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FORTUM'S VIEW ON THE NORDIC TSOS' PROPOSAL FOR NORDIC BIDDING ZONE REVIEW

Key Fortum views on the Bidding zone review:

- Fortum supports regularly reviewing the Nordic bidding zones in order to increase market efficiency
- Fortum expects bidding zones to be large enough in order to enable liquid financial forward trading and to include sufficient balancing resources to operate
- Fortum considers that new configurations should be based on less bidding zones by merging some of the current bidding zones
- Fortum supports the target to keep Finland as a single bidding zone
- Fortum supports the merger of SE3 and SE4 to one price zone, but opposes the establishment of a separate Stockholm region price area, as it is too small and unbalanced for underlying energy markets to operate
- Fortum is disappointed that a merged SE1 and SE2 is not proposed in this review
- Fortum does not support splitting of the Norwegian bidding zone NO4
- Fortum considers that the bidding zone review should study a larger number of alternative configurations and possibilities to reduce the amount of bidding zones
- Bidding zone review should also duly take into account the impacts of the new bidding zone configurations on the financial market and hedging possibilities

1 BIDDING ZONE REVIEW PRINCIPLES

According to the EU Electricity Market Regulation, the bidding zone review methodology shall be based on structural congestions which are not expected to be overcome within the following three years, taking due account of tangible progress on infrastructure development projects that are expected to be realised within the following three years. Current bidding zones shall be assessed on the basis of their ability to create a reliable market environment, including for flexible generation and load capacity, which is crucial to avoiding grid bottlenecks, as well as balancing electricity demand and supply, and for securing the long-term security of investments in network infrastructure.

Bidding zone borders shall be based on long-term structural congestions in the transmission network. Bidding zones shall not contain such structural congestions unless they have no impact on neighbouring bidding zones, or, as a temporary exemption, their impact on neighbouring bidding zones is mitigated through the use of remedial actions and those structural congestions do not lead to reductions of cross-zonal trading capacity in accordance with the requirements of Article 16 in the

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Regulation. The configuration of bidding zones in the Union shall be designed in such a way as to maximise economic efficiency and to maximise cross-zonal trading opportunities in accordance with Article 16, while maintaining security of supply.

The EU CACM Regulation Article 33 gives further detailed criteria for bidding zone reviews with requirements on e.g. market efficiency, effective competition, price signals for building infrastructure, transition costs, and the need for bidding zones to be sufficiently stable and robust over time. A bidding zone review shall also include scenarios taking into account infrastructure developments throughout a period of 10 years.

2 FORTUM'S VIEW ON THE NORDIC BIDDING ZONE REVIEW

Fortum understands that the time limits set by the Electricity Market Regulation were tight for submitting the bidding zone review proposal to the regulators. However, it would have been good to discuss and give advance information of the process and the proposed configurations to the market participants e.g. through the TSOs' market stakeholder groups.

Fortum supports reviewing the Nordic bidding zones in order to increase market efficiency. Currently there are quite many bidding zones in Norway and Sweden, while in Finland a commonly supported target is to keep Finland as a single bidding zone. In Denmark, the division to two bidding zones is reasonable based on the different synchronous zones connected in Denmark together by only one DC link.

In Fortum's opinion, bidding zones should be large enough in order to enable liquid financial forward trading and competitive retail power sales for each bidding zone. Bidding zones should give predictable price signals and trading possibilities for both generation investments, electricity end-users, and demand flexibility. In the bidding zone review, mergers of bidding zones should be considered in all cases where the price difference and grid congestions between bidding zones are small.

Based on the new Nordic Balancing Model, the TSOs should also have enough balancing resources for each bidding zone in order to maintain the balance of each bidding zone during the operational period. In large bidding zones there are enough competitive balancing resources in each bidding zone, but in smaller bidding zones the TSO might not be able to balance the bidding zone with the resources available. This should be taken into account in the review as well.

In the Nordic market, the cross-zonal capacity calculation is planned to be changed from a border-specific net transfer capacity (NTC) model to a flow-based model, which is expected to improve market efficiency. This change needs to be taken into account in the bidding zone review. In the flow-based calculation, some of the inefficiencies of the current calculation could be avoided, which might enable bigger bidding zones.

In bidding zone reviews, cross-border bidding zones should also be considered as viable alternatives, as structural grid congestions are not necessarily located at country borders.

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Fortum considers that impacts on the financial markets should also be taken into account in the review. Liquid and well-functioning financial markets and adequate hedging possibilities are an important factor, which should not be forgotten when evaluating the different bidding zone configurations. Small and unbalanced bidding zones are very challenging for market participants also due to low liquidity in the financial market and the lack of sufficient possibilities for hedging. If TSOs will introduce small and unbalanced bidding zones, there is a need to start the evaluation of a need to introduce also long-term transmission rights to secure sufficient hedging possibilities.

3 COMMENTS ON THE PROPOSAL OF ALTERNATIVE CONFIGURATIONS

Fortum does not support the proposal for alternative configurations to be considered in the Nordic bidding zone review. While it is appropriate to keep the current configuration as one alternative, the new configurations should not be restricted to only two change options. Both of the proposed options can besides have major negative consequences for the market efficiency.

The review should study a bigger number of alternatives, also based on different scenarios of market development. As additional options, at least the merger of the northern Swedish zones SE1 and SE2 should be considered due to no real congestions between these bidding zones, as well as the SE3 and SE4 merger independently of the separation of the Stockholm area.

4 IMPROVEMENT POSSIBILITIES FOR THE BIDDING ZONE NO4

Fortum does not support splitting of the Norwegian bidding zone NO4. This zone is already the smallest of the Norwegian bidding zones based on the day-ahead market purchase volumes. The liquidity of the financial market EPAD product (SYTRO) for NO4 is also quite minimal. From a trading perspective, it should even be considered if a merger of the bidding zones NO3 and NO4 would be possible.

The day-ahead market capacity calculation for the bidding zone NO4 can probably be improved with the introduction of flow-based calculation. The planned addition of the NO4-FI grid connection to the market as an ordinary bidding zone border will also give some positive contribution.

Within the next ten years, grid investment possibilities should be considered as primary major measures to relieve grid congestions on the borders and within NO4. Already in the Nordic Grid Development Plan 2019¹, a back-to-back DC station is proposed to be installed on the NO4-FI connection, enabling flexible steering of the power flow on this connection. The new Trondheim Fjord 400 kV cable in NO3 will probably improve NO4-NO3 transmission possibilities as well.

¹ Fortum published in September its reflection on the Nordic Grid Development Plan 2019, available at <https://www.fortum.com/about-us/media/media-room/our-views-and-positions>

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New grid investments should additionally be planned in order to enable efficient future market development in the region. The old 220 kV NO4-SE2 line could well be replaced by a new strong 400 kV line. Still existing 300 kV lines should be gradually replaced by 400 kV lines enabling more NO4-NO3 and internal capacity.

5 IMPROVEMENT POSSIBILITIES FOR THE STOCKHOLM AREA

Fortum does not support the proposal to set up a temporary new bidding zone for the Stockholm Metropolitan Area. Fortum acknowledges the current grid capacity limitations towards the Stockholm area, but in our view there are better possibilities to address this problem.

A separate bidding zone for the Stockholm area would not meet the CACM regulation criteria for overall market efficiency in the bidding zone configuration and for stability and robustness of bidding zones. Liquidity of forward financial power trading, as well as adequate balancing market competition, would be very difficult to achieve in such a bidding zone with limited flexible resources.

Guaranteeing more generation and demand response capacity for the area through a separate bidding zone with low forward market liquidity would be very uncertain, leading anyway to a need for additional measures. A separate bidding zone would also unnecessarily add costs for electricity users through diminishing retail market competition and through higher costs for power purchase hedging for electricity retailers and big end-users. A Stockholm area bidding zone cannot speed up the required grid capacity additions, as they are already under development and depend on the permitting and construction timetables.

In Fortum's view, the best way to tackle the temporary grid capacity limitations to the Stockholm area would be that the affected regional and distribution grid companies contract local generation, storage and demand response capacity, preferably through competitive tendering. This additional capacity would be available during grid congestions. The costs of these contracts can be covered through grid tariffs, which anyway need to reflect the additional payments to Svenska Kraftnät when the additional grid capacity is commissioned and contracted.

A market-based local flexibility market could also be established in the Stockholm Metropolitan Area, providing both fast resources during sudden local grid failures, and normal balancing services for the whole power system.

The local grid tariffs for grid customers could be developed to be more cost-based through either a capacity component or time-differentiated energy components, enabled by new smart meters. This would reward customers with flexibility to move their power demand from the congested winter peak-load hours to other hours.

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6 SUMMARY

Fortum welcomes the Nordic bidding zone review, which has possibilities to further increase the Nordic power market efficiency.

Fortum does not support the TSOs' narrow proposal for alternative bidding zone configurations. In Fortum's view, the primary new configurations should be based on less bidding zones by merging some of the current bidding zones. This would support efficiency in both wholesale and retail power markets, as well as the targeted stability and robustness of the bidding zones. Liquid and well-functioning financial markets and adequate hedging possibilities are also an important factor, which should not be forgotten when evaluating the different bidding zone configurations.

Fortum proposes that the Nordic TSOs present the review work status and consult market stakeholders on their views through stakeholder workshops also during the bidding zone review. The bidding zone review should include an adequate range of future configurations and take into account also other possibilities for market improvements.

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