

ENTSO-E Advocacy Note on Forward Markets - Volume Determination

Key message: Due to its impact on diverse aspects (hedging needs from market participants, TSO revenue adequacy, collaterals), the volume determination process is a key topic that needs to be thought through carefully.

ENTSO-E welcomes the mandate to the European Commission to launch an impact assessment of different potential solutions in the forward market before a final decision is taken according to Article 9 of the Electricity Regulation pursuant to the Electricity Market Design Reform.

Summary of ENTSO-E's policy messages

1. **Long-Term Transmission Rights' (LTTRs) purpose is to promote effective hedging opportunities to market participants.**
2. **LTTRs are to become financial products, and no physical capacity is to be allocated any more.**
3. **Day-ahead (DA) and Long-Term timeframes are fundamentally different.**
4. **The goal of LTTRs is not to “bring the Futures/Forwards markets together”, as there is no market coupling in long term markets**
5. **TSOs should not auction volumes in excess of the natural hedge they are holding, being the congestion income generated by DA flows through the physical interconnectors the TSOs own**
6. **The volumes to be offered under Option and Obligation setup should not be the same.**
7. **In order to mitigate the financial risk exposure of TSOs, feedback loops taking into account the revenue adequacy and collateral levels (if collaterals are imposed on TSOs) shall impact the offered volumes**
8. **There is a trade-off between the level of volume offered and full financial firmness.**
9. **Coordination between TSOs/NRAs will evolve towards managing the financial risk exposure, that could be reduced by additional safety nets (e.g. supply function, reserve price).**

Assumptions

1. **According to article 3 of the FCA Regulation, the Long-Term Transmission Rights' (LTTRs) purpose is to promote effective hedging opportunities to market participants.** Under TSOs' understanding, a thorough assessment of hedging needs for baseload products (incl. liquidity, correlation & proxy analysis) shall be performed, in order to identify if and where the TSO products are required by market participants, in order to direct the effect of TSOs products where it is most needed. In that spirit, competition during an auction shall be present but competition among the borders is not fully adequate to meet the purpose stated.
2. **If LTTRs (options or obligations) are to become pure financial products: there should be no link with the physical operation of the short-term electricity markets.** (Assumption 1). This requires the **removal of the process of Long-Term Allocation (LTA) Inclusion** from the Day Ahead market. (Assumption 2). Under these assumptions, LTTRs are not physical capacity to be “allocated” anymore. The only remaining link with the physical grid will be to estimate the natural hedge (i.e. the best possible forecast of DA congestion income) that TSOs are holding and justifying the task of offering LTTRs. Under Assumption 2 and the new market models to be implemented under FCA 2.0, revenue adequacy and socialization rules (e.g. Congestion Income Distribution, Firmness and Remuneration Costs methodologies) need to be rethought. **LTTRs can be constructed “synthetically” by combining existing financial products like zonal futures or EPADs.**

Comparison with the day ahead timeframe

3. In terms of capacity calculation and allocation, different principles apply in the day-ahead and long-term timeframe:

- If LTRs are financial products and hence not physical capacities, the LTR volumes on borders are not mutually exclusive (the different volumes of financial contracts do not influence each other, as financial products are available in an unlimited amount, as long as there is trading interest) in contrast to the day ahead timeframe where the physical constraints are part of the optimization. As the natural hedge is an input to determine the volume of LTRs, an estimation of the natural hedge (i.e. the size of the day-ahead congestion income) is needed on border level. In this estimation the physical constraints of the grid and the interdependencies between borders are to be reflected because these are inherently part of the optimization of the day-ahead market.
- The DA capacity calculation differs significantly from long-term capacity calculation, both in terms of their purpose as well as the used features that could be reasonably implemented for these two timeframes (e.g. non costly remedial actions such as topological changes).
- The supply and demand at play are different in both timeframes (DA: physical optimization, LT: hedging financial risk, with different actors and needs – i.e. hedging needs <> physical production).

4. **The goal of LTRs is not to “bring the Futures/Forwards markets together”** (Concept 1) by maximizing available capacity, as DA prices are in fact the underlying of the Forward/futures prices, i.e. the relevant price for the settlement/invoicing of LTRs. As there can be no market coupling in the long-term markets, this price convergence concept in the long term can only be achieved through the Day Ahead market where optimization of assets and maximization of social welfare principles apply. If the goal is to have converging Futures/Forward prices, then the interconnection and thus DA capacities need to be increased e.g. via the use of congestion income to build new interconnectors, not via the FCA Guideline. Maximizing long-term capacity does not lead to more physical cross-border trading or converging spot prices but to the socialization of price risks.

Volumes Determination principles

5. Maximizing the LTR volume is not necessarily the best thing, it is about finding the right amount. **TSOs should not auction volumes in excess of the natural hedge they are holding.** The natural hedge of TSOs is defined by the congestion income generated by DA flows through the physical interconnector the TSO owns. In that sense, the volume determination shall consider these expected flows.
6. **The volume to be offered under Option and Obligation Setup should not be the same**, as products payouts are different and impact TSOs’ revenue adequacy as well. Further optimization of volume determination (i.e. assessing statistical rather than scenario-based approaches to find alternatives to flow-based capacity calculation) and allocation (i.e. reassessing competition among bidding zone borders) of long-term cross-zonal capacity may be beneficial but need further investigation in order to achieve the purpose of promoting effective hedging opportunities to market participants in more appropriate manner.

Financial aspects

7. The LTR offered volume is directly impacting the financial risk TSOs are taking:
 - a) In the case of obligations, where the positions are externally cleared, the level of collateral is directly impacted by the offered & allocated volumes and prices.
 - b) The level of hedging ratio performed for the congestion income (i.e. the share of expected congestion income that is hedged via LTRs).

It is necessary to take into account the interdependencies **between offered volumes and revenue adequacy (today the revenue adequacy is ensured per MTU, new cross MTU mechanisms will need to be implemented)**, i.e. potentially reducing dynamically the volumes before each auction in the volume determination part based on some feedback parameters, if the revenue adequacy is endangered. **If collaterals were imposed on TSOs, offered volumes would potentially need to be further reduced to mitigate the liquidity risk for TSOs.**

8. There is a **trade-off between the level of offered volumes and full financial firmness.** Indeed, the introduction of full financial firmness will induce a new financial exposure not covered by TSOs’ assets. The extent of this new risk depends on how each interconnector is impacting the market spread and resulting revenue adequacy.

This effect will be amplified on borders with only HVDC interconnectors, like offshore bidding zones: during maintenance periods, no capacity will be available, meaning a larger spread and more unhedged remuneration from TSOs to LTRR holders, if LTRRs were auctioned for that period. To mitigate this additional risk, the volumes need to be adapted downwards to stay, on a given period, below the expected natural hedge.

9. Due to points 7 to 8, the **concept of coordination is evolving towards an agreement on financial risks between TSOs/NRAs** and shall not be related to grid security anymore. **Safety nets (in the form of supply function or reserve prices) could be implemented** in order to protect TSOs against too low market participation leading to undervaluation.

Conclusion

In short, any market feature resulting in an increase of risk exposure for TSOs will likely be followed by a decrease in offered volumes, to mitigate the increased risk. Alternatively, a new risk to be borne by TSOs, will need to be covered by grid tariff payers in the end. Therefore, TSOs call for a thorough, collaborative, impact analysis (including costs, benefits and risks) before adopting any new market feature.