



Development of ramping restrictions for HVDC cables

The Nordic power system is a small synchronous area in a European perspective and hence keeping a stable system frequency is a challenge. The Nordic TSOs are constantly working on developing measures to maintain the frequency quality and to control flow changes in the grid coping with the accelerating development in production composition, increase in grid and interconnector capacity and deepened market integration with other synchronous areas. One of the measures that the Nordic TSOs have deemed necessary, is ramping restrictions on HVDC interconnectors.

The current restriction for HVDC was introduced in 2007 as a common Nordic ramping restriction for all individual HVDC interconnectors. The maximum power flow change from hour to hour is restricted to 600 MW in all interconnectors outside the Nordic synchronous area and applied in the day-ahead and intraday market. As number of new interconnectors have increased, the quality of frequency is seen to be endangered with the current individual restrictions and the TSOs are therefore investigating both if new combined maximum ramping rates for several interconnectors can be more efficient from a technical and socioeconomic welfare perspective or if the protection can be established through other measures.

Such combined restrictions may further facilitate a more flexible distribution of the ramping restrictions to individual HVDC interconnectors, which is in line with responses received in the public consultation about amended methodology for ramping restrictions this summer. The discussions have so far been concentrating on ramping on HVDC interconnectors in the bidding zone NO2, but other combined maximum ramping rates may also be relevant to further investigate. The TSOs are in dialog with Nordic regulators about the issue and the TSOs will invite stakeholders to a webinar where more details will be discussed.

If the investigation into the effectiveness of the current restrictions reveals a need for adjustments of the ramping restrictions, the Nordic TSOs plan to make an updated proposal for regulatory approval including possible new restrictions in early 2021.