



– Consultation response –

ENTSO-E Consultation on Options for the Design of European Electricity Markets in 2030

Brussels, 13 May 2021 | Europex appreciates ENTSO-E's efforts to trigger a constructive debate on market design and has provided input on selected questions. Significant volumes of RES-E are already being traded in the day-ahead and intraday markets and we believe that the current wholesale market provides a solid foundation to meet the decarbonisation challenges ahead. The reforms as set out in the Clean Energy Package and current legislation need to be fully implemented, and we welcome further debate on how to build on this framework. We below present our responses to a selection of questions:

How could European Day-Ahead and Intraday markets be improved to further facilitate market access of RES and Distributed Energy Resources in 2030?

Significant volumes of RES are already being traded in the day-ahead and intraday markets. In part, finer time granularity products and smaller minimum bid sizes are already implemented and further work continues on these important features in organized European wholesale physical markets. e.g. SDAC and SIDC.

The spot markets are the physical markets to fundamentally balance production and consumption (day-ahead) and correct forecast errors until delivery (intraday). Even though intermittent renewable production forecasts have significantly improved, it still cannot be accurately predicted. Therefore, the intraday market is helpful for intermittent renewable production because trading is possible until close to delivery and generation ramps can be handled with finer granularity products, such as 15- and 30-minute products. Further advancement of finer time granularity products is necessary e.g. 15min MTU, both for products and also extending to cross-zonal capacity allocation. This is work being undertaken already by all NEMOs and TSOs.

There are further developments that would help to integrate renewables, such as

- intraday continuous trading that would occur until real-time within bidding zones and between bidding zones via utilization of cross-zonal capacity and
- Algorithmic trading and further use of digitalisation / automation.

Both the European wholesale day-ahead and intraday markets can continue to deliver important and reliable price signals in a high-renewables system:

- The importance of the intraday market will certainly grow further, as trading close to delivery will be even more critical. It is important to open such trading within each

bidding zone and across all bidding zones as early as possible and to allow for such trading up to delivery.

- The day-ahead market will remain fully relevant to incorporate all the available information at a certain moment in time and reflecting the fundamental supply and demand balance that determines energy prices per bidding zone and implicitly the value of cross-zonal capacity that is utilised in the coupled day ahead market (i.e. SDAC).
- As a pre-requisite for well-functioning DA and ID markets, it is crucial that cross-zonal capacity for trading, e.g. in SDAC and SIDC, will be maximised within the operational security boundaries. The ability to trade between different parts of Europe is crucial, to resolve fluctuations in supply-demand conditions within single countries and regions by integrated trade between neighbouring countries and regions.
- The removal of market barriers for aggregators is helpful to facilitate further market access of RES and distributed energy resources in 2030. Aggregators could efficiently market renewables and support their further integration in the intraday and day-ahead market where an isolated participation of the renewable asset would have been difficult, and where “traditional electricity retailers” might not be focused on provision of such aggregation services. However, it is also key that the general framework conditions for aggregators are aligned with the rules applicable to all other entities acting in the competitive wholesale and/or retail markets.
- More TSO facilitation of automated processing in scheduling and reporting to TSOs would also be helping to further facilitate market access to intermittent RES.

How could market design mitigate the side effects of the interaction of negative prices and RES supported technologies?

In principle, all generation sources should be remunerated at the market prices (energy and/or capacity market) – this provides the best incentives to react if market prices go negative.

What do you consider to be the key market design barriers limiting the uptake of demand response?

- The supplier/aggregator compensation model needs to be implemented across the different countries.
- Smart metering infrastructure / applications need to be further rolled out.
- Regulated retail prices hinder the ability of those prosumers and decentralised energy resources to be exposed to price signals and should be phased out.
- The share of taxes, grid fees and levies in final consumer bill reduces the energy component – while the energy component is what enables maximisation of the benefits of responding to market price signals.

What do you consider to be the best practices for the facilitation of demand response?

- Removal of regulated end-user prices in countries where that still applies.
- Frameworks which remove barriers for aggregation of end consumers and small-scale RES becoming part of the competitive markets.
- Market-based procurement of DSR.

Do you see benefits in increasing the number of intraday auctions?

There is ongoing work among all NEMOs and TSOs to deliver the three SIDC auctions (IDA) per day as required by the ACER decision on establishing a single methodology for pricing intraday cross-zonal capacity, and this should remain the current focus.

The benefits or drawbacks of those SIDC IDAs, also in relation to the effects on the 24/7 SIDC continuous trading, needs to be assessed before we can draw any conclusions on this question.

The continuous intraday market across EU and Norway in the form of SIDC is working well today and has increased significantly in liquidity among others due to the development of high amounts of renewable and intermittent capacity. Intraday auctions should complement rather than substitute the continuous intraday market.

Would you still see a role for cross-zonal intraday continuous trading in case an adequate number of intraday auctions would be implemented?

Regardless of the application of intraday auctions, we see significant value in continuous intraday trading. e.g. opening within bidding zone and cross-border trading as early as possible and allowing such trading up to delivery.

What potential benefits or drawbacks do you foresee in combining day-ahead and intraday auctions?

In our current assessment, we believe that such combinations risk introducing unwarranted complexity, would unduly limit the number of periods that can be traded in one go and likely would reduce the efficiency of the price formation.

How could markets for forward transmission capacity be improved to support the energy transition?

Developing efficient secondary markets for trading LTTRs for the borders where LTTRs are available will, over time, help to optimise hedging needs linked to such LTTRs for market participants. As a first step, an open registry of the LTTRs issued by the TSOs via explicit auctions at JAO under the Forward Capacity Allocation Guideline (FCA GL) would allow an equitable treatment of all venues that want to list those instruments for secondary trading and give market participants a choice on when and how to acquire such LTTRs.

A prerequisite for this is the implementation of 100% firmness of long-term transmission rights to fulfill the intention of the FCA GL to “Develop efficient hedging opportunities” (i.e.

recital 3 and Art. 3(a) FCA GL). Otherwise, hedging values are hampered which makes contracts very complex for standardized secondary trading and additional risk management such as clearing.

Do you see value in developing new durations of long-term transmission capacity products mirroring products for forward electricity trading?

In general, offering of LTTR products with multi-annual duration could help to provide more efficient LTTR cross-border hedging and possibly contribute to, or at least compliment, the development of the hedging and trading of energy volume and profile risks that takes place in electricity derivatives markets.

Do you see other means to improve the forward markets and hedging possibilities besides long-term transmission rights?

LTTRs are only one possible product for hedging.

Further utilisation of derivatives linked to different energy spot prices, e.g. derivatives based on day-ahead bidding zone and/or regional prices as the underlying reference, would also be beneficial.

Currently, the role of bilateral long-term agreements, or Power Purchase Agreements (PPAs), in financing of renewable energy projects is emerging. This is also relevant for organised forward markets on power exchanges. The reason is that market risks – such as price risk, volume risk or counterparty risk – are still inherent to PPAs and can be hedged via complementary trading on existing wholesale futures (derivatives) markets, e.g. via contracts based on day ahead bidding zone or regional prices as underlying, resulting in lower costs for financing.

How can TSO procurement of balancing services evolve to be a better fit for the new power system of 2030?

More market-based procurement as a general principle, including the use of flexibility from distributed resources to allow a better optimisation with the full scope of flexibilities. More dynamic and shorter-term procurement and utilisation of storage, distributed generation, load (aggregated or directly participating), etc.

Would you support the simplification of products traded in the DA and ID auctions to speed up the implementation of ongoing and future market evolutions?

We do not believe that a reduction of existing products will support the development of liquidity in the SDAC and SIDC markets, or adequately meet market participants needs in relation to the referred to objective to “speed up the implementation of ongoing and future market evolutions”. Over-simplification of products would instead most likely reduce the number of MPs able to be active in those wholesale markets, and that would inevitably reduce the liquidity and efficiency in the price formation and reduce the overall social welfare (economic surplus) and benefits for security of supply and planned balancing of the power (grid) system which today is delivered via SDAC and complimented via SIDC.

Would you recommend any other solution to adapt market coupling procedures?

Given the importance of SDAC for the power system and the integrated European market, it would be beneficial to allow for an extended process to resolve issues before any consideration of decoupling, to ensure that SDAC can be maintained intact to the furthest extent possible.

Do you think the zonal market model including the planned evolutions of the Clean Energy Package is suitable for the 2030 power system?

We strongly believe in the merits of continued market development based on the current zonal market model, and with the evolutions as laid out in the Clean Energy Package.

The Clean Energy package already gives clear guidance for the improvement of the zonal model with regard to several aspects, including:

- Overall efficiency and welfare optimization:
 - Extensions of the flow-based market coupling geographical scope
 - Bidding zone review
 - Shift to 15-min imbalance settlement period across the EU by the latest 2025
- Congestion management and grid investment optimization:
 - Principles of market-based redispatch at TSO level
 - Coordination between TSOs and DSOs
 - Incentives & obligations for DSOs to assess the procurement of flexibility as a complement to building the grid
- Flexibility:
 - Development of demand-response
 - Enabling independent aggregation services

Full implementation shall be ensured and derogations to these principles should be fully justified and where applicable, strictly limited in time.

What is the most important feature of the current zonal market design that must be adapted to make it future proof?

It is important to ensure the correct configuration of the zones through an efficient bidding zone review. The assessment of the configuration impact on market efficiency, competition, liquidity and overall welfare must consider both short-term and forward markets, and use a range of appropriate measurement criteria, as well as recognise the interplay between these markets. Furthermore, a common pan-European approach to core aspects of the methodology is also essential, given the nature of the coupled European electricity market in the day-ahead (SDAC) and intraday (SIDC) timeframes, and the increasingly integrated balancing market.

Do you consider more locational information in the balancing timeframe to be a solution worth requiring further analysis?

Balancing and congestion-management should be explicit separated mechanisms but coordinated across voltage levels. They address different needs and would greatly benefit from dedicated price signals. However, the bidding zone configuration should be identical for imbalance settlement prices as for SDAC, SIDC and forward markets.

Would you recommend any alternative solution to solve intra-zonal congestion in the balancing timeframe?

There is a need to address intra-zonal congestions in the balancing timeframe. However, the solution to merge balancing and congestion management needs into one market mechanism is not recommended.

With separate flexibility markets with explicit flexibility products, there is the possibility to:

- On the one hand, flexibly and efficiently address local congestions without creating a “one-size fits all” process in the balancing timeframe, and allowing the emergence of different price signals for different needs
- On the other hand, create strong links with balancing mechanisms to allow for a coordinated activation for TSOs and DSOs according to their needs and subject to constraints from all voltage levels. Flexibility markets could generate the right outputs to be used in the balancing market for a coordinated flexibility activation.

Do you think experience with nodal models can be useful in Europe, and how?

We share the idea that US-like nodal models are not suited for the European context towards 2030, which has been built from the ground up for a zonal model approach, including all governance and technical arrangements.

A shift to traditional nodal market design attributes (such as central dispatch with no portfolio logic and no active participation of retailers) does not match with the ambitious plans set up for Europe in developing renewables, demand response and decentralization.

Also such a shift would lead to massive EU energy regulatory amendment complexities, as well as significant technical and political complexities.

How can distortions and inc/dec gaming in market-based redispatch be addressed / mitigated?

Before going into the detail of potential mitigation measures, it must first be stated that the scope of risks created by inc/dec gaming is limited to predictable and structural congestions which does not represent all congestions.

We believe the risks can be adequately managed in a market-based approach and in any event inc/dec risks can exist also linked to a cost-based CT and in either case there can be

appropriate market surveillance put in place to act against such practices if existing and against relevant rules, regulations and guidelines.

Inc/dec gaming should not be considered a de-facto showstopper for the development of market-based congestion management. In the end, one must assess the benefits brought by local flexibility markets to tackle the RES and decentralization challenges versus the risks linked to potential distortions.

What recommendations do you have for the development of local flexibility markets based on existing initiatives?

- Clearer incentives for system operators to rely on flexibility: there are miscellaneous national frameworks that are not always incentivizing system operators to optimize grid investment costs with new emerging flexibility resources. there must be compatible incentives for System Operators to engage in flexibility procurement processes instead of further building the grid.
- System operator coordination: a strong coordination between TSOs and DSOs is key for the efficient use of the localized flexibilities.
- Transparency: data shared on prices, locations and expected needs shall lead to the development of a new economic space for the valorisation of flexible assets
- Clear roles: the definition of clear roles between the parties involved is what creates the strength of local flexibility market implementations.
 - The system operator managing the grid
 - Power exchanges handling neutral market operations
 - Flexibility providers managing the optimization of their assets

Should EU legislation attempt to define some fundamental common principles (e.g. degree of integration with existing wholesale markets, products standardisation, etc.)?

A certain degree of standardisation could be useful to the wider implementation of local flexibility market models. However, one must not lose sight of the fact that congestion issues addressed by local flexibility markets are fundamentally localised with local specificities and constraints.

Should there be attempts to define fundamental common principles at EU level (SO coordination, grid model data), such principles shall not impede on the possibility to adapt local flexibility market solutions to local constraints, in order to best address market and grid needs, as a one-size-fits-all solutions is not seen as the best solution.

Do you agree that all three models described above (enhanced energy only markets, strategic reserves, capacity mechanisms) could be suitable for European countries in 2030?

Europex believes that a well-designed Energy Only Market (EOM) builds the basis for the market design in European countries.

The high-level principles of EOMs should be further exploited by removing price distorting impacts and more generally across all EU Member States allowing the wholesale market price to directly impact the retail (end consumer) prices and as such trigger more demand side

response (DSR). Furthermore, the EOM should be enhanced by looking for better ways to ensure that flexibility is properly valued and tradable. In principle, a well-designed European integrated, liquid wholesale market, e.g. day ahead (SDAC) followed by intraday (SIDC) and finally balancing mechanisms rewards flexible generation and DSR.

Next to competitive and liquid EOM wholesale markets, a well-functioning EU ETS and respective carbon market and Guarantees of Origins (GO) market are also needed. These will contribute to low carbon/carbon-free generation, such as RES, being able to refinance themselves on the market.

What type of RES supports is more fit for purpose for the 2030 power system?

Subsidies and support schemes for renewables are no longer the best choice to achieve the climate goals. A key challenge for a successful energy transition is to ensure the full integration of renewable generation into the electricity market and to provide market-based remuneration for renewables. This cost-efficient approach will ultimately benefit the end-consumer.

Currently implemented support schemes are not suitable in the long-term. They distort the energy market and hamper an efficient grid integration of renewables. Furthermore, they favour lock-in effects that increase the period for which renewable energy sources (RES) would receive regulated payments rather than promoting a gradual phase-out of subsidies.

A subsidy-free future for renewable energy is both necessary and feasible.

What other market design elements can facilitate investments in RES to achieve EU climate objectives?

Through efficient competition, financing costs and thus levelized costs of electricity will decrease. Renewables will be fully exposed to the market price signal and will fully react to it. The principal part of the remuneration should be based on market-based revenues, coming from the remuneration of the commodity.

Next to competitive and liquid wholesale markets, a well-functioning EU ETS and Guarantees of Origins (GO) market are also needed. This will contribute to renewables being able to refinance themselves on the market.

With a phase out of subsidy schemes, electricity consumers or taxpayers shall not need to pay for subsidies anymore. Instead, the development of business models for market-based renewable remuneration schemes, such as new direct marketing models, should be encouraged. The future market design should focus on market-based remuneration instead of subsidies, such as wholesale market revenues, revenues from GOs, from PPAs etc.

What are the best practices for the design of RES tenders?

During the transition phase to full market integration, limited support mechanisms may still be needed. All support schemes shall be as least distortive as possible, limited in time, market-based, compatible with European state aid principles and the subsidy amount shall be

determined by competitive mechanisms. RES tenders are necessary to allocate aid competitively.

RES tenders should not allow for support payments in case of negative prices. Negative prices set incentives for market actors to invest in more flexible production capacities and DSR. If RES producers receive support payments also during periods of negative prices, this disincentivises renewable producers to react to negative prices by producing less.

Is there any other key market design area not addressed in this paper which deserves particular attention to enable the achievement of European energy and climate goals for 2030?

Europex appreciates ENTSO-E's efforts to trigger a constructive debate and has provided input on selected questions in the interest of an open dialogue on the market design issues selected by ENTSO-E. However, the high number of questions in the consultation makes it challenging to provide adequate detail on all aspects and we would challenge some assumptions and distinction of roles and responsibilities for some topics. It also seems unlikely that this stakeholder consultation in the current format will give ENTSO-E the level of responses that would adequately represent the full range and depth of stakeholder views and needs.

We would therefore welcome further dialogue to clarify some of the proposals and discuss the above aspects. For several market design topics, it may be more efficient to have high-level questions in consultation and then deal with more specific questions in other formats, e.g. focus groups or expert groups involving, and possibly led by, market stakeholders. Furthermore, several fields/topics addressed in this consultation are already dealt with in regulated processes among all TSOs and/or NEMOs based on existing Network Codes, Guidelines and Methodologies or relevant Clean Energy Package Electricity legislation. It is important to acknowledge the direction of existing work and that implementation of current requirements remains a first priority.

About

Europex is a not-for-profit association of European energy exchanges with 29 members. It represents the interests of exchange-based wholesale electricity, gas and environmental markets, focuses on developments of the European regulatory framework for wholesale energy trading and provides a discussion platform at European level.

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