



Baixas-Santa Llogaia, one year on...

Studied and built by INELFE, the new electricity interconnection between France and Spain was commissioned on the 5th October 2015.

RTE and REE now have twelve months of operations to look back on in terms of expected performance over initial targets.

Net Transfer Capacity has more than doubled since this new interconnection was commissioned

The direct current interconnection commissioning had a major influence on the net transfer capacity on the whole France – Spain border. The net transfer capacity represents the maximum capacity that can be offered for commercial power exchanges between the two countries.

This capacity has more than doubled since the Baixas-Santa Llogaia Interconnection was commissioned, as it can be seen in Figure 1 below. Thanks to their joint efforts, RTE and REE have met their commitment when deciding to build this interconnection to double the net transfer capacity between the electrical systems of both countries.

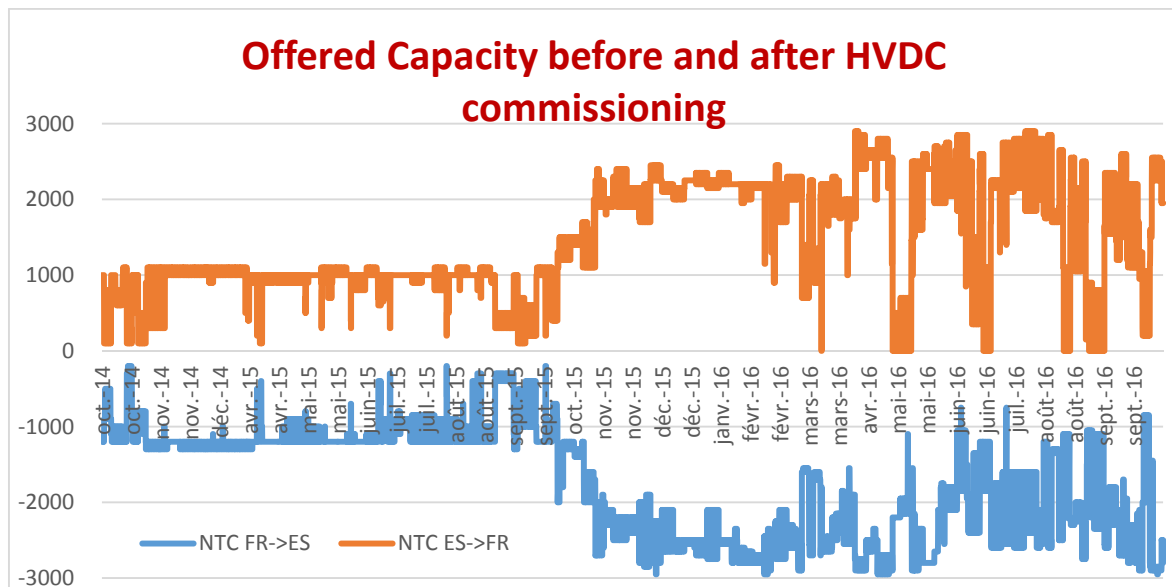
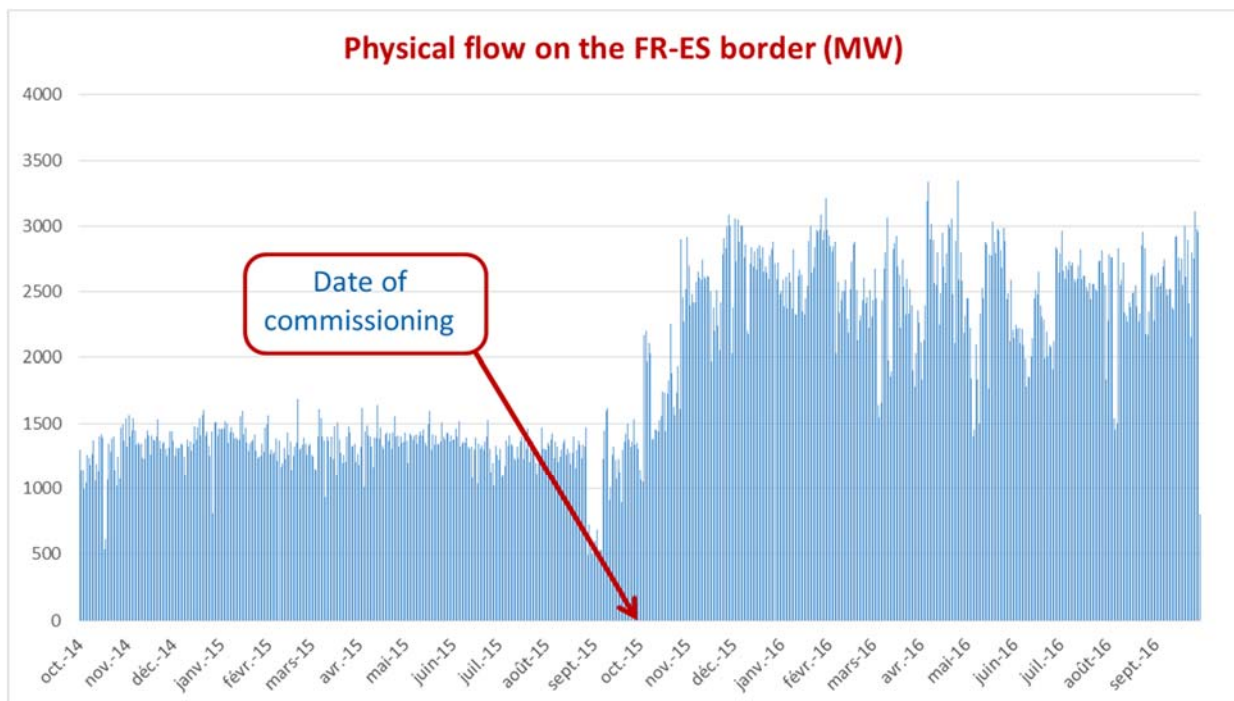


Figure 1: Net transfer capacity before and after commissioning of the Baixas-Santa Llogaia Interconnection

IFE	5/10/14 to 4/10/2015		IFE	5/10/15 to 4/10/2016	
	NTC (MW)			NTC (MW)	
	Max	Average		Max	Average
FR=>ES	1.300	1.091	FR=>ES	2.950	2.201
ES=>FR	1.100	897	ES=>FR	2.900	1.809

Rapid uptake of the additional interconnection exchange capacity

This new transfer capacity was swiftly harnessed by the various stakeholders in the electricity market, as it can be seen in Figure 2 below. In fact, physical exchanges have increased considerably from 8,02 TWh to 15.17 TWh in just one year; i.e. physical exchanges have increased almost 90% when compared with the previous year.



Energy exchanges (TWh) at the French – Spanish Border	ES ⇌ FR	FR ⇌ ES	Total
One year before commissioning (from 05/10/14 to 04/10/15)	1.44	6.58	8.02
One year after commissioning (from 05/10/15 to 04/10/16)	2.81	12.36	15.17

Figure 2: Physical flow* between France and Spain before and after Baixas-Santa Llogaia Interconnection commissioning

* Note: Physical flows correspond to commercial schedule adjusted by real time operation unbalance between the two countries.

Congestion periods decreased significantly, while maintaining high performance levels.

As a direct consequence of the increased exchange capacity, the number of congestion-free hours on the France-Spain interconnection almost doubled (a situation that allows price convergence between

France and Spain in the electricity wholesale market). Nevertheless, congestion still occurs 75% of the hours at the French-Spanish border (87,1% of hours with congestion one year before the commissioning of the new link)

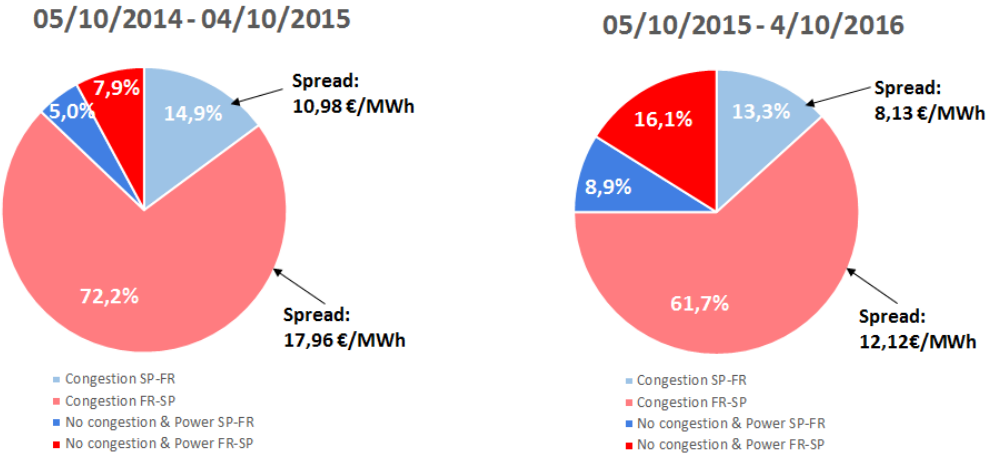
	One year before commissioning (from 05/10/14 to 04/10/15)		One year after commissioning (from 05/10/15 to 04/10/16)	
Number of congestion-free hours	1,128	12.84%	2,197	25.01%
Number of hours with congestion	7,656	87.16%	6,587	74.99%

A higher convergence level of the Day Ahead Market Prices

Another direct consequence of the increased exchange capacity is the approximation between the Spanish and the French Day Ahead Market Prices.

In the hours with congestion, when the interconnection is saturated, in the France to Spain direction (French Market Price < Spanish Market Price) the price difference average has been reduced from 17,96 €/MWh to 12,12 €/MWh.

In the hours with congestion in the Spain to France direction (Spanish Market Price < French Market Price) the price difference average (spread) has been reduced from 10,98 €/MWh to 8,13 €/MWh.



The direct current Baixas-Santa Llogaia interconnection is thus meeting the commitments made by RTE and REE during its construction, providing the electricity market with more than twice net transfer capacity between France and Spain. Therefore, this new international connection improves security of supply, increases competition and efficiency and makes a significant contribution to set up the European electricity market.