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ENTSO-E consultation on Nordic TSOs' proposal on ramping rate restrictions

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The European Federation of Energy Traders (EFET*) welcomes the opportunity to provide comments on the Nordic TSOs' proposal on ramping restrictions. In general, we question the necessity to impose ramping rate restrictions.

Ramping rate restrictions: an unnecessary and unjustified measure

The TSOs explain that the first objective of the ramping rate restrictions, is to **balance the Nordic system** (generation, consumption and exchange over the HVDC interconnectors). However, that objective does not justify the application of ramping rate restrictions. If such restrictions would not be applied, the market outcome could indeed result in a huge change for the Nordic system, for example from full import to full export within one hour. However, such market outcome is backed up by commitments from Nordic BRPs, so there is no reason to assume that these commitments could not be fulfilled. Reference is made to the GB system: The GB synchronous system is of similar size as the Nordic synchronous system and has several DC-interconnectors. However, the GB system operator does not impose any ramping rate restrictions.

It is understood that a large change could result in temporary imbalances if the ramping *period* and ramping *speed* is not coordinated. Therefore, EFET does understand and accept ramping *period* restrictions and ramping *speed* requirements for HVDC interconnectors – but not ramping *rate* restrictions.

The TSOs claim that the ramping rate restriction results in a **socioeconomic welfare loss** of 1 million Euro per year in the balancing market. This might be a relatively low figure. But even then, there is no reason to accept this welfare loss.

More importantly, the analysis is based on historical grid situations and historical bids in January, March, June and October 2019. Therefore the analysis does not take the into account the commissioning of NordLink and Kriegers Flak or the upcoming commissioning of NSL.

Secondly, the analysis only covers the day-ahead time frame and ignores value gains coming from cross-border exchanges in the intraday and balancing time frame. The analysis also does not take into account future fundamental market developments were increasing price volatility in the continental and GB markets can be expected. Such volatility would normally increase the value of cross-border capacity from/to the Nordic market and thus ramping rate restrictions would cause higher value losses.

* The European Federation of Energy Traders (EFET) promotes and facilitates European energy trading in open, transparent and liquid wholesale markets, unhindered by national borders or other undue obstacles. We build trust in power and gas markets across Europe, so that they may underpin a sustainable and secure energy supply and enable the transition to a carbon neutral economy. EFET currently represents more than 100 energy trading companies, active in over 27 European countries. For more information: www.efet.org

Finally, EFET assumes that applying a ramping rate restriction will result in more temperature variants in the cable and will negatively impact the life time of the cable. Therefore EFET requests the Nordic TSOs to take these possible effects into consideration.

The second objective of the ramping rate restrictions is apparently related to **avoiding congestions inside of the Norwegian grid**. This in particular applies to the three interconnectors from/to the zone NO2 and a combined ramping restriction for NorNed, NordLink and Skagerrak of at least 1200 MW/h is proposed

There is no detailed explanation of this aspect. However if the grid is able to be operated securely in case of a full export situation as well in a full import situation, there is no apparent reason to assume that a gradual shift from export to import (or vice versa) would cause flows that would violate security constraints. Therefore EFET rejects the proposal to impose a combined ramping rate restriction for the three interconnectors in addition to other ramping rate restrictions.

Use of combined ramping rate restrictions instead of individual ramping rate restrictions

If the abolishment of ramping rate restrictions cannot be accomplished, then EFET urges the Nordic TSOs to apply a combined ramping rate restriction for all DC interconnectors instead of ramping rate restrictions that apply to each interconnector individually.

The idea is that if the Nordic synchronous power system can cope with ramping rate restrictions of 600 MW/h per interconnector for ten interconnectors, then it can cope with a total ramp of 10 x 600 = 6000 MW/h. Splitting this total system ramp over individual ramping rate restrictions is too conservative. The market will be less restricted if one combined ramping rate restriction is applied. If for example, the market does not result in a change of flow on one interconnector, then other interconnectors would be allowed to change their flow with a greater amplitude than 600 MW/h. Applying one combined ramping rate restriction will result in less restrictions for those interconnectors that generate more value.

Applying a combined ramping rate restriction instead of an individual ramping rate restriction of 600 MW/h would especially be relevant for the new larger interconnectors like NordLink which has a capacity of 1400 MW. A ramping rate restriction of 600 MW/hr for would mean that NordLink could only swing from full import to full export in 5 hours. This could entail a major restriction of the market and result in considerable welfare losses.

Preference for continuous ramping

In order to minimise the possibility of deterministic frequency deviations, EFET proposes to apply smooth or continuous ramping on the DC interconnectors. This would mean that a full hour for ramping (+/- 30 minutes at the hour shift) is used at the moment, and that a ramping period of 15 minutes (+/- 7.5 minutes at the quarter of hour shift) can be used after the introduction of the 15-minute MTU in the Nordic system.