

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

\* 1. Name of your organization

\* 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- Some answers provided are confidential and should not be published, I have clearly marked these answers as "confidential"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 :

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

- |   |  |   |
|---|--|---|
| <input checked="" type="checkbox"/> AT - Austria  | <input checked="" type="checkbox"/> DE - Germany     | <input checked="" type="checkbox"/> Other - Other country |
| <input checked="" type="checkbox"/> BE - Belgium  | <input type="checkbox"/> EL - Greece                 | <input checked="" type="checkbox"/> PL - Poland           |
| <input checked="" type="checkbox"/> BG - Bulgaria | <input checked="" type="checkbox"/> HU - Hungary     | <input checked="" 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 checked="" type="checkbox"/> IT - Italy       | <input checked="" type="checkbox"/> SK - Slovak Republic  |
| <input checked="" 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 checked="" type="checkbox"/> ES - Spain            |
| <input type="checkbox"/> EE - Estonia             | <input checked="" type="checkbox"/> LU - Luxembourg  | <input type="checkbox"/> SE - Sweden                      |
| <input type="checkbox"/> FI - Finland             | <input type="checkbox"/> MT - Malta                  |   |
| <input checked="" type="checkbox"/> FR - France   | <input checked="" type="checkbox"/> NL - Netherlands |   |

Other, please precise :

United Kingdom

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 checked="" type="checkbox"/> ES    | <input type="checkbox"/> SE3 | <input type="checkbox"/> LT | <input type="checkbox"/> GR                       |
| <input checked="" type="checkbox"/> FR    | <input type="checkbox"/> SE4 | <input type="checkbox"/> PL | <input checked="" type="checkbox"/> IT Nord       |
| <input checked="" type="checkbox"/> BE    | <input type="checkbox"/> NO1 | <input type="checkbox"/> CZ | <input checked="" type="checkbox"/> IT-CNOR       |
| <input checked="" type="checkbox"/> NL    | <input type="checkbox"/> NO2 | <input type="checkbox"/> SK | <input checked="" type="checkbox"/> IT - CSUD     |
| <input checked="" type="checkbox"/> DE/LU | <input type="checkbox"/> NO3 | <input type="checkbox"/> AT | <input checked="" type="checkbox"/> IT -SUD       |
| <input type="checkbox"/> DK1              | <input type="checkbox"/> NO4 | <input type="checkbox"/> SI | <input checked="" type="checkbox"/> IT - Sicily   |
| <input type="checkbox"/> DK2              | <input type="checkbox"/> NO5 | <input type="checkbox"/> HU | <input checked="" type="checkbox"/> IT - Sardinia |
| <input type="checkbox"/> DK3 (Bornholm)   | <input type="checkbox"/> FI  | <input type="checkbox"/> HR | <input type="checkbox"/> IE                       |
| <input type="checkbox"/> SE1              | <input type="checkbox"/> EE  | <input type="checkbox"/> 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

## 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.

We share the common concern with the lack of liquidity in certain European forward markets and believe that further harmonization and integration of forward markets will help in partially addressing this concern. We therefore welcome the Commission's effort in trying to find ways to enable a more efficient functioning of the European electricity forward market.

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?

We believe that the most effective actions that the Commission, European Regulators and Members States could take to promote forward market liquidity are:

1. Moving from today's patchwork of Long Term Transmission Rights (LTTRs) across Europe to a harmonized approach based on adopting the same LTTR design on all EU borders – as this will make it easier for market participants to hedge cross-border or cross-zonal price risk and promote forward market liquidity.
2. Shell supports ACER's earlier proposal to extend the maximum tenor of LTTRs from one year to a minimum of three years – preferably five – as we believe that this will support forward market liquidity and increase opportunities to hedge (particularly a generation position) further down the curve. This would align with the timeframe over which cross-border hedging is possible with forward market liquidity in national markets, that are typically liquid three years out.
3. We support actions by authorities to (1) maximise cross-border capacity availability (2) and ensure that cross-border capacity is financially firm and minimize risks to market participants from curtailment.

More specifically, we suggest to focus on the following concrete measures:

- Start with issuing longer-maturity LTTRs (3-5 years ahead of delivery)
- Safeguarding the ability for market participants to hedge in the market of their choice
- Ensuring all TSOs issue LTTRs at each bidding zone border, in both directions



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)

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?

In principal, we believe that having more favorable conditions would, first of all, lead to more efficient hedging and therefore lower the overall cost and increase optionality for both demand, retail supply and generation.

Additionally, we also note that currently, due to unfavorable conditions (e.g. no or very little LTTRs being offered at certain bidding zone borders) certain investments in both demand and supply are at risk.

For example, providing LTTRs of >3years makes it possible to enter into a multiple-year cross-border PPAs to purchase e.g. renewable electricity from a neighbouring Bidding Zone for which there is no direct (forward) demand locally. This would therefore enable a more market-based deployment of renewable generation. In the absence of LTTRs such a transaction is not possible.

Providing LTTRs on bidding zone border will therefore instantly increase the hedging opportunities that are available to both customers and generators, increase both competition and increase forward market liquidity in both the relevant bidding zones.

So both for existing assets and to-be-developed assets, the provision of LTTRs create more favorable conditions which in our view improve hedging optionality and could also enable higher renewable deployment in the EU.

## **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

Please see our answer to question 11 & 12, where we highlight that we see the following main inadequacies of the cross-zonal instruments:

1. Not harmonized across the EU
2. Not all bidding-zone borders provide LTTRs
3. The maturities of LTTRs are too short

Addressing these inadequacies will make it easier for market participants to hedge cross-border or cross-zonal price risk and promote forward market liquidity.

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 kraftnat - 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

If yes, what products have you traded?

- LTTRs
- EPADs as auctioned by Svenska Kraftnat
- Italian CCC products



[Redacted]

[Redacted]

[Redacted]

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

Please see our answer to question 11 & 12, where we highlight that we see the following main inadequacies of the cross-zonal instruments:

1. Not harmonize acrossed the EU
2. Not all bidding-zone borders provide LTTRs
3. The maturities of LTTRs are too short

Addressing these inadequacies will make it easier for market participants to hedge cross-border or cross-zonal price risk and promote forward market liquidity.

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?

10

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

We believe that the price of LTTRs reflect the marginal value of the products. Where the value of the products- including optionality and wider application in the forward markets- and the risks associated with acquiring the LTTRs are priced in the bids of market participants.  
It is important to remark that the ultimate net value of issuing LTTRs can not be a simple analysis of the settlement of these LTTRs and the auction revenue, simply because it impacts forward market fundamentals and therefore influences the overall socio-economic welfare of the electricity system.

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)?

[Redacted]

### 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)**

10

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**

5

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**

8

Other policies and/or market trends - please specify:

In principle all of the above mechanisms influence the forward market liquidity. Important remark is that we consider a PPA as a market-instrument, which is therefore fundamentally part of the forward markets and improves forward market liquidity.

The other instruments are strictly speaking regulated instruments and therefore have the potential to negatively impact forward market liquidity (as well as distorting DA/ID & balancing markets)- these should therefore be designed with utmost care to not impact forward markets significantly.

Reflecting on the current design of the applied CfDs and Capacity Mechanisms, we note that currently there is a clear distinction between these mechanisms in the way they isolate the generator from the price and volume risk. Given the currently applied CfDs, we see that these fully isolate the generator from the price and volume risk and therefore are distorting the forward markets to a higher degree compared to the currently applied capacity mechanisms.

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

We see three main trends:

- (1) the level of investment into capital intensive technologies (both in supply and demand) required to reach net-zero is enormous.
- (2) the increase in intermittent renewable source of electricity which in turn impacts the type of consumption that is able to deal with this intermittency.
- (3) The overall level of electrification of society is expected to increase (increasing overall demand for electricity)

Because of the expected increase in overall electricity demand and the high intermittence of renewables (increasing both volume and price volatility)- this is expected to increase the need for (long-term, >5yrs) hedging to create more predictable cost (for consumers) and revenue (for producers) streams, which is necessary to enable investments.

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

Please see our answer to question 17.1.

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**:

Please see our answer to question 17.1.

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**:

In general, we recognize the need for locational signals in the power system to align physical grid constraints with market outcomes. This is especially true with increasing grid congestions, driving high redispatch volumes and costs.

In our opinion, a further grid build-out is the first-best policy measure. A further improvement can be delivered through better use of the existing grid. This includes improved TSO-TSO and TSO-DSO cooperation, cross-border redispatch and cost-sharing arrangements and cross-capacity calculation processes. Flexibility, such as more storage, also helps to alleviate the grid.

More specifically on bidding zone structures and potential splits, we would like to highlight the negative impact of a bidding zone split on PPAs. As we need a more complex set-up if producer and offtaker are in different zones; basis price risk between zones that cannot be fully mitigated and increases the risk costs; development of the PPA market is further negatively impacted if renewable assets are located in lower price zones as lower capture prices make market-based investments into renewables more challenging; need for subsidies would be sustained for a longer time and the required subsidies would be higher increasing costs for the Member States.

As such, and referring to our earlier answers, we would like to suggest ways to improve forward liquidity & enable cross-border PPAs (introduction of long-term transmission rights (LTTRs) that cover the tenure of PPAs (5-10 years+) offered as Financial Transmission Rights options, implemented on all borders, as this will best facilitate integration of forward markets).

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

We believe that the frequency of the auctions could differ per maturity level of the product, where e.g two auctions per year could take place for the yearly or multi-year products. Moreover, the TSOs should also try to maximize the capacity that is made available and recalculate their reliability margins to ensure maximum capacity is made available for each auction.

Increasing the frequency of auctions for the same product needs a cautious approach, as simply having more auctions without more capacity could lead to splitting the liquidity in these auctions. This would likely make the cost of LTTRs go up and diminish the ability of LTTRs to reduce the cost of cross-border hedging.

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?

Find detailed answer in point 18.

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

Referring to our earlier answers on the need for cross-zonal instruments, we particularly see benefit in have longer maturity levels (3-5 years) for existing bidding-zones. This could significantly improve forward market liquidity.

Specifically for offshore bidding zones, Guarantees related to the provision of tradable long-term transmission rights (LTTRs) to the offshore wind developer as part of the procurement process of the OBZ are required, as this would allow price risks to be hedged and to enter into long-term (cross-border) PPAs with customers. This is critical to enable the decarbonisation of large-scale consumers against lowest possible costs and thereby speeding up the energy transition. We strongly recommend that long-term transmission rights are made available on longer tenures (15 years+) for OBZs, thereby enabling cross-border PPAs of longer duration.

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

We believe LTTRs should be made available as much as possible for all borders and this should be harmonized on an EU level.

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 ?

The overall benefit of FTR options is that it promotes forward market liquidity by providing optionality in the hedging strategies of companies.

The availability of LTTRs (either PTR UIOSI or FTR options) provides market participants with the opportunity to warehouse some of the market price risk in neighboring wholesale markets or via cross-zonal corporate PPAs, which should partially help to mitigate the issue of forward price cannibalization within a bidding zone and thereby supports the deployment of new generation assets, at the same time as supporting a liquid and competitive European forward market.

FTRs as options provide market participants some optionality to hedge their physical positions neighboring markets, thus contributing to the deployment of new renewable generation. While also limiting collaterals to be deposited due to its optionality for market parties.

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

Shell is active in many different electricity markets (e.g. also the US market) and therefore also have extensive experience with LTTRs defined as obligations (even with hybrid versions where options and obligations co-exist).

We consider the EU market to be fundamentally different to the US market due to the level of transparency in the EU on market fundamentals and the size and liquidity of bidding zones), thereby limiting possibility of undervaluation of products and pure speculation in the EU. This is fundamentally different compared to US market where obligations are more common, also due to its nodal market structure.

Regarding FTR obligations, we would like to highlight that any theoretical increase in liquidity, which is forced by the firmness of the obligation in both relevant bidding zones, is very much dependent on the willingness of market participants to commit/buy an FTR obligation.

At a minimum we expect the willingness-to-pay for FTR obligations would be significantly lower as the option value disappears. In addition, we are concerned that market parties willingness to commit would disappear- meaning no demand for the product (hence no increase in liquidity), as it could create exposure for a market party in a very illiquid market which market parties do not want to take on.

For example, in case for specific bidding zone where forward spread is zero - then TSOs might only be able to offload these capacity products by paying for it, whereas market parties are likely still willing-to-pay for options in case the spread is zero- thereby increasing auction value for TSOs.

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

In principal, a PTR with UIOSI allows you to nominate the capacity and therefore it allows you to “flow” the power to another bidding zone, which has incremental value as it allows you to optimize towards real time delivery. Additionally, it enable physical cross-border PPAs, which are not seen as financial derivatives and therefore benefit certain consumers of electricity and allows a generator to operate without needing to participate on the exchanges, which could potentially decrease transaction costs.

A disadvantage of a PTR is the fact that you need to explicitly nominate, which creates an additional operational requirement, potentially increasing transaction costs.

A PTR which is not nominated has the same optionality as an FTR option.

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

See answer to 21.4.

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)?

In principle we prefer TSOs to continue with the issuance of LTTRs (either PTR UIOSI or FTR options) on all bidding zone border and as much capacity as possible to improve forward market liquidity.

We believe that in case the type of market models proposed were to facilitate more hedging opportunities, such alternatives would have been developed by the market itself, without the need for regulatory intervention. We therefore do not support Virtual Hubs, as these would be unlikely to facilitate cross border trading and would actually potentially chill market activity, reducing liquidity as it does not allow market parties to manage physical positions directly.

Specifically for offshore bidding zones, guarantees related to the provision of tradable long-term transmission rights (LTTRs) to the offshore wind developer as part of the procurement process of the OBZ are required, as this would allow price risks to be hedged and to enter into long-term (cross-border) PPAs with customers. This is critical to enable the decarbonisation of large-scale consumers against lowest possible costs and thereby speeding up the energy transition. We strongly recommend that long-term

transmission rights are made available on longer tenures (15 years+) for OBZs, thereby enabling cross-border PPAs of longer duration.

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:

It should remain zone-to-zone for bidding-zone borders.

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:

With the current level of information on the constellation of such a hub and the wider market setup in which this were to take place, it is not possible for us to answer this question with any significant meaning.

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

What we experience is that liquidity in the Nordic Markets is already extremely low and it remains to be seen whether intervention and/or redesign of the Nordic electricity markets would actually be improving the situation.

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

Any reduction in the firmness of the product would make the hedging instrument less adequate in enabling the hedging of the base risk between bidding zones and would therefore significantly reduce the interest in such products.

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)?

We believe that indeed revenue adequacy should be maintained for each market time unit, as this would solidify the firmness of the products.

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

- Yes
- No

Please comment on your answer

We believe the current facilities by SAP is sufficient for market parties to continuously trade OTC and/or resell their rights at the central auction as part of the secondary market. We therefore don't see the need /benefit for active intervention or change to the secondary market.

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?

See answer 26.

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?

As stated, we don't see the benefit of the application of FTR obligations and this option would only be possible under the application of FTR obligations.

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)?

In our view the hedging instruments offered by TSOs are vital for the efficient functioning of the forward markets and could be improved by the following measures

- Start with the issuing longer-maturity LTTRs (3-5 years ahead of delivery)
- Safeguarding the ability for market participants to hedge in the market of their choice
- Ensuring all TSOs issue LTTRs at each bidding zone border, in both directions

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?

An enhanced model based on Zonal futures combined with LTTRs on bidding zone borders. This model represents the status quo in Continental Europe.

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?

See answer for point 31.3.

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

As mentioned in answer to 22.2, in principle we prefer TSOs to continue with the issuance of LTTRs (either PTR UIOSI or FTR options) on all bidding zone border and as much capacity as possible to improve forward market liquidity.

We believe that in case the type of market models proposed were to facilitate more hedging opportunities, such alternatives would have been developed by the market itself, without the need for regulatory intervention. We therefore do not support Virtual Hubs, as these would be unlikely to facilitate cross border trading and would actually potentially chill market activity, reducing liquidity as it does not allow market parties to manage physical positions directly. Therefore, we believe this question is too detailed given the maturity and uncertainty of the virtual hub concept.

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

See answer to point 32.

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?

We do not support mandatory market making as this kind of measure does not contribute to address the underlying issues that result in poor liquidity in forward markets. This can be demonstrated by the UK approach to mandatory market making which did not result in a sustained improvement in forward market liquidity. This measure is at best, a distraction, and at worst, it results in the industry being able to avoid tackling more fundamental reasons for poor liquidity, which would be more likely to result in a sustainable improvement.

## 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?

8

35.2. Please provide detailed comments to justify the score given

We believe the current facilities by SAP is sufficient for market parties participate in auctions. We do believe that JAO could improve in having a more transparent communication portal.

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?

We believe the current facilities by SAP is sufficient for market parties to continuously trade OTC and/or resell their rights at the central auction as part of the secondary market. We therefore don't see the need /benefit to active intervention or change to the secondary market.

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?

See answer to question 37.

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

See answer to question 37.

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)?

See answer to question 37.

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

See answer to question 37.

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.

We do not see a need for regulatory intervention to support or require market participants to hedge against a cross-regional average reference price. We believe that in case the type of market models proposed were to facilitate more hedging opportunities, such alternatives would have been developed by the market itself, without the need for regulatory intervention. As an example, previously EEX published ELIX and now it is publishing PHELIX as a cross-regional reference price. However, we see little appetite from market participants for these products, which suggests that these average prices are not necessarily deemed to be useful instruments for market participants seeking to efficiently hedge price risk in forward markets. The reason market participants do not find it useful is that the cross-zonal price introduces unhelpful basis risk as the fundamentals in each interconnected market are quite different. In other words, artificially introduced market price averages are not representative of the physical reality of agents, thus do not fulfill their hedging needs.

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**

[Contact Form](#)