

CORE-FB



June 08, 2022 - Launch of Flow-Based Market Coupling in the Core region enhances energy transition

Flow-Based Market Coupling mechanism optimises day-ahead European electricity market for 13 countries

Today, the 16 Transmission System Operators (TSOs) of the Core Capacity Calculation Region (Core CCR), together with 10 Nominated Electricity Market Operators (NEMOs), introduced the Core Flow-Based Day-ahead Market Coupling. Having a harmonized capacity calculation methodology in place in the Core CCR makes the European electricity system more efficient and robust. This harmonization thereby improves the capacity allocation in the Core CCR and enables the European power grid to transport more electricity across borders leading to lower overall cost. Furthermore it allows for an improved cooperation between all involved parties. Finally, market participants will also benefit from further improved transparency of all capacity related data. The new Flow-Based Market Coupling Mechanism is another landmark step in the energy transition. It enhances the European grid's ability to manage fluctuations in the supply of wind, solar and other renewable energy, thereby contributing to sustainable value for society.

Additionally, today as part of the Core FB MC project also market coupling is implemented between Croatia and Hungary & Slovenia and Hungary all contributing to a more complete and well functioning European market coupling.

Core comprises 13 countries - Austria, Belgium, Croatia, the Czech Republic, France, Germany, Hungary, Luxembourg, the Netherlands, Poland, Romania, Slovakia and Slovenia – with a total population of 278 million and estimated annual electricity use of 1.500 TWh.

The market coupling algorithm calculates optimal cross-border electricity exchanges

Before introducing the Core Flow-Based Day-ahead Market Coupling, cross-border capacity was partly calculated bilaterally, based on estimations of the use of the grid in the countries involved. With the introduction of a flow-based capacity calculation, the network capacity is calculated by taking into account the grid of the complete region and allocated by the market coupling algorithm by maximizing the economic value of the energy exchanges. A flow-based approach was already introduced in the Central West European (CWE) part of the Core CCR since 2015. The step taken now is to apply an improved flow-based approach to the whole Core CCR. This means the introduction of an improved flow-based methodology, harmonised capacity calculation in a larger region and decreasing price difference in more countries.

Managing a renewable energy system

Integration of the European energy market is crucial to the energy transition. An integrated market allows efficient management of weather-related fluctuations in the generation of renewable energy. When the wind doesn't blow in the North, for instance, the resulting lower power generation by Europe's northern wind farms can only be compensated by solar power generated in Southern Europe if grids and markets of these different zones are fully integrated; both physically through interconnections and in terms of their markets.

The new Flow-Based Market Coupling Mechanism optimises the capacity to exchange power between bidding zones within the Core region, adding sustainable value and boosting socio-economic welfare. At the same time, it enhances the security of supply as it creates better visibility across the whole grid and increase the price convergence in the whole region.

Introduction of a similar Flow-Based Market Coupling mechanism for the long-term and intraday electricity markets is scheduled for the coming years. The market integration process will also include an improved regional optimisation of redispatch.

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Note to editor

Background information:

Core is a Capacity Calculation Region - What does this mean?

The European Union's electricity market governance comprises several regions, each comprising several countries. Integration of the European market is moved forward step by step to keep it manageable. First, the different sub-markets within a region are integrated. Over time, further integration of some regions will follow.

Integrating markets requires accurate and timely insight into the capacity of the grids to transport electricity across borders. Only if electricity can be transported from one zone or country to another in significant volumes supply and demand can be matched and price differences between regions optimised. For this purpose, these Capacity Calculation Regions have been defined.

The determination of CCRs is based on combining the bidding zone borders for which the need of coordination is the highest (e.g. taking into account the interdependencies between their cross-zonal capacities) and consider where it is most efficient to apply cross regional coordination. Different regional methodologies (such as capacity calculation, re-dispatching and countertrading) will be applied on the various capacity calculation regions.

This will promote an effective coordination between bidding zone borders, which enables an optimal use of transmission infrastructure across Europe, with consequential benefits for consumers.



Core Flow-based Market Coupling parties:

16 Transmission System Operators (TSOs)

50Hertz Transmission GmbH, Amprion GmbH, Austrian Power Grid AG, ČEPS, a.s., CREOS Luxembourg S.A., Croatian Transmission System Operator Plc., ELES, d.o.o., ELIA Transmission Belgium SA/NV, MAVIR Hungarian Independent Transmission Operator Company Ltd., National Power Grid Company Transelectrica S.A., Polskie Sieci Elektroenergetyczne S.A., RTE Réseau de Transport d'Electricité, Slovenská elektrizačná prenosová sústava, a.s., TENNET TSO B.V., TenneT TSO GmbH, TRANSNET BW GmbH

10 Nominated Electricity Market Operators (NEMOs)

BSP Energy Exchange LL C, CROATIAN POWER EXCHANGE Ltd., EPEX SPOT SE, EXAA Abwicklungsstelle für Energieprodukte AG, HUPX Hungarian Power Exchange Company Limited by Shares, Nord Pool European Market Coupling Operator AS, Operatorul Pieței de Energie Electrică și de Gaze Naturale "OPCOM" S.A., OKTE, OTE a.s., Towarowa Giełda Energii S.A.