

## **Nordic Balancing Philosophy**

The Nordic transmission system operators (TSOs) have prepared a detailed report describing the Nordic balancing philosophy to outline the principles and strategy behind the current rules and procedures for the balancing process. The framework and balancing rules in the Nordic countries are not fully harmonized. The purpose of the report is mainly to ensure a common understanding among the Nordic TSOs of the current principles and framework in the balancing process, which will promote the daily operational TSO work. Additionally, the report serves as a basis for related ongoing and foreseen system operation development work.

An evaluation of the principles is needed especially with regards to the implementation of the coming Network Codes and Guidelines. This may lead to adjustments to the current balancing philosophy. A central part of the ongoing development is related to dimensioning and requirements for Frequency Containment Reserves (FCR) and Frequency Restoration reserves (FRR).

In ENTSO-E System Operation guideline (SO GL), the dimensioning of reserves is based on requirements considering congestions in the grid and requirements for regional balancing must be described in the new system operation agreement that is currently being developed.

SO GL also requires a process for automatic frequency restoration reserves aFRR reserves and the Nordic aFRR project is working on the concepts for markets on capacity and energy activation.

In addition, Nordic Frequency Containment Process (FCP) project reviews the current requirements for frequency containment reserves (FCR) and evaluates principles regarding exchange of FCR between control areas. SO GL also specifies requirements for sufficient downward FRR for each control area and requirements for downward regulating FCR-D which will be part of the development of the new system operation agreement.

There are also several other ongoing development activities related to system operation which may affect the balancing philosophy in future.