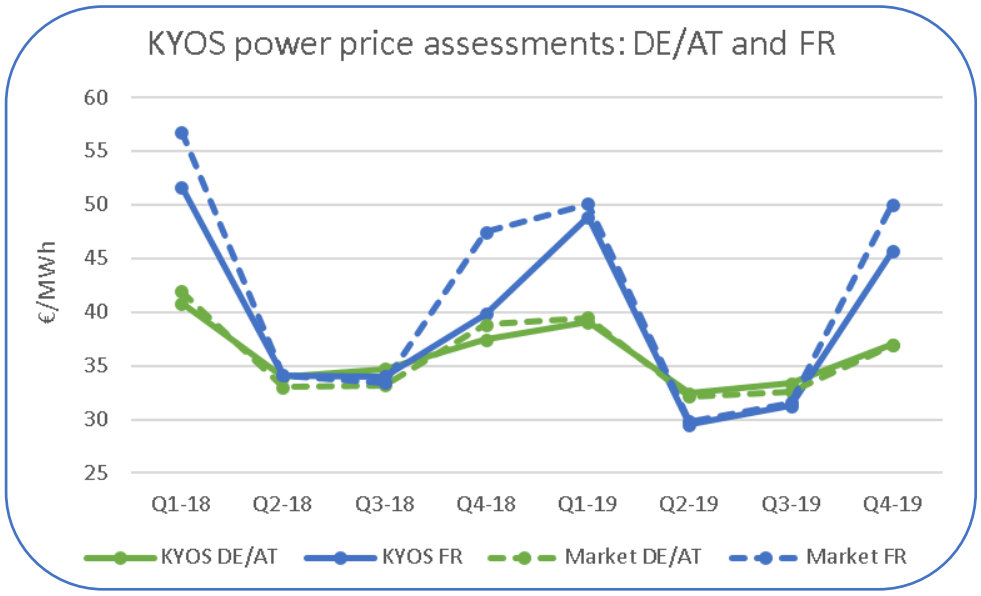
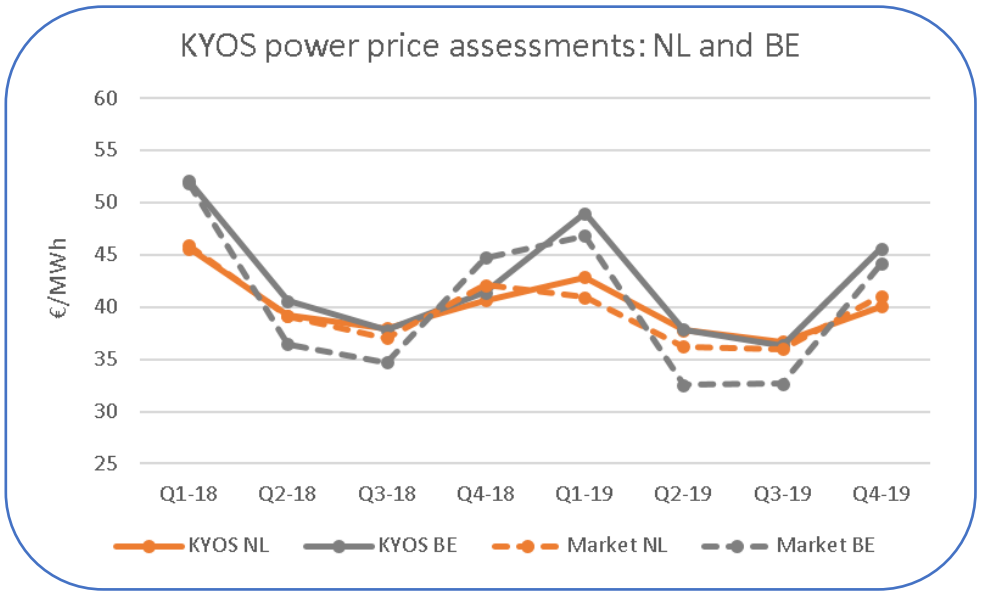
Update

No. 1 • December 2017

KYOS Fundamental Power Market Analysis

Power price assessments:





Remarks

The trading date of the analysis is 30 November 2017. End-of-day closing prices from the relevant exchanges were used for all market prices.

The KYOS power price assessments have been calculated with the fundamental power market model, KyPF. This model allows for a very detailed hourly optimization of all individual power plants in the market, including gas, coal, lignite, nuclear and hydro power stations. The true flexibility of the assets is captured, optimizing between minimum and maximum load, using efficiency curves, and taking into account start costs. This leads to a very realistic behavior of the individual power plants, very close to real market behavior. The model also optimizes the interconnection flows between the countries.

For more information about the analysis, please contact us on info@kyos.com.

Case Study: France

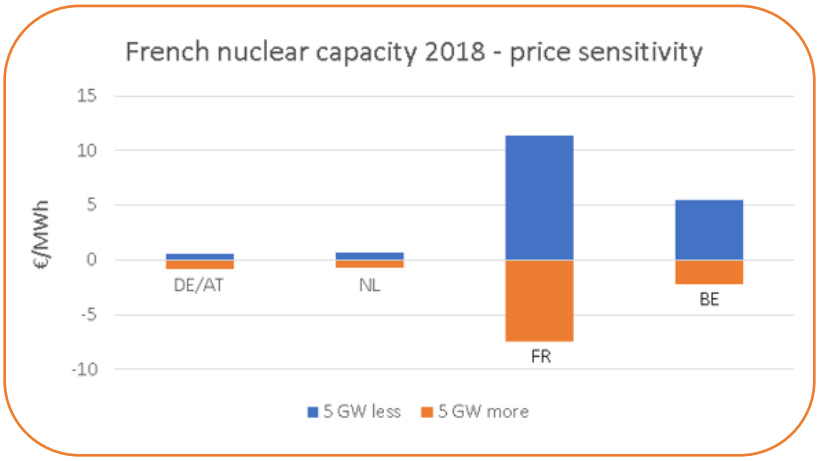
French nuclear scenario analysis for 2018

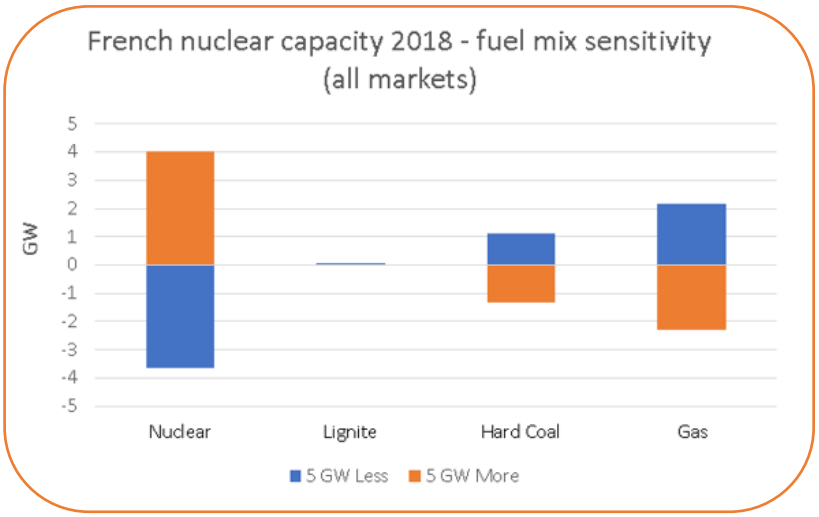
The base case uses an average availability of 90-95% for most plants. However, in France the nuclear power plant availability is assumed to be lower, 70-80%, due to extra maintenance and inspections.

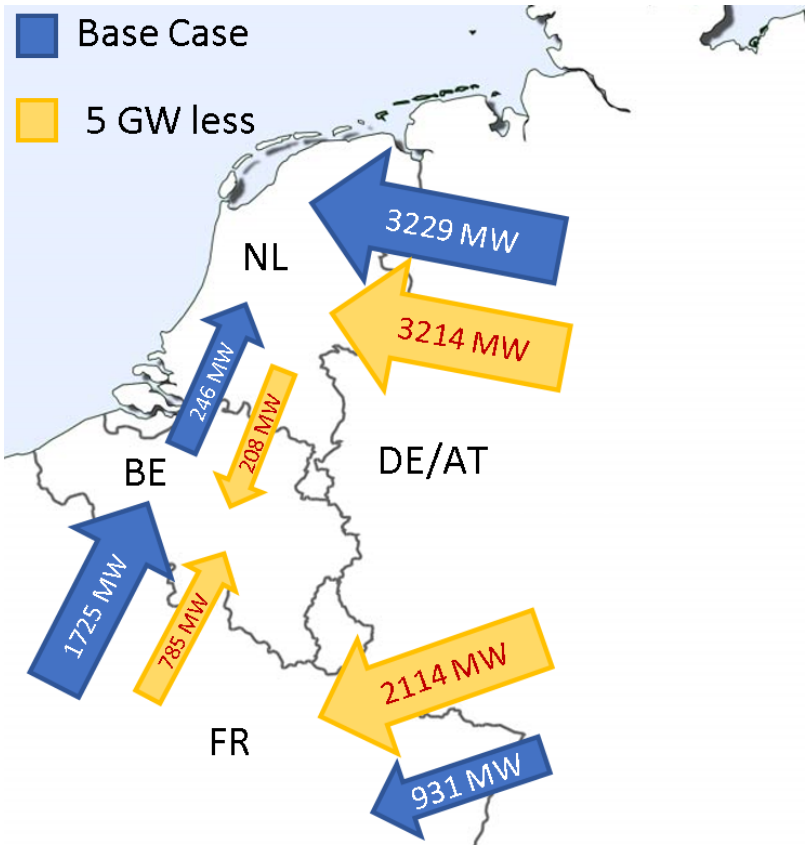
In the alternative scenarios with 5 GW less/more French nuclear capacity, plants are either taken from the market, or added to the market. This leads to other price levels in all markets, and changes in the inter-connection flows and generation mix.

The strongest price response is obviously in France, but Belgium is also very sensitive to these French market conditions. With less nuclear capacity in France, there is a shift towards coal- and especially gas-fired generation. Lignite plants are low in the merit order and hardly respond.

With less French nuclear capacity, the flow on average between the French-Belgian border decreases and increases across the French-German border.







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