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Current Flowbased implementation plan - a risk for a well-functioning Nordic power market

The Guideline on Capacity Allocation and Congestion Management (CACM) prescribes that TSOs per Capacity Calculation Region (CCR) need to develop a capacity calculation methodology to be approved by the relevant NRAs.

The Nordic TSOs have presented *Flowbased capacity allocation* (FB) as the only alternative to implement a capacity calculation methodology for the Nordic Region, that fulfills the requirements of the CACM Regulation¹. With this justification, the Nordic TSOs chose not to study or propose another option when applying for approval for FB from the Nordic Regulators. As cross-border markets are fundamental, and well-working in the Nordics, we are concerned that the single largest change since the 1990s is planned to be implemented without proven significant benefits or robustness.

Furthermore, it cannot be argued from a legal perspective that FB is the sole option as eight out of Europe's ten CCR's have NRA-approved CNTC-based capacity calculation methodologies.²

We are deeply concerned about the implementation process going in the wrong direction. It seems that the TSOs are aiming for a hasty implementation of FB, without evaluating and taking into account the full impacts on the Nordic market. Our concerns have been further emphasized by the TSOs more recently proposed changes to the methodology and process, namely:

- The proposal to delete the requirement to show efficiency and reliability of FB before go-live.

¹ Requirements are described in article 20 of regulation EU 2015/12222

² Source, ENTSO-E Report on Capacity Calculation and Allocation 2019. Four of these regions are meshed grids comparable to the Nordics. The other four regions are so called DC-connected regions such as HANSA. Our conclusion is that it is reasonable to assume that this option would be possible also for the Nordics. However, the Nordic TSOs have not been willing to investigate the CNTC option at all despite feedback and firm requests from stakeholders. According to CACM (Article 20.7 of CACM Regulation) CNTC is also a viable option and may be used if it can be shown that it is at least as efficient as FB assuming the same level of operational security.

- The proposal to delete the requirement to perform one year of simulations showing the efficiency and reliability of FB before starting the parallel run.
- The interpretation that the intuitive FB patch is forbidden (whereas we interpret ACER's opinion that *it is not required*).
- That the intraday capacity calculation will not be included for the full period of parallel runs.

Nordic TSOs have been able to show only modest benefits of moving to FB, focusing only on the simulated socio-economic benefit for day-ahead market. We also see several other aspects that should be considered when assessing the socio-economic impact of FB. The most critical issues are the impact on the ID-trading and the financial trading caused by a) changed capacity allocation in DA and ID, b) presence of non-intuitive flows and c) lack of transparency.

Our concerns may be transferred into three questions that we believe are crucial to answer when evaluating the benefits of FB and before deciding on implementing the FB capacity allocation methodology:

- What would be the socioeconomic cost of lower transparency and lost confidence in the market price?
- How is the intraday market supposed to work and still deliver flexibility to the Nordic TSOs and market participants?
- In light of the presumed minor gains, is this the right priority given the enormous change our sector is currently going through.

We believe that the TSOs and regulators assess FB too much in isolation, and thereby lose visibility of total system impact and in the end socioeconomic implications.

- *Reduced transparency and trust in the market outcome.* The FB method implies an increasing complexity that makes it harder to forecast prices. It will be a challenge to explain non-intuitive power flows (flow from high to low price areas), and there is an obvious risk that this will cause reduced confidence in the market outcome. The few weeks of provided simulations exemplified individual cases with non-intuitive price differences in the range of 100€/MWh, despite flows notably under corresponding NTC capacities. Adding to this the level of transparency in the Nordic FB is below the level in the corresponding methodology for the continental core region. These costs have not been properly taken into account when proposing the method.
- *Impacts to the financial market and EPADs.* Reduced transparency and trust will have negative impact on liquidity of the wholesale market, which in turn will increase the cost for market participants using the financial markets for risk mitigation. We perceive a risk that EPADs are not a sufficient hedging instrument after introducing non-intuitive version of FB. Long-term transmission rights might also not work in combination with non-intuitive flows in the DA market. Impacts to the financial market and hedging possibilities are not covered in the studies performed by the TSOs up to date.
- *Lost value of a market for flexibility.* The CACM regulation requires a methodology for the day-ahead and the intraday market. Nordic TSOs are planning to introduce FB first for the day-ahead timeframe and only in an undefined future for the intraday timeframe and thus intraday capacities would still be given as traditional ATC capacities. This combination will as we see it make it extremely complicated to allocate capacity to the intraday market, as non-intuitive flows inevitably will lead to arbitrage situations, unless TSO's decide not to allocate

any capacity to the ID-market in these situations. This phenomenon will be accentuated for a market like the Nordics that use bidding zones to address congestions.³ This is alarming especially taking into account the increasing amount of wind power generation in the system leading to increased need for close to real time trading.

- Finally, the dialogue with stakeholders have offered very limited possibilities to analyze the effects described above. We have also communicated our concern about the KPI's chosen for the parallel run, and we do not agree with the TSOs that the KPIs has been drafted in dialogue with the stakeholders. We consider that more extensive KPIs are needed and the process to define KPIs should be restarted. Secondly, we consider that at least the high-level principles for KPIs (e.g. efficiency and reliability) should be kept in the legal methodology document.

We do not rule out that a more extensive evaluation would lead to the conclusion that FB is the best alternative for the Nordic countries, but to reach that situation other alternatives like a full-fledged CNTC-alternative, have to be evaluated in parallel. Additionally, it is important to have a more holistic view when evaluating different alternatives.

The way forward - requested changes:

We remain skeptical that FB is the best option for the Nordic system, but at the same time we recognize and respect the current implementation process. Where we stand today, the signatures of this paper would like to see the following changes to the implementation process and methodology:

- NordREG and the TSOs transparently show the benefits of FB and guarantee that the methodology will not go live, unless it brings real benefits. The TSOs' request for removing the condition of showing efficiency and reliability of FB in the amended CCM proposal of 17 April 2020 must be rejected.
- Simulation period should precede the parallel runs, and TSOs request for removing the requirement to perform 12 months of simulations before starting the parallel run should be rejected. The simulation should at the minimum compare a plain and an intuitive patch of FB and include capacities given for allocation to the intraday market. Additionally, we would still like to see a fair comparison between FB and CNTC.
- If efficiency improvements are measured in relation to the current NTC method, and thus do not include the potential efficiency gains from a CNTC methodology, the FB should be significantly better compared to the NTC method.

³ The so called non-intuitive flows is likely to have a substantial negative impact on intraday markets. We see two possible scenarios both with negative implications for the market: Either it will introduce unsustainable arbitrage possibilities trading power from low- to high price areas erasing potential value from FBMC DA, OR zero capacity is allocated to the ID market which result in negative impact on fundamental functionality and efficiency of the ID-market and less contribution to balance the system coming into the operational hour. This effect is accentuated for the Nordic ID-market with many bidding zones with relatively low liquidity and growing share of RES.

- The increased efficiency of moving to FB should be clearly shown during the whole period of parallel runs (at the minimum 12 consecutive months). Capacities given for allocation to the intraday timeframe should be included in the parallel runs as well.
- In addition to the benefits for day-ahead market, the socio-economic assessment must cover also the value of the intraday market that allows participants to trade into balance before passing gate closure and entering the balancing time frame and the financial market that allows market participants to hedge their electricity sales. Transparency and explicability of the market results has also a value, and this should also be taken into account in the evaluation.
- The minimum level for transparency (related to both input and output data) in the Nordic countries should be the same as in CWE region today. This implies e.g. that the TSOs should publish also information on the location of the internal critical network elements with permanent identifiers. If one a more TSO does not publish this information, it is impossible for market participants to understand, explain and forecast the market results – only TSOs have the necessary data to do this.
- If Nordic TSOs are not able to show that FB will contribute to achieving the general objectives of CACM (e.g. increasing transparency and efficiency), the implementation process must be stopped. At the latest in that situation TSOs should also start investigating the other CACM compliant capacity calculation methodology, namely CNTC.

We ask the Nordic regulators not to approve deleting the requirement for having a simulation period before parallel runs and showing efficiency and reliability of FB before go-live as proposed by the TSOs. The benefits of moving to FB should be clearly shown during the simulations and parallel runs. In addition to socio-economic benefits in the day-ahead market, also impacts on other markets (i.e. intraday and financial), transparency and explicability of the market results should be taken into account when evaluating the benefits. FB should serve as real market improvement, otherwise it should not be implemented. In order to ensure well-functioning methodology and markets, it is important to involve stakeholders closely in the implementation. Unless the Nordic TSOs can clearly show the benefits of moving to FB, the implementation should be delayed and other options (i.e. CNTC) analyzed as an alternative.



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