Powernext

Everything you need to know about TLC

Why TLC ?

Since November 21st 2006, France, Belgium and the Netherlands have coupled their day-ahead markets through their national power exchanges and transmission system operators (TSO) to enable an optimal management of the interconnection capacity between the three markets and to enhance market liquidity.

The implementation of the Trilateral Market Coupling answers the requirements of the European Regulation which recommends the set up of market mechanisms for capacity allocations. A similar mechanism has been operating in Scandinavia under the name of "market splitting". The TLC realizes, today for tomorrow, a joint, simultaneous, and consequently more efficient allocation of energy and interconnection capacity use by the relevant organized markets in cooperation with the TSO's.

The TLC principles through simplified examples

The aggregation of the coupled markets' order books allows the market with the lowest price exports electricity to the market with the highest price. Two situations may appear: either the Available Transfer Capacity (ATC) is large enough and the prices of both markets are equalized (price convergence), or the ATC is too small and the prices cannot be equalized.

These two cases are described in the following examples.

Suppose that, initially, the price of market A is lower than the price of market B. Market A will therefore export to market B, thus the price of market A will increase whereas the price of market B decreases. If the ATC from market A to market B is sufficiently important, a price common to the two markets may be reached, so that no market tends to export/import to the other anymore.

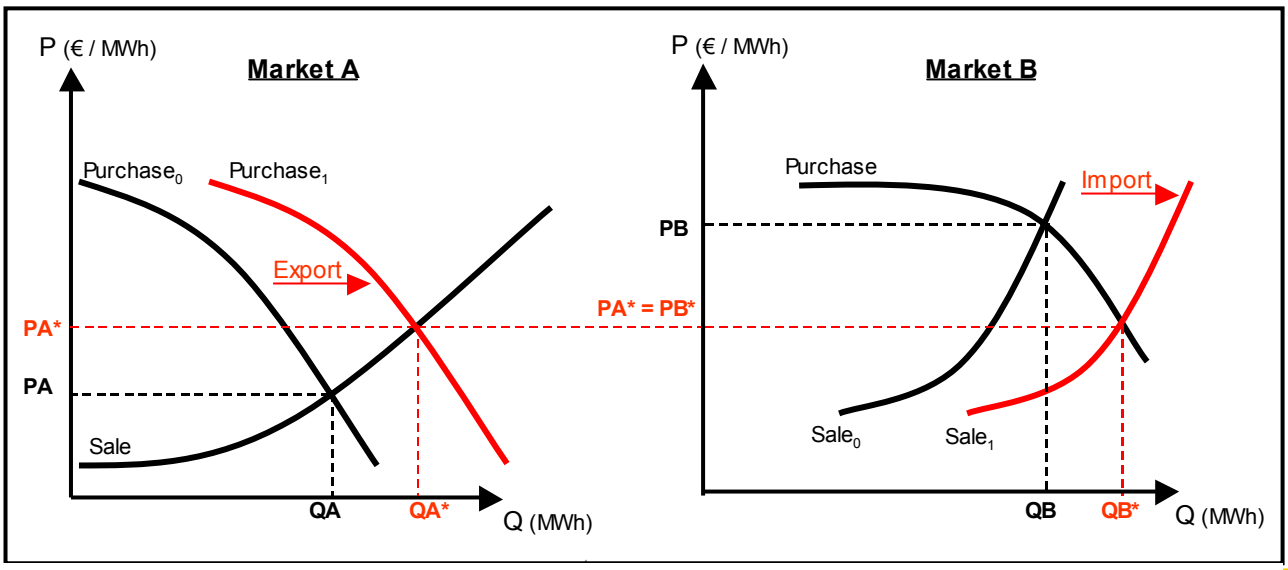

Figure 1- Representation of Market Coupling for two markets, no ATC congestion.

Another situation happens when the ATC is not sufficient to ensure price harmonization between the two markets. The amount of electricity exchanged between the two countries is then equal to the ATC and the prices are given by the intersection of the purchase and sale. curves. Exported electricity is bought in the export area at a price of P_A*, and is sold in the import area at a price of P_B*.

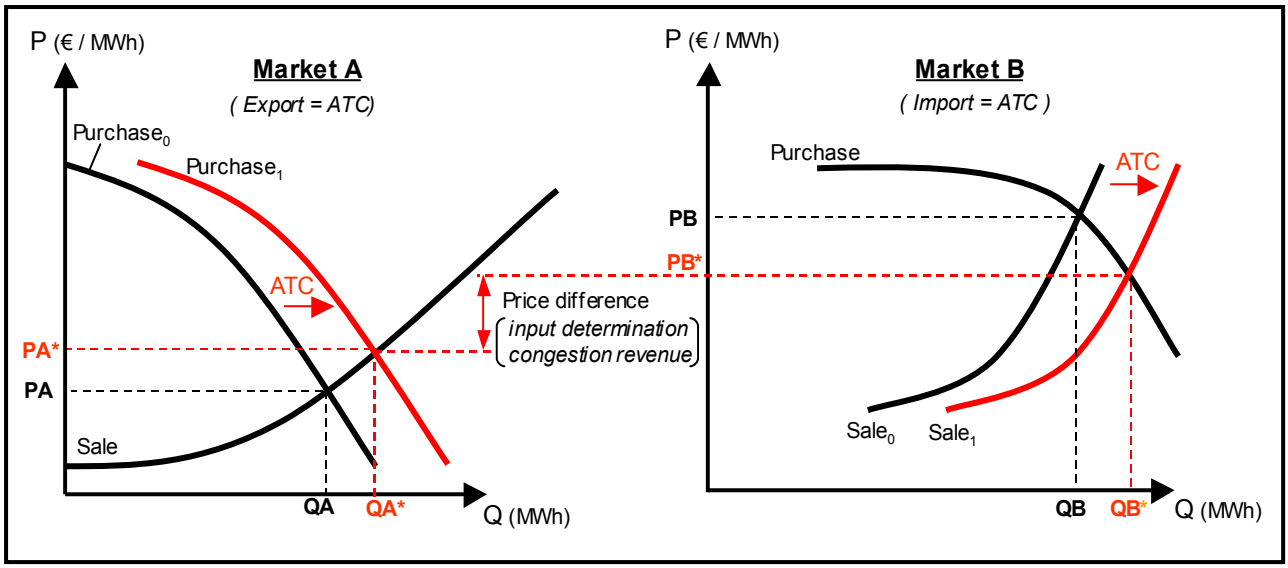

Figure 2- Representation of Market Coupling for two markets, ATC congestion

The simplified example below may be extended to the three-country case. Please refer to the document « *Algorithm Appendix* » for more information.

What are the TLC's practical impacts on Powernext Day-Ahead® members?

The commercial and contractual relationship of the participants with each of the coupled markets remains the same. TLC does not require any modification to Powernext Day-Ahead®'s trading agreement. A modified version of the market rules will be published before the launch of TLC.

The exchanges are taking turn managing the operational coordination of TLC. This process is transparent for the members who keep the same commercial and operational contacts on each of the coupled markets. **From the point of view of a Powernext Day-Ahead® member, TLC is seen as a modification of the market price determination rules.**

How does TLC operate on a daily basis?

Every day, the three transmission system operators Elia, RTE and Tennet determine and communicate to Powernext, Belpex and APX the Available Transfert Capacity (ATC) on each border and make it available to the participants through their web site around 9:00 am.

After the order book is closed - as of 11:00 am - the purchase and sale orders of the three exchanges are aggregated and matched according to their merit order, independently from the geographical origin of the orders and within the cross-border ATC. At last, the TLC algorithm determines for each zone:

- A price (possibly the same),
- A net export or import position corresponding to a cross border flow.

The prices and net positions are consistent with the High Level Properties which are described in the "Algorithm Appendix". These properties specify the global balance of flows within the coupled area, the interconnection capacities, and the consistency between prices and the direction of flows.

Each participant receives the market results (prices and quantities for the 24 hours of the following day) according to the local procedures and interfaces as of 11:15 am. Each buyer (seller) pays (receives) the price of the area where he belongs.

Fall-back procedures have been planned in the case when it is impossible to operate TLC. More information regarding fall-back mechanism may be found in the document called "Market Coupling Fallbacks".

TLC benefit

TLC presents several advantages:

- it enables a systematic optimal use of the available capacity on the French-Belgian and the Belgian-Dutch borders,
- it allows a fair and simple access to cross border transactions as the members of each exchange will automatically benefit from the available capacity through a higher market liquidity without having to acquire a specific access,
- it enables a valorisation of the cross border capacity at the right price; the capacity price is implicitly determined by the difference between the 2 markets,
- when there is no congestion at the border, a single price is determined for both markets,
- it was designed in such a way that each exchange will be able to operate independently without any significant modification of their market rules, or their trading platform. There will not be a single order book or a common clearing and settlement organism.

Other European countries will be considered for this mechanism in the near future. TLC is a structuring concept which allows a giant step toward a unified European electricity market at short term.