



## **Closing down Flow-Based Market Coupling in Central Western Europe: paving the way for the further integration of European electricity markets**

The Central Western Europe (CWE) region was the first to implement the flow-based capacity calculation methodology that has now been adopted as the preferred way forward across the rest of Europe.

### **Arnhem/Bayreuth, Berlin, Brussels, Dortmund, Luxembourg, Paris, Stuttgart, Vienna**

Today, eight Transmission System Operators (TSOs) from six European countries are celebrating the closure of a project that has changed the way we calculate and allocate day-ahead capacity to the power grids of each involved country. The flow-based market coupling approach means it is possible to carry out coordinated regional optimisation based on maximum economic value. This is contributing to the decarbonisation of the European energy system and is increasing security of supply. This voluntary approach, which began to be developed in 2006, has been improved with the extension of the flow-based capacity calculation method across the much larger Core region on 8 June 2022.

To build an internal European electricity market, the different national systems need to be connected both physically - via interconnectors - and commercially. In the early 2000s, some CWE countries started to move towards market coupling in accordance with several regional initiatives. An important additional step was the establishment of the Pentalateral Energy Forum in 2006 by the ministers of Belgium, France, Germany, Luxembourg and the Netherlands. This forum was meant to foster security of supply through further market integration. In 2007, an important milestone was reached when the ministries, regulatory authorities, TSOs, Power Exchanges (PX) and market parties signed the Memorandum of Understanding of the Pentalateral Energy Forum on Market Coupling and Security of Supply in Central Western Europe. In 2010, the CWE markets were first coupled based on the coordinated Net Transfer Capacity (NTC) calculation methodology. In 2011, Austria joined the Pentalateral Energy Forum. The next major step, in May 2015, took place with the launch of the new flow-based capacity calculation method, thereby introducing the flow-based market coupling (FBMC) methodology to Europe. To realise this innovative approach, CWE TSOs and their partners have invested significant efforts in the project over several years.

One of the main targets of market coupling is the convergence of market prices across participating countries. Sufficient cross-border transmission capacities are crucial for the achievement of the so-called 'full' price convergence between countries. The first approach adopted for the allocation of cross-border capacities was based on coordinated NTC. In contrast, the flow-based market coupling method allocates capacities in a more efficient way, as the economic value of a single exchange takes into account all other exchanges and their respective use of the available grid capacity across the whole region. This requires regional coordination, leading to regional optimisation. As a result, since 2015, capacities allocated to cross-border trading and consequently the economic value of the exchanges and the level of price convergence between the CWE countries have increased over time. Accordingly, CWE TSOs have made a significant contribution to dispatching available resources in a cost-efficient manner to meet demand across the CWE region. Further CWE market coupling milestones have been the introduction of additional borders as part of the German-Austrian Bidding Zone split in 2018, the ALEGrO project in 2020 and the minimum remaining available margin of 20%. CWE TSOs would like to express their special gratitude towards CWE power exchanges and the Joint Allocation Office (JAO) for the great teamwork and the national regulatory authorities and ministries for their strong support as the main sponsors over the past few years.



The ending of the flow-based market coupling approach across the CWE is a natural consequence of the launch of the new flow-based market coupling approach across Core. This launch has extended the use of flow-based allocation across a wider European area - the Core Capacity Calculation Region (CCR) – which comprises 13 countries: Austria, Belgium, Croatia, the Czech Republic, France, Germany, Hungary, Luxembourg, the Netherlands, Poland, Romania, Slovakia and Slovenia. This region is home to 278 million citizens with an estimated annual electricity use of 1500 TWh. The Core CCR makes use of the flow-based methodology, adding value to the version previously operated in CWE.