

## Vattenfall AB

Staff Function Communications  
Public & Regulatory Affairs Sweden  
169 92 Stockholm

## Nordic TSOs

[ShortTermMarketsConsultation@fingrid.fi](mailto:ShortTermMarketsConsultation@fingrid.fi)

Datum:  
2019-06-26

Kontakt: Kristian Gustafsson  
E-mail: [kristian.gustafsson@vattenfall.com](mailto:kristian.gustafsson@vattenfall.com)

Telefon: +46 705295217

### Vattenfall's comments to the Nordic TSO's discussion paper: "Short-term markets"

Vattenfall welcomes the opportunity to comment the proposal.

#### ***(1) 1. What developments do you expect in the next 10 – 15 years for the market structure and market platforms covering the short-term market timeframe?***

The energy transformation will have a profound impact on the energy system but also the regional and local networks. A prerequisite for a cost-efficient system over time is there for socio-economically effective tariff structures. That should be complemented with a harmonized view on fees and incentives for the network's customers over all voltage levels ranging from TSO level to distribution level.

Vattenfall foresees an increasing need to manage local and system-wide grid connection, due to new consumption (data center) and new production (Wind and PV). This will require a significant increase of information exchange and coordination between local grid operators to system operators and competitive market participants. Vattenfall also believes that harmonization of national grid tariffs within the EU is desirable. However, differences and similarities between different countries need to be analyzed and the opportunities for further harmonization hereby clarified.

An area that will be more and more critical to develop and to assess is how and to what extent dynamic grid tariffs may support the functioning of the short term energy market as a non-frequency ancillary service to manage alleviate a strained system and grids. Vattenfall would like to emphasize that the TSOs and National Regulatory Authorities analyze the interlinkages between the development of flexible grid tariffs and the development of flexibility platforms and short term energy markets.

The roll-out of smart meters and the digitalization trend at large will enable new and developed customer contracts that will contribute to meet the challenges with a more distributed supply system. Vattenfall is convinced that digitalization as such, e.g. smart aggregation of customer loads will be an important piece to address these challenges. The development of tools and regulatory framework must be responsive to this development in order to utilize these resources in the most efficient way.

***(2) 2. Any other views/comments related to the future short-term market structure and market platforms?***

The target design should be based on a single price, one balance settlement system, combined with markets based on 15 minutes periods. Our expectation is that the supply system will be a combination of both large and small scale production units. To maintain the prerequisite of a level playing field, on an aggregated level it is important that all units are subject to equal requirements. Units that help the system are either credited through lower fees, or offered a market based compensation. TSOs should not be allowed to own their own generation assets.

Overall we encourage TSOs and NRAs to develop a framework that allow market participants to maximize their offered volume of flexibility. In our view this is best achieved without any obligation to be balanced at the day-ahead stage, but rather through an obligation to transparently offer all flexibility to the market. An important development area is the growing demand for different system services. Therefore Vattenfall encourages the TSOs to actively engage in further development of the market framework to allow a better match the system operators demands with market's flexibility, already at the intraday time frame. Vattenfall is also supportive of further harmonization of the system operation, for example regional ISOs, to better reflect the borderless market.

Transparency in system operation will be a cornerstone for a credible market. The TSOs' use of so called special regulations is not always communicated properly and not sufficiently harmonized among the Nordic TSOs. Special regulations impact the flow and thus the regulating power prices and imbalance prices that in turn impact the market participants' expectations on risk for imbalances and their activity on the intraday market.

For the further market development we propose to complement the current design with an opening balancing auction (after gate closure of the continues intraday market) to cover system needs for the balancing time frame. Such a market place would have the potential to pool the markets flexibility resources with system operation needs to operate the market in a secure and reliable way.

Vattenfall therefore encourages the Nordic TSOs to test and evaluate a combination of the following three tools to handle their need for flexibility:

- Opening (pan-Europe) ID auction (as early as possible)
- A regional opening balancing auction. Place after the continuous trading period for each traded product has closed and before the delivery period starts.
- Special regulation during the operating time frame.

By combining these three markets, the TSOs should have the opportunity to enlarge the market and handle the regulatory requirement at a low cost. The TSOs would also be able to adjust its strategy continuously to minimize market manipulation, arbitration risk, etc.

**(3) 1. How do you see the role of flexibility providers in the future short-term markets?**

Vattenfall welcomes changes to the regulatory framework to allow new resources to enter the market. To fully activate the demand resources all flexibility products should be priced pay as clear. With the equal requirement for all technologies, and regions in the same market.

We are convinced that aggregation of demand will constitute an important source of flexibility for the future power system. We are as convinced that the growth and development of this

potential should be under full balance responsibility in order to maximize the socioeconomic value for the end customers.

A central objective for any further market development should be to bring in more flexibility from the demand side to the various markets. To make this happen, thresholds in terms of technical requirements and long pre-qualification processes need to be lowered so that it is technically possible and economically viable. As an example, it is not considered to be reasonable to set local frequency meters on each private electric car charger that meet the same technical requirements as the local frequency meters that are currently available at Hydroelectric power stations. In order to preserve a level playing field equal rules we therefore recommend the development of several different product categories.

What regards the pricing of flexibility Vattenfall supports a framework with the following characteristics:

- High level principle – same requirement for all technologies, and regions in the same market. Marginal pricing for both capacity and energy products.
- Grid regulation - Balance prices should be unaffected by actions originating from constraints in the grid, that is actions intended to solve bottlenecks should not affect the pricing of balance power nor imbalance prices. Generally, grid regulation using the balance market should only be used as a temporary solution, as it to some degree distorts the balance market prices as bidders may anticipate a grid regulation and thus bid as if it is under a “pay as bid” regime.
- Transparency in system operation - To maintain the credibility of the market functioning it is therefore central that the TSOs publish the bid price, reason and any corrective measures when they use the regulation power market for handling congestions in the grid. One other example would be the exchange of power between areas as this also has a major impact on system imbalances, market prices and actors' actions. Vattenfall strongly argues that the current praxis for special regulation methodology would be improved either through:
  1. Either organize separate market/product for grid regulation applying marginal price (ref to opening balancing auction as mentioned above), or
  2. Allowing for two prices for the same bid, e.g. bid price + some acceptable margin (e.g. +10%) for a bid if used for grid regulation.
  3. Ensure transparency and efficiency in the combined activation of different products such as aFRR and mFRR. Currently we have observed cases where the latter has not been used to restore the former, contrary to the defined role for respective category.
- The role of aggregators - Vattenfall is convinced that aggregation of demand will constitute an important source of flexibility for the future power system. We are as convinced that the growth and development of this potential should be under full balance responsibility in order to maximize the socioeconomic value for the end customer.
- Specific on mFRR and aFRR specific development - For the further development of new products the European framework and guidelines will set the boundaries and process, however starting from a pragmatic view on the Nordic System our recommendation is to work through the following steps:

Quantify the need for flexibility to match variations in production, cable transmission and consumption. *How do the existing products match this?*

- Is there a need for more frequency control products? (response time <1s; response time between 1s - 6s; more tertiary regulation products (Activation time <5 min, <15 min, <30 min) etc.
- The above-mentioned time interval could also be combined within a product category; the TSO calls for the lowest price as long as the response time is acceptable.
- Product definitions will also have to develop to include batteries. In particular, the system requirements for eg. speed, frequency interval, etc. must be reviewed. Current framework is adapted to existing technology.
- Products for “new” system services
  - Inertia: We are positive about a market or cost plus solution - but not a pivotal development step.
  - Reactive power. Measurement and settlement of reactive power has been analyzed historically with the result that the administration was considered too costly in relation to the market value. Should be studied further from current situation.
  - Black start capability is also an example of a system service that should be given market compensation.

A general feedback is also that the technical capabilities from non-traditional sources of ancillary services could be increased significantly if the demand from this is more clearly communicated already in the connection stage.

- Balance responsibility and settlement:
  - All market participants should be fully responsible for their imbalances, or contract the service to manage imbalances from a Balance Responsible Party.
  - Symmetry between the imbalance price and the balance price, paid to the resource that restore frequency. Areas to consider is the potential contribution from regulatory tools such as scarcity adder or similar.
  - Single pricing and single balance position and portfolio bid should be the basis for Nordic harmonization.
  - Any requirement to plan for balance at the day ahead stage should be removed. Rather the balance responsible parties should rather be given strong commercial incentives and requirements to transparently bid in all its flexibility balance and commercialize flexibility.

#### ***(4) 2. Other possibilities to facilitate linking resources located in DSO grid to the short-term market?***

On the related topic “should DSOs be allowed to own storage”, as is addressed in the recent EU-package (CEP), Vattenfall proposes the regulator to focus on application rather than technology. DSOs must be able to operate the grid efficiently, and use storage for that. In a worst case, a too prescriptive framework could therefore jeopardizing the safe operation of the DSO-grids. However, if that flexibility could also generate a market value in any other traded product category (ancillary service, balancing etc) the regulatory framework should encourage a market solution and not lock in capacity for DSO-use only. The topic is not black and white and requires further work to develop.

An area to consider is if the current delimitation of bidding zones is optimal from this perspective. Vattenfall's view is that congestion in the grid should be managed where it occurs, using market based methods. An obvious trade-off here is how a combination of an energy market applying "copper plate" approach may be (socioeconomically) efficiently combined with a grid redispatch market based on a much more detailed grid representation.

***(5) 1. Which actions from TSOs are needed to ensure that the existing transmission capacity will be allocated efficiently to the short-term market taking into account transition in the energy system?***

Acknowledging the reasoning behind the methodology set to reserve cross border capacity for the exchange or reserves in the Nordics, Vattenfall would still like to highlight complicating factors that need to be closely monitored:

- Any method set to reserve capacity between market time frames, requires full oversight of informed regulators to avoid excessive reservations that optimize the TSO-cost of balancing rather the societies cost of electricity supply. The methodology used to forecast the capacity demand for the following day should be developed with regulatory oversight.
- The reservation also implies a complicating factor that will further add to the complexity of the market framework, in a time where the complexity in itself already tend to constitute a boundary for further development. Recommendations: Evaluate alternative options to improve the possibilities to reallocate grid capacity through counter trade. Clarify how the cost of capacity is distributed between users.
- A further area that will require further consideration is the distribution of welfare from transmission capacity allocation in the case of merchant interconnectors, i.e. for the cases when the reserved transmission capacity is not owned by the TSOs.

***(6) 2. Have you experienced that grid has constrained offering your resources to the short-term market (or markets in general)? If so, how much have such grid constraints increased in the recent years and are you expecting them to increase in the coming years?***

No comments.

***(7) 3. What challenges would there be from the perspective of resource owner when moving from portfolio bidding to nodal or unit bidding?***

As is also addressed in the regulatory process to implement the BSP-BRP split, Vattenfall advocate a solution where the BSP connected assets can still make a portfolio bid as this represent a more efficient framework for the Nordic resource base and thus enables a bigger potential for flexibility. The *pros and cons* should be assessed from a system wide perspective. *What is the most socioeconomic solution to make the demanded flexibility available for the system as a whole?* As stated above, Vattenfall welcomes flexibility from new sources, but as important for the end-consumers is that the flexibility is made available at the economics of scale in a market framework is possible to work.

***(8) 4. Any other views/comments related to capacity calculation and allocation?***

The new capacity calculation method, following what is stipulated under the CACM guidelines, imply a major change to the market. Thus it is crucial that the process is transparent and subject to well informed regulatory oversight.

The benefits and socioeconomic value of a flowbased methodology increase closer to the operational hour. Vattenfall therefore remain doubtful about the TSOs' current proposal to start the transition before a solution for the ID market is available. We believe there is still reason to question whether or not the benefit of flowbased capacity allocation in the Nordic market exceeds the cost of implementation and operation of the new method. The rationale of this is even more emphasized in a longer term perspective.

***(9) 1. When is the optimal intraday gate opening time for future short-term markets from your perspective and why? Shall gate opening time be different for cross-zonal trading and trading within a bidding zone?***

Vattenfall would like to see an as early as opening time as possible, and a clear roadmap for full harmonization towards that. The trade within a bidding zone should be possible as soon as possible.

***(10) 2. When is the optimal intraday gate closure time for future short-term markets from your perspective and why? Shall gate closure time be different for cross-zonal trading and trading within a bidding zone?***

Vattenfall's general view is that market participants should be able to adopt their respective positions as close to the delivery time as possible. This can be achieved with a late harmonized gate closure of the intraday market, but can also be complemented by an "opening balancing auction" as mentioned above.

***(11) 3. Do you see the need for redesign of market timeframes? If so, which issues are underlying, that would have to be solved by the redesign? Why?***

The general trend goes towards more trading taking place closer to the operational hour. An as clear trend is that the local aspects and location of the flexibility becomes more and more important. The future power market design should thus allow for more efficient matching of market participants flexibility and the system needs.

***(12) 4. Any other views/comments related to the market timeframes?***

As stated above we foresee a design should be based on a single price, one balance settlement system, combined with markets based on 15 minutes periods for trading and settlement.

***(13) 1. Have the TSOs described the most important issues from your perspective for changes towards the real-time trading? What should be kept/added/deleted?***

Yes.

***(14) 2. Which design aspects should be considered to facilitate market participants' bid submission in the several platform environment?***

Vattenfall supports a regulatory framework that facilitates new resources to enter the market. System service products should non-discriminatory. Capacity product for FRR should not require both up and down regulation to qualify. Lower minimum bid size for mFRR and aFRR , should be combined with automatic call/activation.

***(15) 3. Any other views/comments related to future market design of short-term market timeframe?***

No.

Med vänlig hälsning

Vattenfall AB



Cecilia Hellner  
Chef Public & Regulatory Affairs Sweden