

Date: 2018-07-10

Annex 1

Agreement by all Regulatory Authorities of CCR Nordic on the next step after the approval of TSOs' Proposal for a Capacity Calculation Methodology in accordance with Article 20.2 of Commission Regulation (EU) 2015/1222 of 24 July 2015 establishing a Guideline on Capacity Allocation and Congestion Management on the Determination of Capacity Calculation Regions

The CCM Proposal

The TSOs (original) proposal for a Capacity Calculation Methodology was submitted to NRAs 17th September 2017. The NRAs made a Request for Amendment that was submitted to the TSOs 16th March 2018. The TSOs amended proposal was submitted to the NRAs 16th May 2018.

The Regulatory Authorities of CCR Nordic together with the Norges vassdrags og energidirektorat (NVE) have assessed, consulted and closely cooperated and coordinated and have reach an agreement on 10 July 2018 that the CCM Proposal meets the requirements of Regulation 2015/1222 and as such can be approved. Each Regulatory Authority of the Nordic CCM has also agreed to approve the amended proposal in a national decision. These national decisions must be taken by 16 July 2018 at the latest.

The next steps

Although the Regulatory Authorities has agreed that CCM proposal is generally deemed compliant with relevant articles of Regulation 2015/1222, the Regulatory Authorities of CCR Nordic note that capacity calculation is a regional task which according to CACM should be assigned to the Coordinated Capacity Calculator (hereinafter referred to as "CCC") in the Nordic Capacity Calculation Region. The proposal does not provide sufficient clarity on the roles in capacity calculation, especially regarding dynamic stability calculation. The Regulatory Authorities of CCR Nordic agree that the TSOs should start preparing to refine the now agreed methodology with processes and elements to enable for the CCC to handle dynamic stability in capacity calculation on a regional level. The Regulatory Authorities of CCR Nordic agree to ask the TSOs for updates on a regular basis. The Regulatory Authorities of CCR Nordic agree also to initiate a request for amendment of the Capacity Calculation Methodology to clarify the roles and responsibilities of the CCC and individual TSOs by the end of 2018.

Without prejudice to each TSOs' task to ensure operational security, all Regulatory Authorities of CCR Nordic agree that the model for operational capacity calculation for the Nordic region in the future includes that:

1. CCC shall calculate the capacities using the technical limitations of the system needed to ensure secure system operation i.e. operational security limits, defined in CACM as *the*



acceptable operating boundaries for secure grid operation such as thermal limits, voltage limits, short-circuit current limits, frequency and dynamic stability limits.

2. Each Nordic TSO is required to provide the operational security limits to the CCC in an appropriate format¹ as well as all the relevant data needed to use the security limits in the regionally coordinated capacity calculation process. The appropriate format for the operational security limits shall not include any pre-calculation by the individual TSO where the operational security limits are transposed to flow limits presented with MW values.

Other remarks

This proposal considers the current Common Grid Model (CGM), which has been approved by all EU NRAs.² All the Regulatory Authorities of CCR Nordic agrees, as regards the development and future use of a CGM for dynamic stability calculations each Nordic TSO is required to share all relevant data, including dynamic data, among the TSOs to ensure that an appropriate CGM can be developed. Also, each Nordic TSO is required to contribute actively to the development of an appropriate version of CGM, which includes also dynamic data. The CCC shall use the appropriate version of CGM for capacity calculation.

Also, although the Regulatory Authorities of CCR Nordic and NVE have agreed to approve the methodology, the The Regulatory Authorities of CCR Nordic foresee that the methodology should be evaluated further to ensure that CACM objectives for coordinated capacity calculation are fully realized. The up-coming implementation process, especially the parallel runs, will give the Regulatory Authorities of CCR Nordic and market players valuable knowledge on how the methodology will work in practice and how it might be developed. The Regulatory Authorities of CCR Nordic will follow the work by the TSOs in close cooperation with NVE and the Agency for the Cooperation of Energy Regulators. The Regulatory Authorities of CCR Nordic agrees to come back with request for amendments when/if it is deemed appropriate.

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1. Operational security limits can be effectively presented in appropriate units describing a specific power system physical property such as thermal limits in MVA, voltage limits per unit, frequency relative to nominal and dynamic stability limits per unit for voltages and damping for electromechanical oscillations.
 2. All TSOs' proposal for a common grid model methodology in accordance with Article 17 of Commission Regulation (EU) 2015/1222 of 24 July 2015 establishing a guideline on capacity allocation and congestion management