

Impact assessment of measures to improve the ability of market participants to hedge price risks in the internal forward market for electricity, leading to a revision of the Commission Implementing Regulation amending Commission Regulation (EU) 2016/1719 of 26 September 2016 establishing a guideline on forward capacity allocation

Fields marked with * are mandatory.

Part 0: General questions about the respondent

* 0. Please indicate your email

sls@danskfjernvarme.dk

* 1. Name of your organization

Danish District Heating Association / Dansk Fjernvarme

* 2. Confidentiality

- I agree for my answers to be published in full
- I do not consent in the publication of any of my answers
- Some answers provided are confidential and should not be published, I have clearly marked these answers as "confidential"

Please list the questions nr for which your answers are confidential

* 3. At group level, what type of stakeholder (or stakeholders represented by your association) are you?

- Transmission System Operator (TSO)
- Distribution System Operator (DSO)
- Vertically integrated energy company (production and supply)
- Energy producer only
- Energy supplier
- Industry

- Trading company without physical energy assets
- Bank or Investment firm
- Portfolio management company (with physical assets)
- Interest organization
- Power Exchange / Counterparty clearing House (CCP)
- Broker
- Member state
- National Regulatory Agency (NRA)
- National Competent Authorities (NCA)
- Academics
- NGO
- Business association
- Other, please precise

Other, please precise :

We are an interest organisation representing 354 Danish district heating companies. The Danish district heating companies are producing electricity in combination with heating and own most of the thermal electricity production in Denmark. Furthermore some district heating companies also use electricity for heating, and are therefore also large-scale consumers. Total electricity generation capacity is about 7.200 MW and consumption capacity is about 2.000 MW.

4. In which EU Member States do you have physical assets or activities – if any (demand, retail supply, generation)?

- | | | |
|--|---|--|
| <input type="checkbox"/> AT - Austria | <input type="checkbox"/> DE - Germany | <input type="checkbox"/> Other - Other country |
| <input type="checkbox"/> BE - Belgium | <input type="checkbox"/> EL - Greece | <input type="checkbox"/> PL - Poland |
| <input type="checkbox"/> BG - Bulgaria | <input type="checkbox"/> HU - Hungary | <input type="checkbox"/> PT - Portugal |
| <input type="checkbox"/> HR - Croatia | <input type="checkbox"/> IE - Ireland | <input type="checkbox"/> RO - Romania |
| <input type="checkbox"/> CY - Cyprus | <input type="checkbox"/> IT - Italy | <input type="checkbox"/> SK - Slovak Republic |
| <input type="checkbox"/> CZ - Czechia | <input type="checkbox"/> LV - Latvia | <input type="checkbox"/> SI - Slovenia |
| <input checked="" type="checkbox"/> DK - Denmark | <input type="checkbox"/> LT - Lithuania | <input type="checkbox"/> ES - Spain |
| <input type="checkbox"/> EE - Estonia | <input type="checkbox"/> LU - Luxembourg | <input type="checkbox"/> SE - Sweden |
| <input type="checkbox"/> FI - Finland | <input type="checkbox"/> MT - Malta | |
| <input type="checkbox"/> FR - France | <input type="checkbox"/> NL - Netherlands | |

Other, please precise :

5. In which Bidding zones have you traded on the forward market in the last 3 years?

- | | | | |
|---|------------------------------|-----------------------------|--------------------------------------|
| <input type="checkbox"/> PT | <input type="checkbox"/> SE2 | <input type="checkbox"/> LV | <input type="checkbox"/> BG |
| <input type="checkbox"/> ES | <input type="checkbox"/> SE3 | <input type="checkbox"/> LT | <input type="checkbox"/> GR |
| <input type="checkbox"/> FR | <input type="checkbox"/> SE4 | <input type="checkbox"/> PL | <input type="checkbox"/> IT Nord |
| <input type="checkbox"/> BE | <input type="checkbox"/> NO1 | <input type="checkbox"/> CZ | <input type="checkbox"/> IT-CNOR |
| <input type="checkbox"/> NL | <input type="checkbox"/> NO2 | <input type="checkbox"/> SK | <input type="checkbox"/> IT - CSUD |
| <input checked="" type="checkbox"/> DE/LU | <input type="checkbox"/> NO3 | <input type="checkbox"/> AT | <input type="checkbox"/> IT -SUD |
| <input checked="" type="checkbox"/> DK1 | <input type="checkbox"/> NO4 | <input type="checkbox"/> SI | <input type="checkbox"/> IT - Sicily |

- DK2 NO5 HU IT - Sardinia
 DK3 (Bornholm) FI HR IE
 SE1 EE RO

6. What is the size of the approximate yearly volume you have traded on the electricity forward markets?

- <10 MWh
 10 MWh – 1 GWh
 1-10 GWh
 10-100 GWh
 100 GWh – 1 TWh
 1-10 TWh
 > 10 TWh

7. Which product or products have you traded in the electricity forward markets in the last 3 years?

- Futures
 Futures traded OTC
 Forwards
 Electricity Price Area Differentials (EPADs)
 Long-Term Transmission Rights (LTTRs)
 Other

Other: please specify

Options

Part I: Evaluation of current forward markets

a) Assessment of the electricity forward markets

8. Is there, in general, sufficient availability of hedging instruments on the forward markets to effectively perform hedging corresponding to your risk profile?

- Yes
 No

9. Is there, in general, sufficient liquidity on the hedging instruments on the forward markets to effectively perform hedging corresponding to your risk profile?

- Yes
 No

10. Please list the products for which you encounter insufficient accessibility (in terms of effectiveness and liquidity) and provide a detailed answer to explain what problems you encounter in BZs where availability is insufficient (f.e. lack of competition, market too small, none of the available liquid products is a good proxy, inadequate cross-zonal hedging instruments, ...). In case you identify a lack of liquidity in some or several of the markets you resort to, please estimate the slippage costs that result from this lack of liquidity - if possible.

There is inadequate liquidity when wanting to hedge the price more than one year ahead or hedge a specific month.

There is a wrong timing for selling transmission rights - right before the period in question starts, e.g. the yearly transmission rights are sold in December for the year starting in January.

The TSOs use their assets (transmission interconnectors) as backing for the transmission rights sold. I.e. when TSOs lose money on transmission rights, they gain more congestion income in day-ahead and vice versa. As the transmission rights should be an instrument to help with managing risk, they should be sold at a point in time, where the risk is higher - as early as possible, when there is more uncertainty about the next year's prices.

There are inadequate possibilities for managing volume risk. Producers can face a huge financial loss, if they have hedged the price of their production and the production facility for some reason becomes unavailable during the time hedged.

11. Are additional measures needed to improve the ability of market participants to hedge price risks in the forward markets?

- Yes
 No

If yes, which ones?

12.1.1 In case you have physical assets or activities (demand, retail supply, generation): to what degree or percentage do you hedge price risks related to these assets?

10

12.1.2 In case you have physical assets or activities, please describe in broad terms your hedging activities.

Some of our members hedge up to 50% of their production up to one year ahead, some hedge 10% and many don't hedge, even though they would like to do so.

Some of the investments in new production assets or life extension of existing assets are not being hedged, even though members would like to do so. There is a risk that this is causing some otherwise profitable investments to be scrapped.

12.2. In case you have physical assets or activities (demand, retail supply, generation) and in case you do not hedge (a part of) your physical assets or activities, what are the main reasons for not hedging (f.e. availability of hedging products, costs of hedging, risk management choice, etc)

Main reasons are:

- Availability and liquidity of hedging products,
- Complexity of understanding the associated risk with hedging products,
- Volume risk,
- Barriers in Danish national legislation to hedging the power prices for combined heat and power production.

12.3. In case you have physical assets or activities (demand, retail supply, generation): would you hedge a larger proportion of physical assets if the market conditions were more favorable? In this case, which conditions would need to be met?

Yes, if any or all of the above reasons would be solved.

b) Cross-zonal forward hedging

13. Is the status-quo regarding the availability, design and type of cross-zonal instruments adequate to meet your hedging needs?

- Yes
 No

Please provide a detailed answer

When hedging the price in Denmark, a market participant can chose to buy an LTTR to Germany and sell the German forward or future. Or buy an LTTR from Germany and buy the German forward future.

This design is intended to provide a good hedge, but there are several issues that make our members reluctant to use this hedging possibility.

Firstly, they are exposed to risk from the remuneration cap on the LTTR being met during decoupling or any other unforeseen event. To mitigate this risk, market participants should be able to participate in the shadow auction and thereby gain capacity that has a value. However the shadow auctions are reserved for market participants that are able to nominate on each side of the border. Only a few of our 354 members can nominate in Germany. The others have no intentions nor possibilities of going into the German market to be able to participate in the shadow auctions.

The whole idea about shadow auctions should be rethought. The market participants with hedging needs cannot participate, and the TSOs don't receive even near the congestion income that would be necessary to cover the remuneration of the LTTRs.

Another issue is that the TSOs during a decoupling event don't use the same day-ahead prices for remuneration as the ones used by EEX for the German futures/forwards.

This was present recently in the 25th June 2024 decoupling event, where the transmission rights from DK1 to Germany only paid out a fraction of the difference between the day-ahead price in DK1 and the day-ahead price used in the German future. The day-ahead price used for the future settlement was much higher than the one used by the TSOs for the LTTR remuneration. This again meant, that on this specific day, a Danish power producer which had bought an LTTR from DK1 to Germany, sold a future in Germany and sold their production in Day-ahead in DK1, faced a loss of many thousand EUR per MW hedged. This is not an acceptable risk, when choosing whether to use hedging products.

This issue should also be seen in the light of the NEMOs facing several difficult implementation projects in the near future. 15-minutes MTU, Nordic flowbased, change of complex orders a.o. These changes can be perceived to increase the decoupling risk and thereby reducing the usability of LTTRs for hedging.

14. When trading in another bidding zone, what products do you use (if any) to cover the basis risk?

- LTTRs
- EPADs
- EPADS supported by TSOs (as auctioned by Svenska krafnat - SvK)
- Future spreads
- Italian CCC (transport capacity fee hedge) products
- Others - please specify:

Other: please specify

15.1. Hedging instruments issued or supported by TSOs : Have you traded cross-zonal hedging instruments issued or supported by TSOs in the last 3 years

- Yes
- No

15.3. Hedging instruments issued or supported by TSOs: Do cross-zonal instruments supported by TSOs satisfy your hedging needs (in terms of maturity, frequency of auctioning, type of product, ...)? If not, please elaborate your answer

15.4. Hedging instruments issued or supported by TSOs: After acquiring a FTR option, do you engage in delta hedging for the acquired option on the electricity forward obligation market?

- Yes
- No

15.5. Hedging instruments issued or supported by TSOs: On a scale from 1 to 10, do you consider that the LTTRs' price reflects the forward market fundamentals?

Please elaborate your answer (date, border, data, etc)

15.5. Hedging instruments issued or supported by TSOs: should you have identified a potential disconnect between LTTR and forward market fundamentals, do you see any risk of contagion across market segments (through arbitrage, for instance)?

c) Future-proofness: expected evolution of the Forward market

16.1. Do you consider that the following policies and market trends have an impact on the hedging incentives of market participants on the forward market: **Contracts for difference (as a state-aid scheme)**

8

16.2. Do you consider that the following policies and market trends have an impact on the hedging incentives of market participants on the forward market: **Power Purchase Agreements**

8

16.3. Do you consider that the following policies and market trends have an impact on the hedging incentives of market participants on the forward market: **Capacity remuneration mechanisms**

0

Other policies and/or market trends - please specify:

17.1. How do you expect the forward markets to evolve in the next 5 to 10 years with respect to **hedging needs**:

17.2. How do you expect the forward markets to evolve in the next 5 to 10 years with respect to **trading volume**:

17.3. How do you expect the forward markets to evolve in the next 5 to 10 years with respect to **the maturities of products**:

17.4. How do you expect the forward markets to evolve in the next 5 to 10 years with respect to **active players (f.e. type of players, shares, etc)**

17.5. How do you expect the forward markets to evolve in the next 5 to 10 years with respect to **products:**

17.6. How do you expect the forward markets to evolve in the next 5 to 10 years with respect to **the evolution of liquidity**

17.7. How do you expect the forward markets to evolve in the next 5 to 10 years with respect to the **evolution of liquidity needs:**

17.8. How do you expect the forward markets to evolve in the next 5 to 10 years with respect to **share of volume traded among the different bidding zones:**

17.9. How do you expect the forward markets to evolve in the next 5 to 10 years with respect to **the configuration of bidding zones:**

17.10. How do you expect the forward markets to evolve in the next 5 to 10 years with respect to **any other trends (please specify)**:

Part II: Assessment of potential improvement to the forward capacity allocation by TSOs

a) Evolution of the current design for TSOs to support forward markets

18. Frequency: How frequently should the auction of long-term transmission rights (supported by TSOs) take place? Should the frequency of auctions differ depending on the maturity of the LTTR? If yes, what frequency would you propose for which product and maturity? Please provide a detailed answer

19.1. Volume: How should the total volume of offered cross-zonal capacity be split among products across different maturities (monthly, quarterly, yearly)? Should more capacity be allocated to shorter maturity, longer maturity products or equally in general?

19.2. Volume: Should the auctions of cross-zonal instruments foresee any safeguards or automatic volume adjustments in case of lack of sufficient interest in the auctions?

- Yes
- No

19.3. Volume: How should the forward transmission capacity be offered? (coordinated vs uncoordinated way in each border, statistical vs scenario-based calculation, thresholds, split, allocation, possibility of offering longer maturities, etc)

20.1. Maturities: How to define the ideal maturities for cross-zonal instruments? Please provide a detailed answer

20.2. Maturities: Should the maturity of cross-zonal instruments be the harmonized at EU level, regional (per capacity calculation region) level or not at all?

- EU level
- Regional (per capacity calculation region)
- Not harmonized at all

Please provide a detailed answer

21.1 Type of products: Should LTTRs only be issued as baseload products or should other types of products be envisaged?

21.2 Type of products: What are the advantages and disadvantages of LTTRs defined as options ?

21.3. Type of products: What are the advantages and disadvantages of LTTRs defined as obligations?

21.4. Type of products: What are the advantages and disadvantages of LTTRs defined as Physical Transmission rights (PTRs) ?

21.5. Type of products: What are the advantages and disadvantages of LTTRs defined as Financial Transmission Rights (FTRs)?

The advantage of financial transmission rights is that they do not change the market participants incentives in the short-term markets.

22.1. Should cross-zonal hedging instruments be issued :

- on bidding zone borders only – as today
- from any zone to any other zone (within the same capacity calculation region)
- from any zone to regional hub (including EPADs)
- as a combination of two futures contracts

22.2 Which of the above solution(s) would be the most resilient to potential changes in the markets (f.e. increased deployment of renewables, less hedging demand due to flexible demand, offshore bidding zones and bidding zones reconfigurations, volume contracted under power purchase agreements, etc)?

22.3 Should cross-zonal hedging instruments be issued from any zone to any other zone or from any zone to a regional hub, should it remain possible to trade cross-zonal hedging instruments on border-to-border basis?

- Yes
- No

Please comment on your answer:

22.4. If TSOs were to allocate cross-zonal capacity on zone-to-hub product (f.e. LTTRs), would you subsequently trade the futures with the corresponding underlying system price?

- Yes
- No
- It depends, please precise the conditions

Please comment on your answer:

23.1. System price / hub: If you have experience with the trading on the Nordic electricity forward market: Please provide feedback on the current market design of the Nordic region based on a system price

23.2. System price / hub: If you have experience with the trading on the Nordic electricity forward market: Would forward market based on zonal futures and zone-to-zone LTTRs be more appropriate for the Nordic Market to achieve higher liquidity for all Nordic market participants?

- Yes
- No

Please comment on your answer:

24.1. Firmness of products: How does the non-financial firmness of cross-zonal instruments impact your interest in such instruments?

24.2 Firmness of products : Should cross-zonal instruments issued by TSOs be fully firm?

- Yes
- No

Please elaborate on pros/cons

24.3. Firmness of products: In case LTTRs are concluded on a firm basis and in an obligation-type, how should the counterparty risk of TSOs be managed, in order to ensure holders of the LTTRs are able to collect the payout that is owed to them?

24.4. Firmness of products: Do you see any financial stability risk arising from the non-firmness of those instruments (i.e., counterparties not receiving their forecasted payouts and being left unhedged)?

24.5. Firmness of products: Should LTTRs be concluded on a firm basis, what sort of risk mitigation tools do you believe the SAP should be subject to in order to manage the risks?

25. Revenue adequacy: How to maintain revenue adequacy for TSOs (i.e. that day-ahead congestion income is sufficient for LTTR payout)? Should revenue adequacy be maintained for each market time unit or on a less granular basis (f.e. at least daily monthly or annually)?

26. Secondary market: Should there be an active secondary market for cross-zonal instruments issued by TSOs?

- Yes
- No

Please comment on your answer

27.1. Secondary market: If a secondary for cross-zonal instruments were to be organized, how and where should this secondary market be organised: please select (several choices possible)

- Single Allocation Platform (SAP)
- Power exchanges
- Others, please specify

Other - please specify

27.2. Secondary market: Do you see benefits in the possibility of transferring Financial Transmission Rights from the SAP to a power exchange?

27.3 What are your views about the possibility for the SAP to match opposite bids for LTTRs without the allocation of cross-zonal capacity where possible?

27.4 What are your views about the possibility for SAP to optimize the allocation of yearly, quarterly and monthly products when they cover the same delivery period?

28. How to take into account the existence of preexisting intergovernmental agreements when calculating forward transmission capacity? [Background: preexisting intergovernmental agreements refer to agreement on physical delivery of electricity between two Member States]

b) Alternative designs to support cross-zonal hedging in the forward markets

29. What other measures could be necessary to improve the availability of hedging opportunities so that hedging needs can be addressed with hedging products that are both liquid and provide efficient hedge?

30. Are the forward hedging instruments offered by TSOs necessary to support the functioning the forward market? Can cross-zonal price risks be sufficiently hedged with other available products listed by power exchanges (spreads, EPADs)?

31.1. Among these key evolutions proposed by various stakeholders to improve the LTTR design, please select your favorite one(s):

- Zonal futures combined with LTTRs on bidding zone borders. This model represents the status quo in Continental Europe
- Zonal futures combined with LTTRs between any two borders bidding zone borders. This model differs from the status quo in Continental Europe by allowing LTTRs between any two bidding zones, and not only between two neighboring bidding zones.
-

Zonal futures and hub futures combined with zone to hub LTTRs. This model differs from the status quo in Continental Europe by offering zone-to-hub LTTRs which can also be used in pairs to hedge between any two zones. Market participants would then have a choice whether to trade zonal futures or system price futures and in which way they would use LTTRs.

Other model

Potential other model, please define:

31.2. Alternatively to issuing LTTRs, TSOs could allocate capacities to support other products. The two models below have been identified by stakeholders. Please select your favorite one:

- As alternative to the previous model, the TSOs' capacity is not used to offer LTTRs but to support the trading of existing products (EPADs, future spreads) through the allocation of their cross-zonal capacity. A power exchange would therefore be selected for auctioning those products and the allocation of transmission capacity.
- Zonal futures combined with auctions of zonal futures with implicit capacity allocation. Under this model, TSOs would not allocate LTTRs, but would instead organize auctions of zonal futures and subsequently the open positions in futures would be transferred to power exchanges.
- Other model

Potential other model, please define:

31.3. Which model (from all the models listed in questions 31.1 and 31.2) do you deem the most appropriate in terms of addressing the existing problems?

31.4. Which model (from all the models listed in questions 31.1 and 31.2) do you deem the most appropriate in terms of being robust for future potential market changes?

32. What could be the adequate geographical scope of a regional system price and how should this scope be determined?

33. How should a system price be calculated:

- Weighted average of spot prices (and if so, please elaborate on the definition of the weights)
- As an "unconstrained" price (such as the current Nordic System Price)
- Other, please precise

Please provide details on your previous answer

34.1. Do forward markets need to be supported with market makers?

- Yes
- No
- It depends

34.2. Should market making be:

- Voluntary (subject to commercial arrangements)
- Mandatory in some cases

34.2.2 How should market making costs be covered?

34.3.1 What entities would be most suitable to act as market makers?

- TSOs
- Large market participants with physical assets
- Large market participants without physical assets
- Else, please precise

Potential other entity, please precise

34.3.2 Under which conditions/requirements should those entities act as market makers?

c) Role of Single Allocation Platform (SAP)

35.1. If you traded LTTRs: On a scale from 0 to 10, how satisfied are you with current SAP (JAO) services?

35.2. Please provide detailed comments to justify the score given

36. What are your suggestions to improve the functioning of SAP (JAO)?

37. What should be the role of the SAP in your view? Should SAP be involved in the organization of the secondary market for LTTRs and how exactly?

38.1. What should be the potential changes to the current knowledge, functioning and organization of the SAP to manage the auctioning of LTTRs on a larger scale, should the electricity market design become much more reliant on those instruments?

38.2. What should be the potential changes to the current knowledge, functioning and organization of the SAP to facilitate secondary markets for LTTRs?

38.3. What should be the potential changes to the current knowledge, functioning and organization of the SAP to generally manage the risks to which it is exposed (e.g., operational risk)?

39. Would you suggest any improvement to the transparency and overall functioning of the auctioning process?

40. CfD coupling: Should the allocation of transmission capacity to support the forward markets be performed by SAP or by a nominated exchange? Please provide details supporting/explaining your response.

41. In your view, what would be the potential impact of the application of financial regulation (EMIR, MIFID, etc), should JAO undertake activities that are regulated under the financial rulebook (e.g., operating a secondary market for trading in financial transmission rights)? What is your view on the appropriate regulatory oversight set-up, considering the various activities JAO engages in (shadow auction for DA market, data services for capacity calculation and allocation, ...)?

Part III. Conclusion

42. Feel free to add any other element you would like to share

If needed, please upload your file(s)

Contact

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