



Project reference

Feasibility study for Flow-Based Market Coupling based on historical domains

HOW WAS THE PROPOSITION?

The effort to derive Flow-Based Market Coupling (FBMC) input data for market modelling could be avoided by using real historical FBMC data.

HOW WAS THE PROCEDURE?

It was checked whether day-ahead FBMC domains published by Joint Allocation Office (JAO) could be handed over to the market model. Afterwards, market model results were compared between runs with real historical domains, runs with derived model-based domains and real market outcomes. This comparison was carried out for critical situations and the annual time frame. Further, run times and memory needs were recorded. Based on the analysis, goal-specific recommendations and trade-offs for FBMC modeling were achieved.

APPROACHES

- 1 Only Net Transfer Capacities (NTC)
- 2 By model or real market data derived and simplified FBMC domain
- 3 Real historical FBMC domain from JAO including Critical Network Elements and Contingencies (CNEC) and implicit Remedial Actions (RA)
- 4 Extended FBMC domain with all CBCO and all explicit RA

Practicability

Proximity to reality

WHAT WERE THE RESULTS?

Real historical domains can be applied without adjustments and without significant calculation time excess, if the market model can handle the complexity like Maon. It can be used especially for simulation time frames in the near future and avoids the FBMC derivation effort.