

Nordic Capacity Calculation Methodology Project

Background - The Nordic power system is changing, and will face more intermittent renewable infeed, and an increasing degree of interconnection with adjacent synchronous areas. This requires the power system operations to change accordingly, whilst the Nordic TSOs are maintaining the balance between market facilitation and grid security. By introducing more coordination and cooperation among the Nordic TSOs at the capacity calculation stage, it is possible to obtain a more detailed estimate of available cross-border capacity to facilitate the DA and ID market, whilst maintaining required operational security.

The Capacity Allocation and Congestion Management (CACM) guideline, which entered into force on August 14th 2015, sets out European requirements for capacity calculation for the Day-ahead and Intraday market time frame. With its coordinated capacity calculation approach, and more accurate grid representation during the capacity allocation, the FB methodology is the preferred coordinated capacity calculation methodology in the CACM GL. A Coordinated Net Transfer Capacity (CNTC) approach may only be used if it can be demonstrated that the FB approach would not bring any added value compared to the CNTC approach. The CACM guideline requires all TSOs in each capacity calculation region to submit a proposal for a common coordinated capacity calculation methodology to the concerned regulatory authorities within the respective region no later than 10 months after the approval of the proposal for a capacity calculation region.

Anticipating the requirements in the CACM GL, the Nordic TSOs initiated a Flow-Based (FB) pre-feasibility study in November 2012. The purpose was to investigate technical feasibility and potential benefits of an FB capacity calculation and allocation for the Nordic region. The study provided sufficient comfort for the TSOs to initiate a feasibility study in which to develop an FB methodology and a prototype tool for the Nordics, and to start preliminary market experimentations. In October 2015, the FB project entered a new phase as the prototype tool went into sufficient maturity to start market simulations.

As required by the CACM Regulation, the Nordic TSOs have now proposed a common coordinated capacity calculation methodology for the day ahead and intraday timeframe within the Nordic region. The proposal has been submitted to the national regulatory authorities in CCR Nordic in September 2017. The proposal is following:

For the Day Ahead timeframe: The Nordic TSOs propose to implement a Flow Based capacity calculation approach for the Day Ahead Market timeframe, assuming that it can be shown that the objectives of CACM GL are met.

For the Intraday timeframe: As the long-term solution, the Nordic TSOs proposes to implement a Flow Based approach for the intraday timeframe as soon as the intraday market platform is technically able to utilize flow-based capacities.

As an interim solution, the Nordic TSOs propose to implement a coordinated net transmission capacity approach for the intraday market timeframe.

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