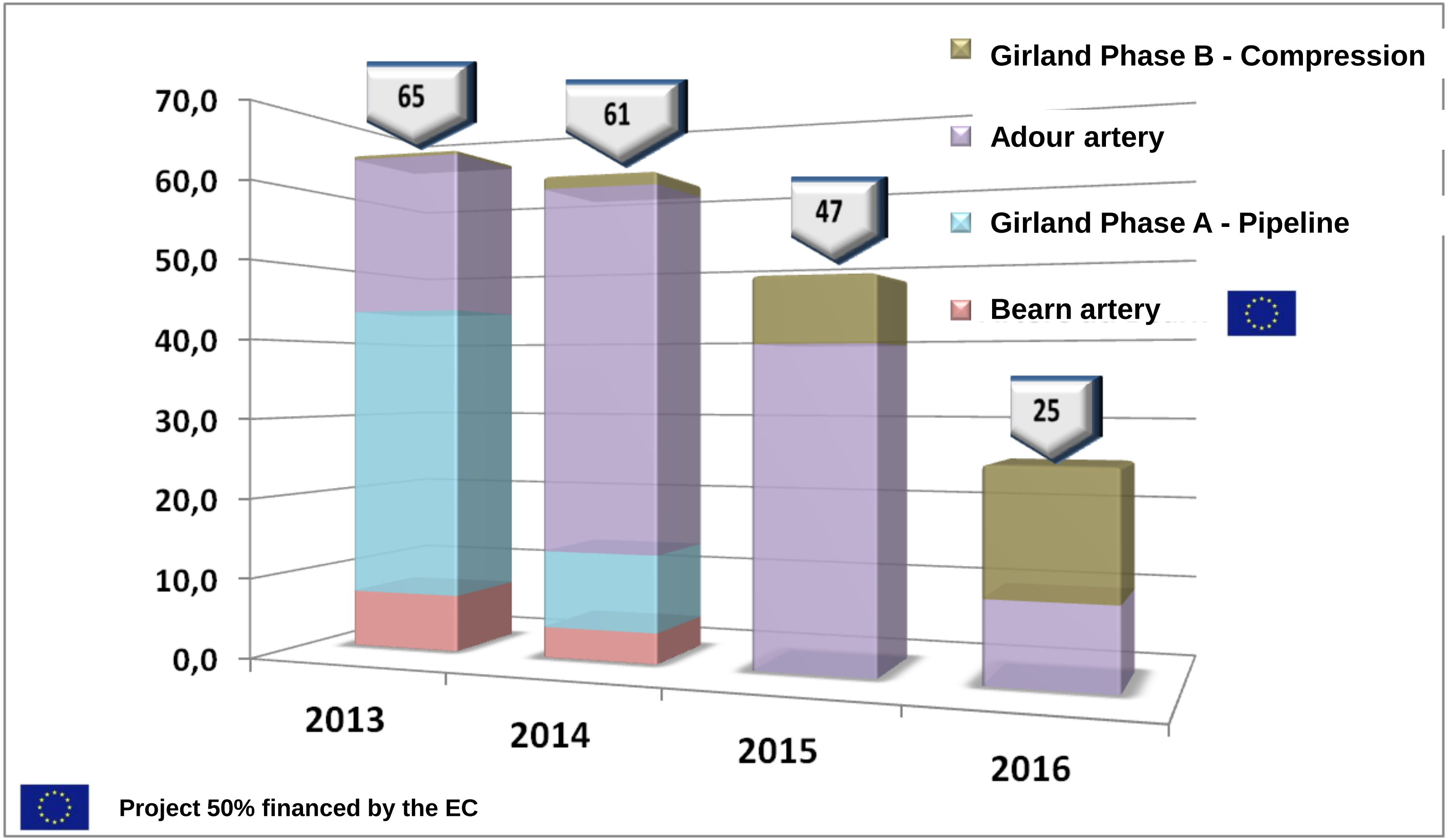
Non approved projects €400M*

- MIDCAT
- Decentralised odorisation Transportation of odourless gas via the Large Scale Transport grid

* In the absence of a preliminary study, this amount is a rough estimate only.

TIGF transport grid development plan 2013-2022

Approved fluidity investments



TIGF has decided to invest €200M over the next 4 years to develop interconnections with Spain and the GRTgaz Sud zone

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    - Connection investments
    - Safety and maintenance investments
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Public Service investments

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Consumption development hypotheses

Stability of traditional gas uses:

- Public distributions: 26 to 27 TWh/yr
- Industry: 5 TWh/yr

Slight drop in traditional consumption of 0.5% per year.

Electrical power plants:

Projects initiated over the last few years did not materialise.

TIGF looked into the connection of a gas-fired combined cycle power plant in its consumption zone after 2018 and the installation of 2 combined heat and power plants by the end of the plan.

An increase in peak demand from 40 to 50 GWh/d and additional required flexibility to supply those plants have been taken into account.

Regional Grid improvement investments: €30M to 35M

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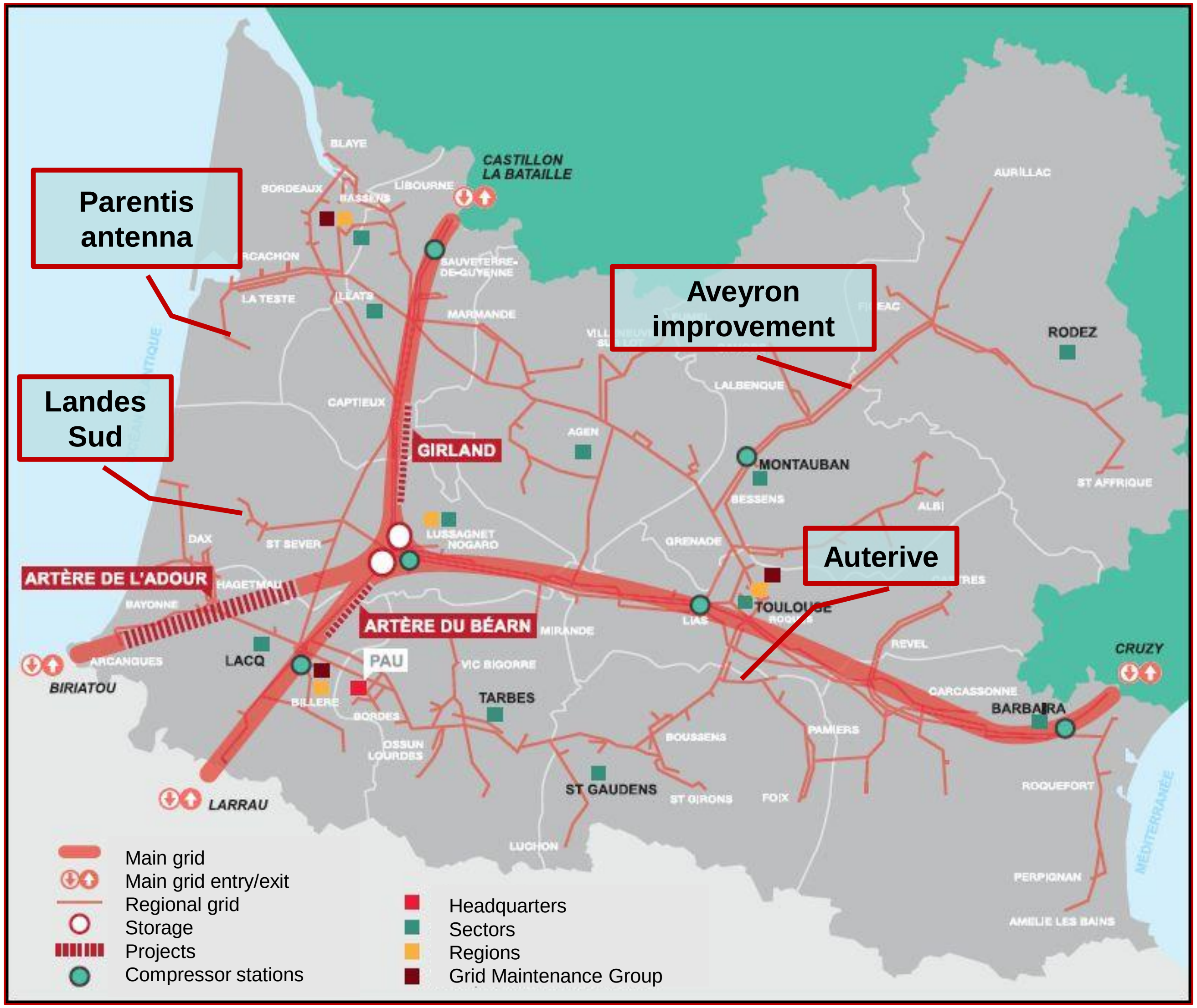

Connection investments

Within the framework of its programme, TIGF earmarked €15M to 20M for new transport grid installation connections, in particular:

Electrical power supply:
3 projects scheduled for the period of the plan
1 gas-fired combined cycle power plant and 2 combined heat and power plants

Biogas:
By actively assisting project initiators with its gas expertise, TIGF intends to promote the development of this new branch, which corresponds to its Sustainable Development aspirations.

- Saving energy (production close to consumption)
- Development of renewable energies

Biogas: research projects

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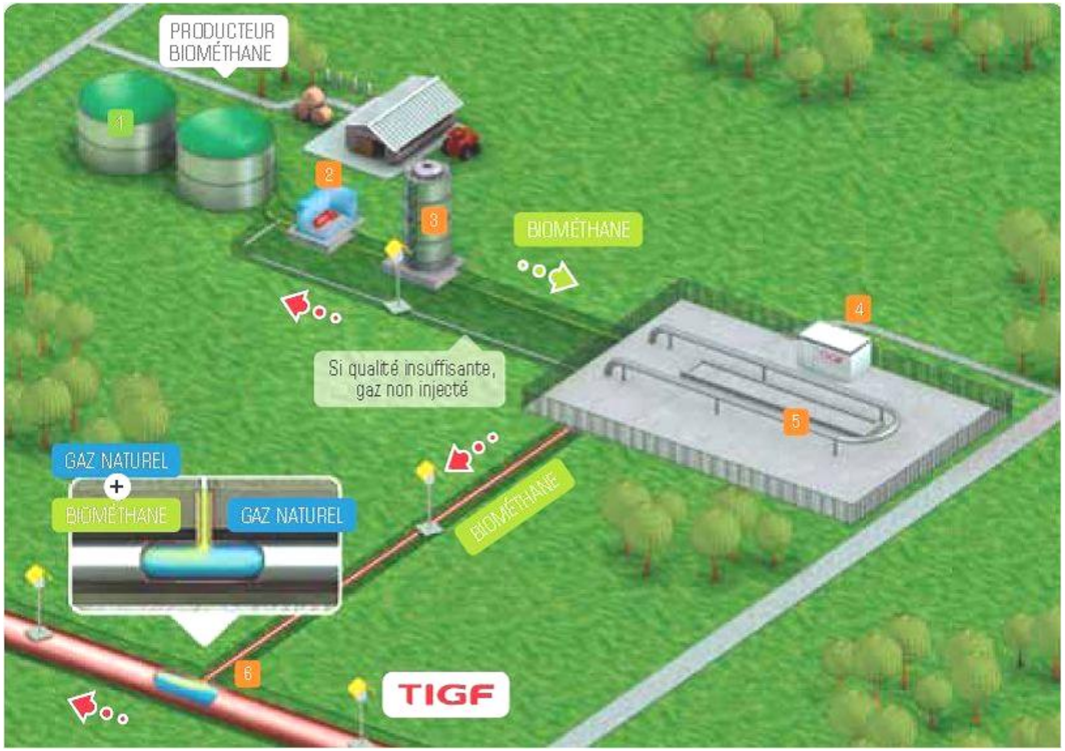
TIGF is researching an ever-increasing number of projects to connect biogas production to its transport grid

5 projects could be initiated in the very near future (2 years) and 5 others over the medium term



25 potential projects

Unitary production forecasts

from 90 to 750 $m^3(n)/hr$

Production forecasts for 2015

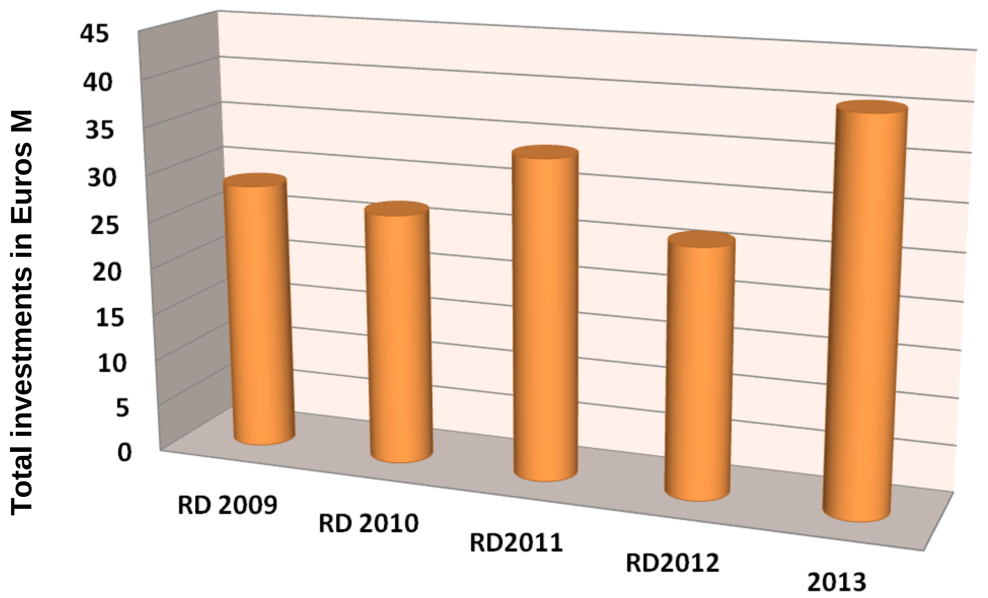
340 MWh/day (5 units)

Production forecasts for 2018

800 MWh/day (10 units)

Safety and maintenance investments

In response to regulatory evolutions, stakeholder requirements and its safety policy, TIGF has modernized its grid and increased infrastructures reliabilty over the last few years (€30M/yr on average over the last five years).



	RD 2009	RD 2010	RD2011	RD2012	2013
Series 1	28.5	26.7	~~33.8~~	26.2	40.4

TIGF intends to continue its efforts over the next decade, making investments of around €300M (+/- 10%).

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    - Investment schedule

Overview of the 2013-2022 plan

TIGF

Overview of transport grid investments

- ❖ **Large Scale Transport Grid fluidity investments**
  - **Approved projects: €200M**
  - **Non approved projects: €400M**
- ❖ **Public Service obligation investments**
  - **Regional Grid improvements: €30M to 35M**
  - **Connection: €15M to 20M**
  - **Safety and maintenance: €300M (+/- 10%)**

Plan overview: Schedule