

Meeting Interconnection targets with Spain

How to complete efficiently the Internal Energy Market

February, 2015



Electricity

- Spain remains an “electricity island”
- Reaching 2020 10% target interconnection is a top priority
- New projects shouldn’t be “pharaonic”; they need to keep technically feasible and economically competitive.
 - Marine DC or underground connections are extremely expensive.

Gas

- South Gas Regional initiative (Spain - France) is a success.
 - Larrau + Euskadour support flows equivalent to 20% of Spanish demand.
- MIDCAT should only be carried out if backed by a successful open-season among market players (market test).

- **Portugal and Spain** are already a single market. No need of new interconnections (electricity and gas).

Current and future customers will bear the costs of any decision

Electric interconnections are the priority vs. gas

New interconnections need to be justified on economic basis

- Development and operation costs are paid by customers through tariffs, impacting welfare and competitiveness.
- Any investment require the support of a strict cost-benefit analysis:
 - Current market price differentials (electricity) and open-sesons (gas) bring the starting point
 - Other factors of complex valuation (e.g. security, RES deployment, decarbonization, etc.) incorporated under rigorous and transparent criteria.
- Pure political drivers disconnected from market logic should be avoided

Electricity

Gas

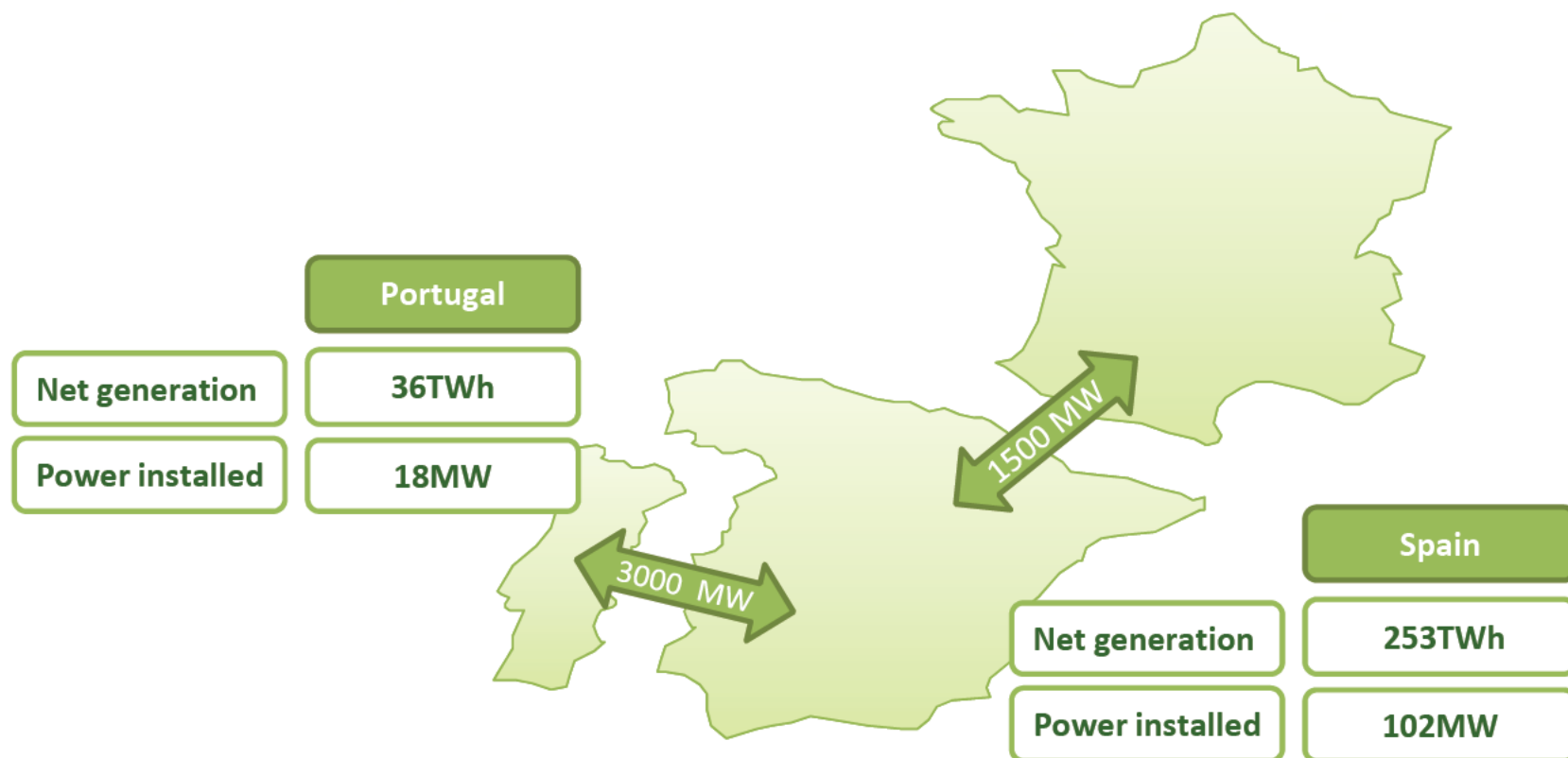
Interconnection capacity projects

European Council adopted a 10% of interconnection capacity
The goal of the MIBEL is to increase the interconnection with France

Project	Capacity	Situation	Date in service	Promotor
ESP-FRA INELFE (1)	2000	On-going	2015	REE-RTE
ESP-PT Interconexión por Galicia (2)	1000	Designing stage	2015 2017	REE-REN
ESP-FRA-UK BRITIB (3)	1000	Under study	2017	Cobra (ACS)
ESP-FRA INTER-OESTE (4)	2000	Planning	2022	REE-RTE

Rigorous cost-benefit analysis
is in any case required.





Spain – Portugal interconnection already exceeds 10% target

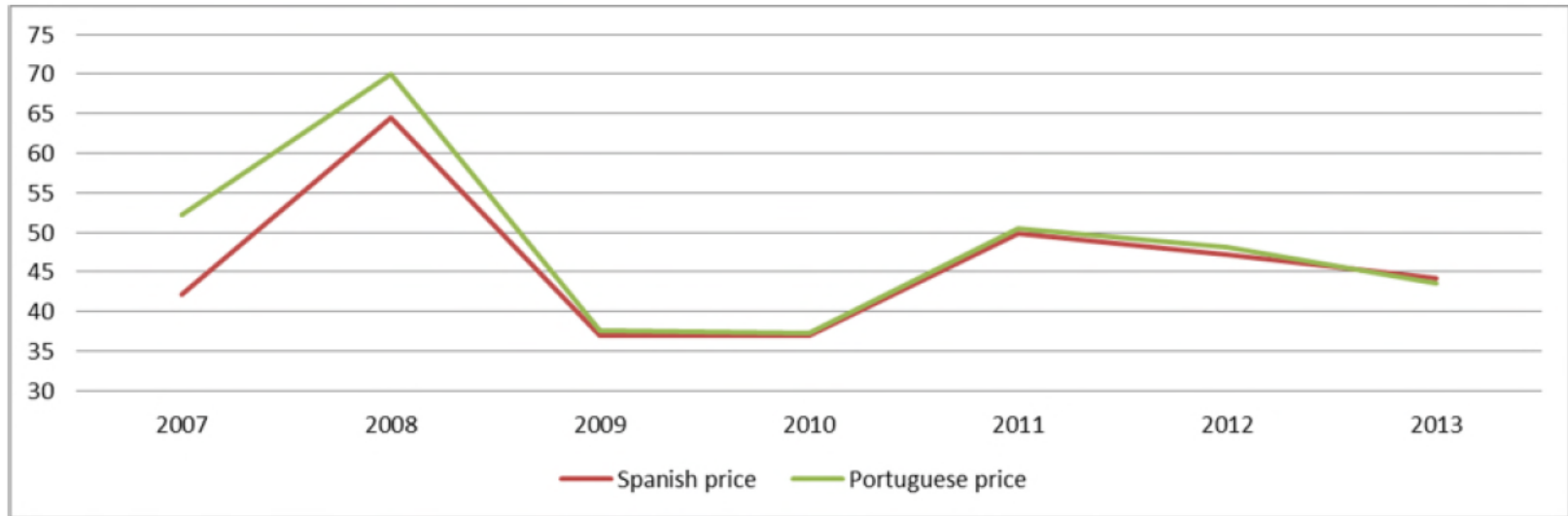
MIBEL – France “formal” 10% target would require x9 current capacity.
Important to carry a “sensible” target interpretation as suggested by ACER

Spanish and Portuguese market prices

Price differences between Spain and Portugal have decreased.
Congestions and price differentials are not an issue.

Year	Identical prices	Spanish day ahead Average price	Portuguese day ahead Average price	Dif ES-PT
2013	89,2%	44,26 €/MWh	43,65 €/MWh	0,61 €/MWh
2014*	95,7%	37,15 €/MWh	36,65 €/MWh	0,50 €/MWh

*data until 01/09/2014

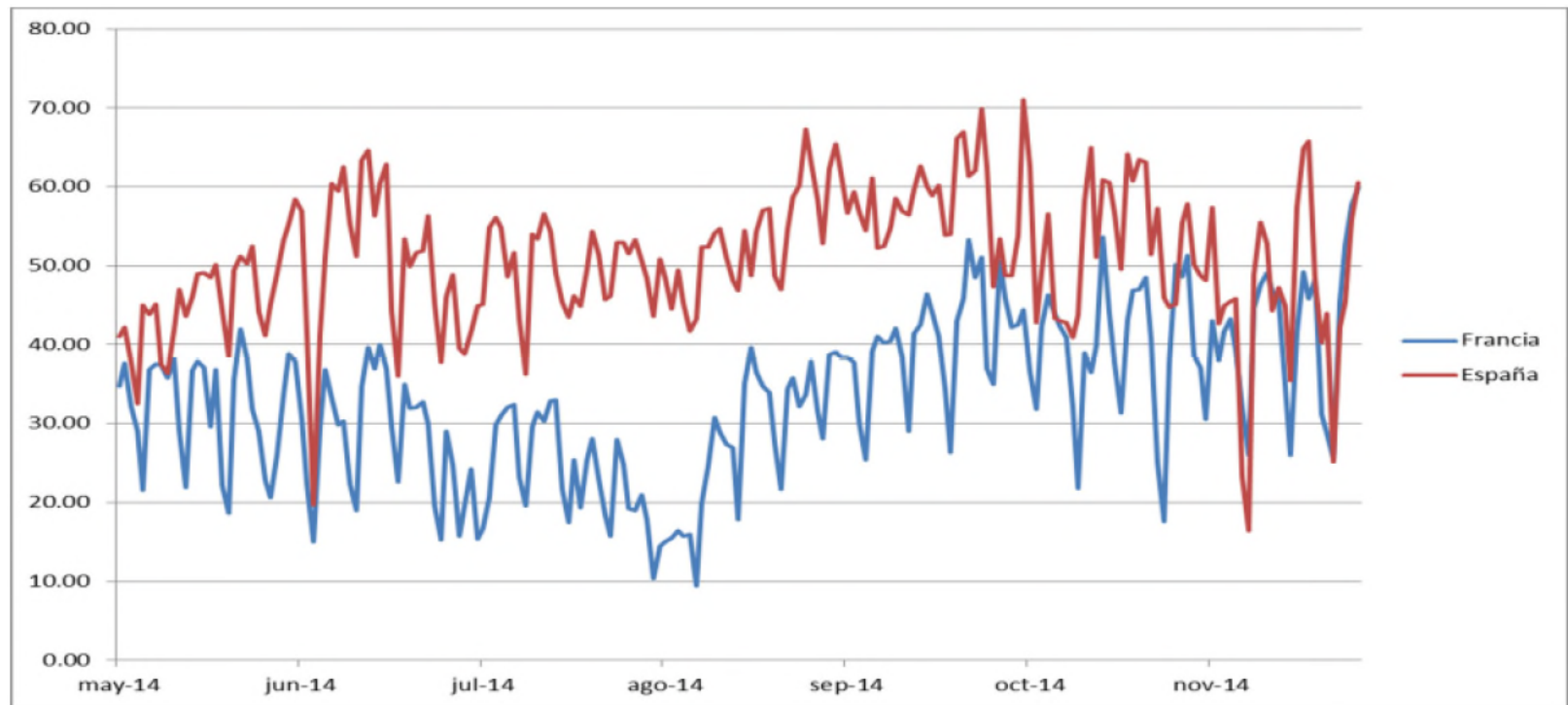


Spain – Portugal ready to become a single bidding zone

Spanish and French market prices.

Large price differences between Spain and France Interconnectors congested

Year	French day ahead Average price	Spanish day ahead Average price	Dif ES-FR
14-may-2014 to 30-nov-2014	32,76 €/MWh	50.90 €/MWh	18,14 €/MWh



Source: OMIE, Powernext.

Spain – France Electric interconnection increase economically justified

- The increase of electric interconnection between Spain and France is **economically justified**.
- From the **EU perspective**, more interconnections may bring:
 - **Enhance security of supply**. Mutual back-up for electricity or replacement in case of gas shortage.
 - **Facilitate the integration of existing RES** and the deployment of new efficient facilities.
 - Support a **liquid and competitive** Internal Energy Market
- Each project requires strict cost-benefit justifications and adjust to least cost criteria.
- “formal” 10% target needs a practical and sensible interpretation; enhancement to 15% only after testing “10% results”.

Spain – France Electric interconnection increase must be a priority for both countries and the EU

Electricity

Gas

**Spain & Portugal share the same infrastructures
(strong interconnection capacity)**

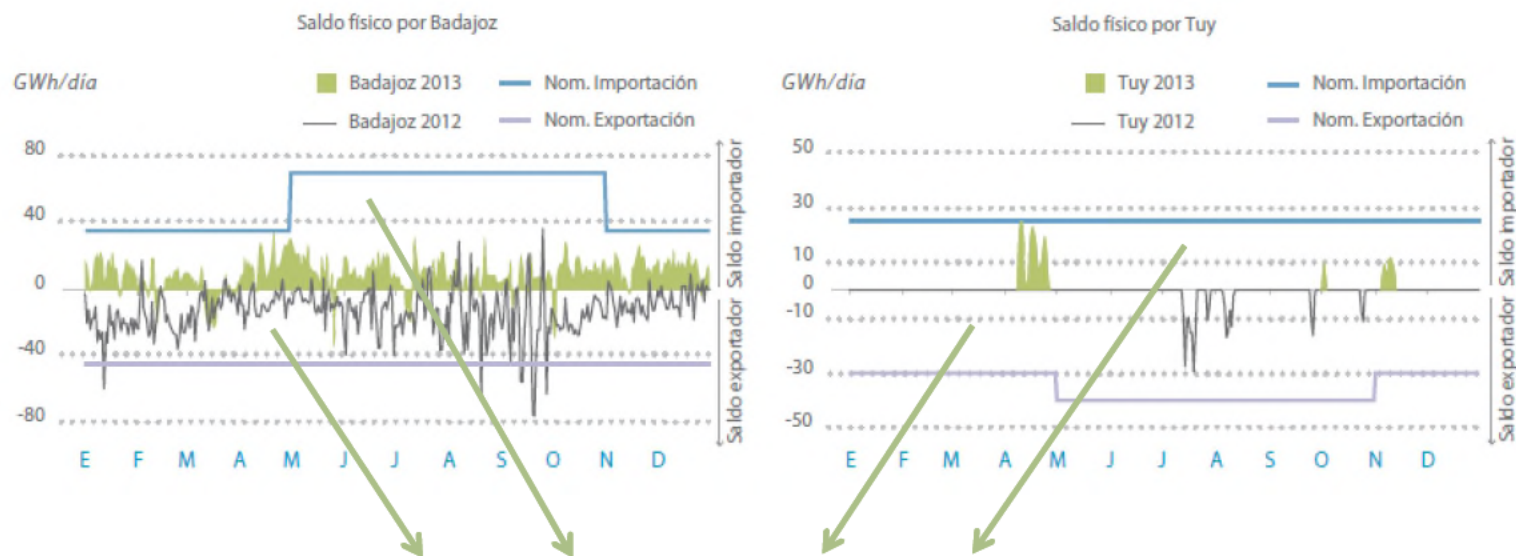


- Pipeline Argelia – Morocco – Spain – Portugal – Spain (1996) brings up to 12 bcm to the Iberian peninsula
- It allows bidirectional flows at two interconnection points
- No additional interconnection capacity seems justified

Spain & Portugal priorities should rather base on regulatory development to build the Iberian Gas Market

Spain & Portugal share the same infrastructures (strong interconnection capacity)

Physical gas flows through interconnections Spain – Portugal. Balance = Imports – Exports



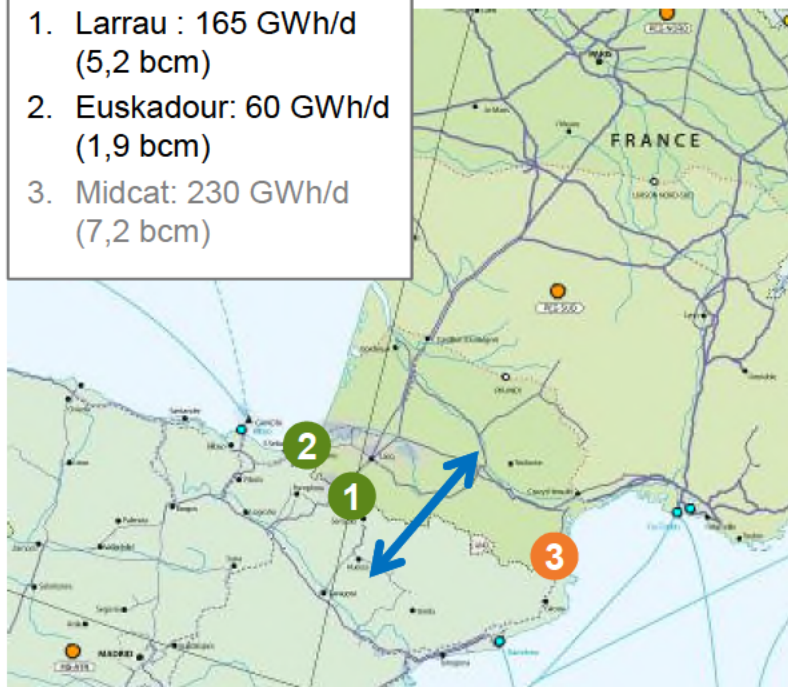
There is available capacity in both directions

**New interconnection projects should be test through open seasons with
traders – suppliers.**

**In April 2015, capacity will be 7 bcm
(20% Spanish market / 15% French market)**

Spain – France Capacity

1. Larrau : 165 GWh/d
(5,2 bcm)
2. Euskadour: 60 GWh/d
(1,9 bcm)
3. Midcat: 230 GWh/d
(7,2 bcm)



- South Gas Regional Initiative work has allowed a notable amount of capacity.
- Open season as market based mechanism:

1. Larrau: Operational April 2013
2. Euskadour : To be completed April 2015

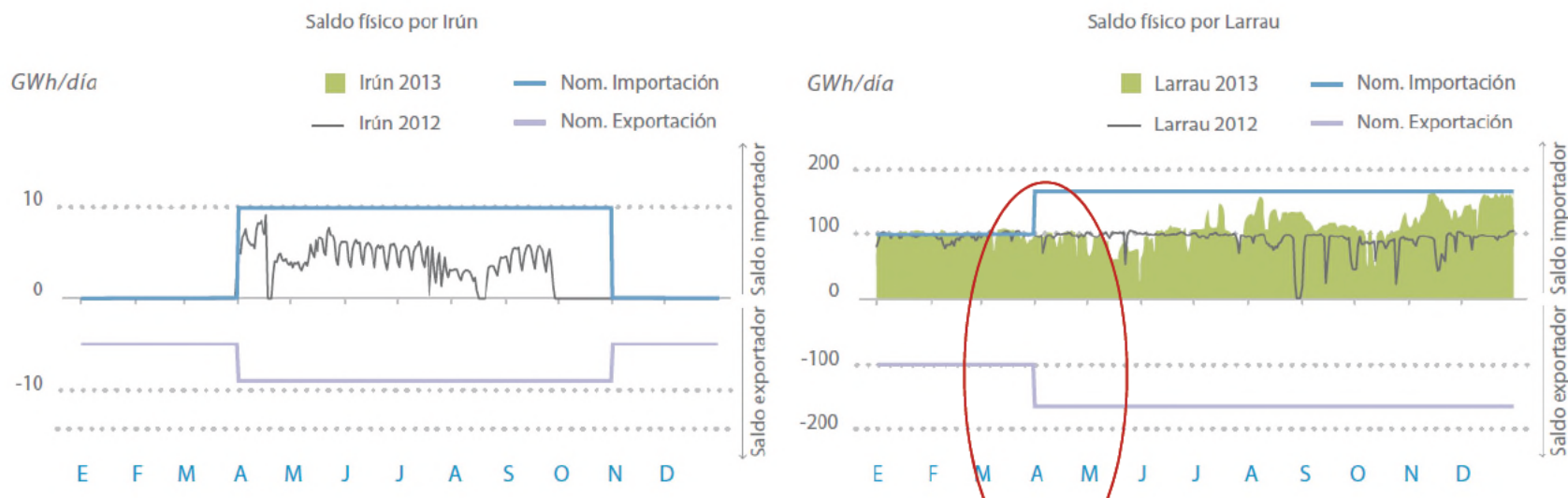
- Allows strong international trading between Spain and the northern European markets

MIDCAT should be supported by open-seasons

Spain – France gas interconnections

**In April 2015, capacity will be 7 bcm
(20% Spanish market / 15% French market)**

Physical gas flows though interconnections Spain – France. Balance= Imports – Exports



Since April 2013, capacity has increased from 100 to 165 GWh/d (5,2 bcm)
In 2012 & 2013, used for import operations

MIDCAT should be tested through open seasons with traders – suppliers

- Current gas infrastructures between Spain, Portugal and France seem **adapted to needs according** market prices and physical exchanges.
- New projects may be justified by the potential **contribution to EU overall security**:
 - **Cost-benefit analysis still necessary** for correct valuation of alternatives
 - **Open-seasons** among traders-suppliers should test the projects to undertake
 - **Spanish customers should not bear** investment and operation costs of such projects.