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EPEXSPOT

Public Consultation – New Energy Market Design

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Executive Summary

Role of scarcity prices in the market design

- Scarcity prices are an important ingredient to the market design. A strong and trustworthy market price signal is the key to incentivizing the required flexibility on power markets.
- Market prices already reflect the availability of transmission capacity, which is incorporated into prices under market coupling and explicit auctions for transmission rights.
- The development towards large, cross-border bidding zones supports the efficiency of the power system by integrating markets.
- When scarcity prices are used to price flexibility, they create significant opportunities for the market. They improve operational performance, investment incentives, demand response, renewables market integration and transmission pricing. In markets with strong and reliable price signals, additional capacity mechanisms to incentivize investments are not required.
- A clear commitment against regulatory interference in market price formation is needed. The price signal and the trust in the price formation mechanism are the basis for market actors' decisions and also for new products developed to serve the need for flexibility.
- A regional definition of security of supply is needed. In an increasingly integrated market with increasing cross-border energy flows, a purely national definition of security of supply is neither adequate nor efficient.

Balancing markets

- Before envisaging additional legal measures, the Network Code Electricity Balancing needs to be fully implemented and enter into force.
- Cross-border access to balancing markets has to be promoted. However, there should be no reservation of capacities for the balancing timeframe.
- A clear separation of intraday and balancing markets is needed in order to avoid market disturbances and arbitrage, and to deliver the right economic incentives to minimize access to balancing energy.

Intraday markets

- Smooth implementation of the agreed EU wide intraday platform goes hand in hand with a smooth implementation of the CACM governance.
- Quick-wins should be facilitated to prepare the ground for the future intraday target model implementation.

New long-term contracts

- There is no need for new arrangements for long-term contracts between generators and consumers. Long-term contracts are already traded on well-established and liquid derivatives markets both on exchanges and the bilateral market.
- There is no role for the public sector in enabling new contracts for generation capacity, as these would not provide additional benefits to the established, well-functioning markets.

Taxes and charges

- The differences between national tax and levy schemes and/or the application of regulated prices create distortions that affect investment decisions for the industry. If the differences in retail price are not mainly driven by a difference in wholesale prices but by a difference in the regulated components, the market is prevented from delivering the right signals for investments.
- Political choices may impact investment decision to a large extent since taxes and charges may have a bigger impact on the investment's profitability than the genuine value of the commodity as observed on the wholesale markets.

Integration of renewables into the internal market

- Renewables support needs to be increasingly market-based through feed-in-premium or quota systems.
- Support levels should be determined through competitive mechanisms.
- The on-going reforms of the EU Emissions Trading Scheme will further strengthen investment signals for renewables.
- Further steps are needed to integrate renewables support mechanisms with the existing power market.
- Full market integration is most efficiently achieved by renewables support based on a payment per unit of capacity.
- A more coordinated approach of renewables support is required and regional support schemes should be further encouraged.
- Achieving the 2030 energy and climate targets will also require more coordination and the development of the proposed governance framework. The potential of Guarantees of Origin needs to be used more actively.

Linking wholesale and retail markets

- Several structural and regulatory elements hamper the development of demand-response measures.
- The absence of time-of-use rates, which would be more incentivizing for demand response compared to flat rates, can be identified as an explanation.
- Moreover high fixed costs render investments in demand-response measures more capital intensive than what was initially expected. Regulatory and market arrangements (i.e. capacity based remuneration) could improve investment conditions.

Regional coordination of national policy making

- The further setting, definition and execution of national oversight shall come under scrutiny whether they are in line with the goals and procedures imposed on the European level. Regulation at a European level requires flexibility. Adequate resources to fulfil the assigned tasks have to be provided.
- As decisions with a cross-border, regional or even European dimension are concerned, they need to be taken by the same authority. Double regulation must be avoided. Emphasis needs to be placed on better regulation instead of more regulation.
- Undue regulation needs to be prevented while decisions have to be verifiable and revisable.

Cooperation between System Operators

- Regional Security Coordination Initiatives strengthen the overall efficiency of the internal market.
- Further analysis should be conducted on which competences should rest with current national TSOs and which could be part of the tasks of a new, independent system operator. As a first step, a harmonized approach towards assessing risks to security of supply should be developed.
- EEX and EPEX SPOT also advocate the cooperation of TSOs in relation to build and maintain the infrastructure needed for efficient and effective cross-border electricity trading. This includes cross-border incentives for grid expansion, coordinated on a European level.

Adapting the regulatory framework

- TSOs are natural monopolies and the regulation of ENTSOs needs to address this fact.
- Future regulatory oversight need to provide clearly defined rules and roles for ENTSOs.
- Transparency and public involvement need to be fostered in the future work of ENTSOs.
- As far as market coupling is concerned, new governance rules for power exchanges are already foreseen in CACM Regulation.
- These rules are promising and should be evaluated first before considering new regulations.

System adequacy standards

- A harmonized methodology to assess power system adequacy is required.
- The appropriate geographic scope of a harmonised adequacy methodology and assessment should be at least regional.
- An alignment of system adequacy standards would support an efficient single market.

Opening capacity markets across borders

- Cross-border participation in capacity mechanisms will have to be built upon market coupling with the predominant aim to maximize overall welfare and close TSO cooperation in order to work properly.
- Any elements of a possible European framework have to be consistent with the Internal Energy Market and the electricity target model. Distortions of cross-border trade need to be minimized to avoid inefficiencies and higher costs for end-consumers. Capacity markets need to meet the criteria of being market-based (and market-wide), non-discriminatory and coordinated across borders.
- In member states with mature energy markets, market-based reference prices shall be the dominant basis of decision making for market participants.
- As the assessment of power system adequacy is concerned, EEX and EPEX SPOT believe that member states should have the final say. However, a harmonization of the type of measures/benchmarks should be considered for the sake of a better comparability of the different national standards.

1. Would prices which reflect actual scarcity (in terms of time and location) be an important ingredient to the future market design? Would this also include the need for prices to reflect scarcity of available transmission capacity?

- ▶ **Scarcity prices are an important ingredient to the market design. A strong and trustworthy market price signal is the key to incentivizing the required flexibility on power markets.**
- ▶ **Market prices already reflect the availability of transmission capacity, which is incorporated into prices under market coupling and explicit auctions for transmission rights.**
- ▶ **The development towards large, cross-border bidding zones supports the efficiency of the power system by integrating markets.**

Scarcity prices are an important ingredient to the market design. A correct and trustworthy market price signal is the key to incentivizing the required flexibility on power markets. An efficient market requires a strong market price signal correctly representing market fundamentals at all times.

In the old, conventional energy world, the role of the energy system was to provide power at a steady rate based on predictable forecasts of demand. In the new, renewable world, the challenge is flexibility – caused by fluctuating renewable energy sources. The only reliable incentive for flexibility is the market price signal. Only the market price signal can transform supply and demand into one single measure for scarcity. Hence, the market design must strengthen this market price signal.

An energy-only market with an increasing share of renewables will have to rely on scarcity prices in order to cover capital cost. When the targeted levels of renewables are realized, conventional power plants will no longer serve baseload but only cover residual load in a declining number of hours. In these hours, conventional capacities are essential for the security of supply. They have to refinance their investment during the few hours of operation. This cannot be covered by prices at the level of marginal production costs, but requires scarcity prices reflecting the “marginal value of consumption”, expressed in the consumers’ willingness to pay. Only such prices can cover capital cost of production assets (otherwise, fixed costs of the production with the highest marginal costs are difficult to recover).

Scarcity prices can already be observed in the market at rare occasions. One example of this is the solar eclipse of 20 March 2015, when prices for transactions on the intraday market peaked at close to 1,000 €/MWh. This short-time price signal indicated market participants’ willingness to pay in a situation of scarce supply. This example shows how the market price signal correctly represents a situation of scarcity without disruptions of the power system or impeding security of supply.

Market prices already reflect the availability of transmission capacity, which is incorporated into prices under market coupling and explicit auctions for transmission rights. Short-term scarcity of transmission capacity between bidding zones is reflected in the price differential between markets under market coupling. Long-term expected value of transmission capacity is reflected in the price of transmission rights auctioned explicitly. When this resource is scarce, it will be reflected in the prices for transmission capacity. These prices can serve as an investment signal for interconnector capacity, and also provide adequate incentives to locate new investments in production capacity, eventually levelling the price levels between different bidding zones. Already today, locational scarcity is being reduced by the growing capacity of both grid and interconnectors.

The development towards large, cross-border bidding zones supports the efficiency of the power system by integrating markets. Supply and demand can be brought together more efficiently. The prerequisite for this is grid expansion. Delayed or insufficient grid expansion even in a national context has a negative impact on the market as a whole, as is currently seen in the discussion of splitting the German/Austrian bidding zone. Such a decision would be a huge step back in the creation of the internal market, splitting Europe's most liquid bidding zone, decreasing the possibilities of risk mitigation and eventually causing higher energy prices for consumers. EEX and EPEX SPOT call upon all parties involved in this discussion to jointly develop appropriate solutions and specifically, to consider the requirements of the entire market – including spot and derivatives market – in this debate. For a more detailed discussion, see the Consentec study commissioned by EEX and EPEX SPOT¹.

¹ Economic efficiency analysis of introducing smaller bidding zones, Consentec, 2015.

2. Which challenges and opportunities could arise from prices which reflect actual scarcity? How can the challenges be addressed? Could these prices make capacity mechanisms redundant?

- ▶ **When scarcity prices are used to price flexibility, they create significant opportunities for the market. They improve operational performance, investment incentives, demand response, renewables market integration and transmission pricing. In markets with strong and reliable price signals, additional capacity mechanisms to incentivize investments are not required.**
- ▶ **A clear commitment against regulatory interference in market price formation is needed. The price signal and the trust in the price formation mechanism are the basis for market actors' decisions and also for new products developed to serve the need for flexibility.**
- ▶ **A regional definition of security of supply is needed. In an increasingly integrated market with increasing cross-border energy flows, a purely national definition of security of supply is neither adequate nor efficient.**

When scarcity prices are used to price flexibility, they create significant opportunities for the market. They improve operational performance, investment incentives, demand response, renewables market integration and transmission pricing. In markets with strong and reliable price signals, additional capacity mechanisms to incentivize investments are not required. When flexibility is priced and market actors react to it through their generation and consumption decisions, this improves the operational performance of the power system. This can also set new incentives for investments. Scarcity prices are also essential to incentivize participation of demand response in the market. Indeed, scarcity prices reflect the ability of consumption to react to market signals since price-elastic consumption can express its sensitivity to consume when prices become higher. Another opportunity is the better integration of renewables exposed to the market price signal when they react to these prices. Finally, scarcity prices can provide signals for investment in transmission capacity, efficiently advancing the integration of European power markets.

If new investments in conventional capacity are needed, their fixed costs will need to be recovered in some way or another. In the energy only setting it is the price spikes that allow fixed cost recovery. In a market with capacity remuneration it is the combination of price spikes on the energy market and the revenues from the capacity mechanism. Ultimately, the decision is political. In France, a political decision for such a mechanism has been made. In the German-Austrian bidding zone, policy makers and EEX and EPEX SPOT believe that an energy only market 2.0 will provide the necessary incentives for investment. This will require suitable hedging instruments, such as options or futures.

A clear commitment against regulatory interference in market price formations is needed. The price signal and the trust in the price formation mechanism are the basis

for market actors' decisions and also for new products developed to serve the need for flexibility. The greatest risk to the correct functioning of scarcity prices is political interference based on the unjustified fear that such prices will be to the detriment of consumers. In a well-functioning market, where investments are not delayed by the anticipation of political decision impacting (positively or negatively) of the investment's business case, this fear is unfounded, as electricity retail prices do not follow the volatile short-term price signal but rather the long-term forward price which rarely sees price peaks.

No interference in prices also enables marketplaces to adapt their offering to support more flexibility. For the intraday market within Germany, Austria and France, lead times have been reduced to 30 minutes before delivery, answering the markets' demand for more short-term trading. On 14 September 2015, EEX launched the 'Cap Future' as the first of its 'energy turnaround' products, with a wind hedging product to follow. The 'Cap Future' allows trading the average of the high-price segment of the German intraday market up to four weeks ahead. For direct marketing of fluctuating renewables, the contract can mitigate the price risk of intraday market activity due to repurchasement in case of generation forecast corrections. For operators of conventional power plants, on the other hand, the contract allows to secure high prices in hours in which generation flexibility is needed, creating a new revenue stream.

EEX and EPEX SPOT strictly oppose any form of regulatory price cap for the existing, well-functioning markets. Regulatory price caps would obstruct market participants' trust in the free price formation process and the market itself, creating the need for additional mechanisms to achieve the objective of supply and demand adequacy, raising system costs.

The technical price limits currently in place are sufficient and correctly defined. On the day-ahead market, they are harmonized at +3,000.00 €/MWh (upper boundary) and -500.00 €/MWh (lower boundary)². Price thresholds on the German, French, Austrian and Swiss continuous intraday markets are harmonized at +9,999.99 €/MWh and -9,999.99 €/MWh. In the past years, these price boundaries have proven entirely adequate: in Germany, for example, one of the most liquid markets in Continental Europe, they have never been reached. However, since the price limits are technical in nature, they can be adjusted in consultation with market participants if necessary.

A regional definition of security of supply is needed. In an increasingly integrated market with increasing cross-border energy flows, a purely national definition of security of supply is neither adequate nor efficient. It will only be possible to use peak prices for hedging when member states have binding agreements in place that prohibit the curtailment of interconnectors in times of scarcity. EEX and EPEX SPOT welcome initiatives such as the recently released "declaration of the 12 electrical neighbours"³. They are important building blocks for such a definition by prohibiting price caps on power markets, not

² with the exception of Spain/Portugal

³ "Joint Declaration for Regional Cooperation on Security of Electricity Supply in the Framework of the Internal Energy Market", 8 June 2015

limiting cross-border trading in times of scarcity and developing a common understanding of security of supply.

Transparency and hence the acceptance of scarcity prices is strengthened through the publication of generation and production data. A number of initiatives exist, such as the EEX Transparency platform on which data for seven European countries is published. The available platforms are well accepted by the market, reporting companies and the public and are built on existing, tried and tested infrastructure. The creation of additional, parallel platforms with overlaps in data should be avoided; additional reporting obligations and fragmentation of the platform landscape are without additional benefits.

3. Progress in aligning the fragmented balancing markets remains slow; should the EU try to accelerate the process, if need be through legal measures?

- ▶ **Before envisaging additional legal measures, the Network Code Electricity Balancing needs to be fully implemented and enter into force.**
- ▶ **Cross-border access to balancing markets has to be promoted. However, there should be no reservation of capacities for the balancing timeframe.**
- ▶ **A clear separation of intraday and balancing markets is needed in order to avoid market disturbances and arbitrage, and to deliver the right economic incentives to minimize access to balancing energy.**

Only a European electricity market ensures a secure and flexible electricity supply. The different profiles of Member States can complement each other, for example with regards to their energy mix or peak consumption. This is beneficial for security of supply amongst others. **Beyond derivatives, day-ahead and intraday markets, a more European approach is therefore also recommendable for the design of balancing markets. In particular, further cross-border access to balancing markets should be promoted.** For the sake of a reasonable optimization of overall welfare, EEX and EPEX SPOT clearly object to the reservation of capacities for the balancing timeframe. This would steadily withdraw transmission capacities from the free market and therefore lead to inefficiency.

The European design of balancing market is also part of the Network Code Electricity Balancing. **Before envisaging additional legal measures, this Network Code needs to be fully implemented and enter into force.** In this regard, EEX and EPEX SPOT welcome ACER's recommendations published on July 22nd, promoting further European harmonization of balancing markets. They include, amongst others, the harmonization of imbalance settlement periods for balance responsible parties.

It is crucial to ensure that intraday and balancing markets do not overlap, as formulated by ACER in its recommendations on the Network Code Electricity Balancing. **EEX and EPEX SPOT therefore call for a clear separation of intraday and balancing markets in order to avoid market disturbances and arbitrage, and to deliver the right economic incentives to minimize access to balancing energy.** The more the market participants can balance their positions efficiently on the commercial markets (day-ahead and intraday), the less balancing energy will be needed for the benefit of the wider electricity system. Therefore, the (cross-border) intraday gate closure time should be as close to delivery as possible.

4. What can be done to provide for the smooth implementation of the agreed EU wide intraday platform?

- ▶ Smooth implementation of the agreed EU wide intraday platform goes hand in hand with a smooth implementation of the CACM governance.
- ▶ Quick-wins should be facilitated to prepare the ground for the future intraday target model implementation.

With the signing early June 2015 between Deutsche Börse AG and power exchanges, and with the entry into force of CACM on August 14th 2015, the current voluntary cross-border intraday project (XBID Project) is likely to become the basis for the Intraday Target Model implementation. It will therefore have to be extended to more parties in Europe. **In that context, smooth implementation of the agreed EU wide intraday platform goes hand in hand with a smooth implementation of the CACM governance, which should ensure a better management of the pan-European project (QMV, NEMO Committee...) than the current early implementation project.**

So-called “Quick-Wins”, aiming at enhancing the current intraday market design and easing cross-border access to interconnections, should be facilitated to prepare the ground of the future intraday target model implementation, while reaping the benefits of market integration for the market participants earlier than in 2017 (scheduling of first go-lives of the XBID project).

5. Are long-term contracts between generators and consumers required to provide investment certainty for new generation capacity? What barriers, if any, prevent such long-term hedging products from emerging? Is there any role for the public sector in enabling markets for long term contracts?

- ▶ **There is no need for new arrangements for long-term contracts between generators and consumers. Long-term contracts are already traded on well-established and liquid derivatives markets both on exchanges and the bilateral market.**
- ▶ **There is no role for the public sector in enabling new contracts for generation capacity.**

There is no need for new arrangements for long-term contracts between generators and consumers. Long-term contracts are already traded on well-established and liquid derivatives markets both on exchanges and the bilateral market. In general, long-term contract (being traded bilaterally or on exchange) can provide investment signals, because they are used to fix price levels for future delivery of commodities. Standardised contracts have been and are being traded on European power exchanges. Additional contracts trading outside the well-established markets could not provide additional investment incentives, as the price signal on the established long-term markets is already widely used as a price reference.

There is no role for the public sector in enabling new contracts for generation capacity. Long-term markets for electricity already exist in almost all member states, contracts are standardized and well-accepted by market participants, also liquidity in these markets is high: the European long-term markets are well-developed. EEX and EPEX SPOT therefore does not believe that the public sector could play an active role in enabling or further developing long-term markets. On the contrary, any involvement of the public sector could be seen as hampering free price formation and likely reduce liquidity and efficiency, eventually raising costs for all involved parties. For any further discussion, clarification is needed on what is meant by a possible “public sector role in enabling long-term contracts”.

6. To what extent do you think that the divergence of taxes and charges levied on electricity in different Member States creates distortions in terms of directing investments efficiently or hamper the free flow of energy?

- ▶ **The differences between national tax and levy schemes and/or the application of regulated prices create distortions that affect investment decisions for the industry. If the differences in retail price are not mainly driven by a difference in wholesale prices but by a difference in the regulated components, the market is prevented from delivering the right signals for investments.**
- ▶ **Political choices may impact investment decision to a large extent since taxes and charges may have a bigger impact on the investment's profitability than the genuine value of the commodity as observed on the wholesale markets.**

Two recent reports by the European Commission and Eurelectric point out that electricity prices increasingly burden households and industries, potentially deteriorating Europe's competitiveness. The reports also observe that public charges make up the largest part of consumer bills and drive the increase of electricity total prices.

For over ten years now, the spread between wholesale and retail price has been increasing. Since the proportion of public charges in the total consumers costs is in general very large, and typically varies depending on many aspects (e.g. by country, by type of consumer, etc.) it inevitably has consequences in terms of investment signals and competitiveness. The basic idea behind liberalised markets and market coupling is the mere fact that electricity should flow to those consumers that attach the greatest value to it. **The differences between national tax and levy schemes create distortions that affect investment decisions for the industry.**

The same is true for differences in national approaches for subsidies (or other remuneration mechanisms), distorting the generation market. Again, inefficient or uncoordinated regulatory interventions on national level undermine the achievements of competitive, interconnected European wholesale markets. **If the differences in retail price are not mainly driven by a difference in wholesale prices but by a difference in the regulated components, the market is prevented from delivering the right signals for investments.** This issue becomes more accurate when the regulated component of the price becomes large, as most markets experience today.

To summarize, political choices may impact investment decision to a large extent since taxes and charges may have a bigger impact on the investment's profitability than the genuine value of the commodity as observed on the wholesale markets.

It should be noted that similar market distortions may result from the regulation of the commodity price itself, and we fully support the Commission's position that such regulated prices should be phased-out as quickly as possible.

We insist on invigorating the role of wholesale markets for the sake of European competitiveness. Transparent and competitive electricity prices have to be restored by limiting interventions leading to disproportionate and uncoordinated public charges. Let electricity prices be determined by the European market, not by national regulation.

7. What needs to be done to allow investment in renewables to be increasingly driven by market signals?

- ▶ **Renewables support needs to be increasingly market-based through feed-in-premium or quota systems.**
- ▶ **Support levels should be determined through competitive mechanisms.**
- ▶ **The on-going reforms of the EU Emissions Trading Scheme will further strengthen investment signals for renewables.**

Renewables support needs to be increasingly market-based through feed-in-premium or quota systems. EEX and EPEX SPOT welcome that the European Commission calls for this in the European Environmental and Energy Aid Guidelines. In addition, we fully support the guidelines' requirement for mandatory direct marketing of renewables, balancing responsibility for renewables, and the nonpayment of support in times of negative prices.

Support levels should be determined through competitive mechanisms. EEX and EPEX SPOT welcome the pilot tender for solar in Germany and the planned introduction of additional tendering procedures. In addition, and as planned, these should gradually be opened for participants from abroad as this will open up possible efficiency gains of the internal market. These measures will allow renewables to be increasingly driven by the market price signal, as is the case for other more traditional assets.

The on-going reforms of the EU Emissions Trading Scheme will further strengthen investment signals for renewables. EEX and EPEX SPOT welcome the political agreement achieved on the introduction of the Market Stability Reserve. For long-run investment signals, ambitious, long-term targets for emissions savings in the EU are much more important than changes to the market design. These need to be well-aligned with other targets (such as renewables) that need to take into account effects of policy overlap between targets.

8. Which obstacles, if any, would you see to fully integrating renewable energy generators into the market, including into the balancing and intraday markets, as well as regarding dispatch based on the merit order?

- ▶ **Further steps such as dispatch based on merit order and harmonization of support policies are needed to integrate renewables support mechanisms with the existing power market.**
- ▶ **Full market integration is most efficiently achieved by renewables support based on a payment per unit of capacity.**

Further steps are needed to integrate renewables support mechanisms with the existing power market. This should be done in line with increasingly harmonized policies across Europe. The key to fully integrating renewables energy (RES) is providing marketers of RES with incentives to bid their real marginal costs in the derivative and spot markets for power, meaning dispatch based on the merit order. Then, even with a high share of renewables, the market price signal will remain undistorted. In particular, it is not biased downwards, which is essential to stimulate investment in conventional generation capacity.

Full market integration is most efficiently achieved by renewables support based on a payment per unit of capacity. This makes the support for RES independent of dispatch, creating incentives for efficient dispatch of these plants. The switch away from feed-in-tariffs towards auctions for renewable capacity (e.g. in Germany) is a crucial step forward. The eventual goal should be that renewable generators are paid upfront for providing capacity to the market but then left fully exposed to the power market. The currently implemented subsidy schemes, where feed-in tariffs or market premiums coupled with power spot prices are not suitable in the long-term. Although in Germany market premiums have proven to be a significant improvement to feed-in tariffs, they are not the most efficient incentive when the share of RES further increases.

9. Should there be a more coordinated approach across Member States for renewables support schemes? What are the main barriers to regional support schemes and how could these barriers be removed (e.g. through legislation)?

- ▶ **A more coordinated approach of renewables support is required and regional support schemes should be further encouraged.**
- ▶ **Achieving the 2030 energy and climate targets will also require more coordination and the development of the proposed governance framework. The potential of Guarantees of Origin needs to be used more actively.**

A more coordinated approach of renewables support is required and regional support schemes should be further encouraged. In an efficiently functioning internal market, new renewables generation capacity should be built where it is most efficient, irrespective of national borders. This is even more important given the on-going political discussion in member states on the costs of support for consumers, and the possible efficiency gains and cost decreases through making use of the internal market. The existing initiatives, in particular the common renewables support scheme of Sweden and Norway show that even joint support schemes are possible. Member states should be further encouraged to make use of the different cooperation mechanisms available under the Renewables Directive.

Achieving the 2030 energy and climate targets will also require more coordination and the development of the proposed governance framework. The potential of Guarantees of Origin also needs to be used more actively. In particular the EU level target for renewables without binding national targets will require increased coordination. A 'light-touch approach' to coordination will not be sufficient to achieve this. Binding contributions are needed from all member states, with adequate sanction mechanisms in place for targets not reached. The proposed renewables governance framework should be used as a platform for mutual learning from best practices, becoming an active driver of reforming support schemes towards the market. Using the framework as means to bundle reporting obligations for national energy policies will not be sufficient.

The European Union needs to make better use of the system of Guarantees of Origin (GO) as the standardised, Europe-wide instrument for designating power from different sources. Significant resources have been invested by regulators, associations, market actors and market places to create the possibility for uniform, reliable and secure trading of GOs across countries. A common, European standard has been established for origin-marking power from different sources. This common standard can facilitate the coordination of support policies through enabling more cross-border trading of power from different sources.

10. Where do you see the main obstacles that should be tackled to kick-start demand-response (e.g. insufficient flexible prices, (regulatory) barriers for aggregators/customers, lack of access to smart home technologies, no obligation to offer the possibility for end customers to participate in the balancing market through a demand response scheme, etc.)?

- ▶ **Several structural and regulatory elements hamper the development of demand-response measures.**
- ▶ **The absence of time-of-use rates, which would be more incentivizing for demand response compared to flat rates, can be identified as an explanation.**
- ▶ **Moreover high fixed costs render investments in demand-response measures more capital intensive than what was initially expected. Regulatory and market arrangements (i.e. capacity based remuneration) could improve investment conditions.**

Amongst others, the achievement of a well-functioning market depends on the successful integration of the demand side into the price formation mechanism. Supply and demand should be allowed to interact on a level playing field, meaning that both generation and consumption should be able to react to market price signals on all markets

The future market design should allow customers to offer their flexibility in a market-based manner, e.g. via demand side management and aggregation services. **However, several structural and regulatory elements hamper the development of such measures, such as:**

- **regulated prices and/or inflexible prices in supply contracts**
- **the lack of clear and harmonized arrangements for consumers/aggregators to settle against the market**

EEX and EPEX SPOT also believe that the effort to integrate demand response should firstly focus on the lowest hanging fruits, i.e. the biggest consumers. Indeed, while domestic demand response to prices is an interesting feature in the longer term, there are still tremendous volumes of flexible demand within the industry which are not reaped by the market. It is therefore plausible to provide a significant economic benefit at a reduced cost, would the economic, regulatory and political context be prone to attract these flexible volumes in the power market.

It is important to note that after more than a decade and a half of liberalization of power markets in Europe, the energy-only markets have not delivered demand response capacities to the level that was initially expected. This fact can also be observed in most countries worldwide. Demand response is a crucial element for the sustainable development of the power markets even more today due to the integration of vast amounts of intermittent

renewable capacities. The only countries to our knowledge that have managed to achieve demand response capacities that exceed 10% of peak load are located in US states (PJM or NE-ISO). **The first explanation for the lack of demand response developments in the EU can be found in the absence of time-of-use rates which would be more incentivizing for demand response compared to flat rates. An additional explanation relies in the fact that demand response developers have to bear fixed costs and not only variable costs. Investments are therefore more capital intensive than what was initially thought for demand response providers.** As demand response providers are usually smaller companies compared to utilities and more risk averse they face the same (or more) difficulties financing their operations based on energy-only price spikes. Remuneration for the capacity they provide to the system allows them to have a stable stream of revenues to invest in the infrastructure needed for their operations. They can then use the wholesale energy market to sell the energy freed by the demand reductions if the regulatory and market arrangements allow it⁴.

⁴ as it is the case in France with the NEBEF initiative

11. While electricity markets are coupled within the EU and linked to its neighbours, system operation is still carried out by national Transmission System Operators (TSOs). Regional Security Coordination Initiatives ("RSCIs") such as CORESO or TSC have a purely advisory role today. Should the RSCIs be gradually strengthened also including decision making responsibilities when necessary? Is the current national responsibility for system security an obstacle to cross-border cooperation? Would a regional responsibility for system security be better suited to the realities of the integrated market?

- ▶ **Regional Security Coordination Initiatives strengthen the overall efficiency of the internal market.**
- ▶ **Further analysis should be conducted on which competences should rest with current national TSOs and which could be part of the tasks of a new, independent system operator. As a first step, a harmonized approach towards assessing risks to security of supply should be developed.**
- ▶ **EEX and EPEX SPOT therefore also advocate the cooperation of TSOs in relation to build and maintain the infrastructure needed for efficient and effective cross-border electricity trading. This includes cross-border incentives for grid expansion, coordinated on a European level.**
- ▶ **Beyond the cooperation of TSOs, the association of market participants and market operators to the decision making process is essential.**

The enhanced cooperation of TSOs allows more cross-border capacity to be released on the markets, and hence strengthens the overall efficiency of the internal market. **Initiatives such as CORESO and the membership of TSO in at least one RSCI strengthen this process. This will increase overall liquidity as more cross-border capacity is released to the market. Market players and consumers are expected to benefit from this increase of capacity.**

Looking ahead, it is crucial to develop a regional perspective on security of supply. This approach has great potential to provide security of supply in a much more efficient way. **For future policy development, further analysis should be conducted on which competences should rest with current national TSOs and which could be part of the tasks of a new, independent system operator. As a first step, a harmonized approach towards assessing risks to security of supply should be developed.**

However, EEX and EPEX SPOT believe that grid operation is not the only field that requires increased cooperation of TSOs. Ultimately, what we need is European mechanism to share the cost and to invest in where the weakest link in the whole European system is, and not leave it to the national operator of that grid to pay it alone. **We therefore also advocate the cooperation of TSOs in relation to build and maintain the infrastructure needed for efficient and effective cross-border electricity trading.**

12. Fragmented national regulatory oversight seems to be inefficient for harmonised parts of the electricity system (e.g. market coupling). Would you see benefits in strengthening ACER's role?

- ▶ **The further setting, definition and execution of national oversight shall come under scrutiny whether they are in line with the goals and procedures imposed on the European level. Regulation at a European level requires flexibility. Adequate resources to fulfil the assigned tasks have to be provided.**
- ▶ **As decisions with a cross-border, regional or even European dimension are concerned, they need to be taken by the same authority. Double regulation must be avoided. Emphasis needs to be placed on better regulation instead of more regulation.**
- ▶ **Undue regulation needs to be prevented while decisions have to be verifiable and revisable.**

ACER should play an active role in the interconnected European electricity market for the benefit of the market participants and their customers. This future part in providing a more adequate regulatory oversight needs to entail the following range of key facets:

Being active in various European markets, EEX and EPEX SPOT firstly share the assessment of the Commission: A fragmented national regulatory oversight is inefficient. This is both a burden and an obstacle that needs to be overcome to arrive at a truly European dimension for the electricity markets. From the European perspective, harmonizing national approaches, minimizing regulatory discrepancies and removing excessive and contradictory requirements should be the core function of ACER. **The further setting, definition and execution of national oversight shall come under scrutiny whether they are in line with the goals and procedures imposed on the European level.**

Moreover, the integrated European electricity market requires a level playing field that is not subject to national borders. As the harmonized parts of the electricity system is concerned, equal treatment of all participants shall be ensured. Harmonization of rules is an important step to achieve this goal to address the potential threat of regulatory arbitrage. In some aspects, however, EEX and EPEX SPOT advocate to take an additional step ahead: **As decisions with a cross-border, regional or even European dimension are concerned, they need to be taken by the same authority equipped with adequate resources to fulfil its tasks.**

At the same time, however, several caveats need to be taken into consideration to avoid additional burdens and unplanned side effects.

Double regulation must be avoided. EEX and EPEX SPOT strongly advise to focus on better regulation instead of more regulation by simply adding an additional layer. Generally, we welcome that the Commission tried to pay attention to this supposedly easy rule (e.g. the avoidance of double reporting under REMIT). Nevertheless, market participants now face a complex, multi-layered system of reporting obligations. As regards the future role of ACER, placing the emphasis on the key facets stated above is key to overcome the sometimes paralyzing threat of multiple regulations. This also holds true as regards the treatment of the spot as well as the derivatives market. Both segments of the energy market have to be regulated and supervised in a consistent manner limiting the influence and relevance of financial market regulation.

Undue regulation needs to be prevented while decisions have to be verifiable and revisable. Addressing factual problems on a higher or more distant level always carries the potential of undue or even wrongful steps. EEX and EPEX SPOT therefore advise that any decision-making should be complemented by public participation. There needs to be the possibility to complement the Agency's level of knowledge by involving the market. We call for clear rules in this regard to improve both, decision-making and acceptance. Besides that, clear rules for legal protection (i.e. possibilities to question and correct wrongful decisions) are required and have to be discussed from the very beginning.

Finally, EEX and EPEX SPOT stress the fact that **regulation at a European level requires flexibility**. The involvement of ACER, its responsibilities, procedures and conduct have to be subject to flexibility. The problems resulting from an improper European layer can be easily illustrated by giving a concrete example. The so-called "target model" was introduced by applying a very rigid market design framework. The parties involved faced several difficulties in the implementation of this model, especially as the discretionary power in certain situations was overly restricted. Regulation of a complex matter on broad level simply requires the possibility to address unexpected situations, different settings and conflicting interests. The future regulatory oversight on European level as well as the interplay of different authorities therefore requires flexibility and administrative discretion.

Taking the target model as a reason to ask for more flexibility, it needs to be stressed that there is a clear trade-off between harmonization and acceptance of the differences of the underlying energy markets. Both are facts and/or means that need to be taken into account when considering the future interconnected European electricity market as the final goal. And there is no clear ranking between them. Flexibility is needed to balance these usually conflicting facets. The new market design has to provide this flexibility in order to be a success.

**13. Would you see benefits in strengthening the role of the ENTSOs?
How could this best be achieved? What regulatory oversight is needed?**

- ▶ **TSOs are natural monopolies and the regulation of ENTSOs needs to address this fact.**
- ▶ **Future regulatory oversight need to provide clearly defined rules and roles for ENTSOs.**
- ▶ **Transparency and public involvement need to be fostered in the future work of ENTSOs.**

For power exchanges (and future NEMOs), the relationship to ENTSOs/TSOs is of special interest. Taking this relationship as a basis, EEX and EPEX SPOT have to make two introductory remarks:

First, we note that additional regulatory oversight is considered for ENTSOs and power exchanges (and future NEMOs, respectively) in the present consultation. At the same time, however, there is only a discussion concerning strengthening the role of ENTSOs. Interestingly, no reasoning is provided for this preliminary decision. Moreover, the question itself does not explicitly specify whether the question on the potential strengthening is restricted to the network codes and guidelines. In both cases, the consultative communication lacks precision. In any case, we are ready and willing to enter into further discussions.

Second, it is interesting to note from our perspective that power exchanges are labelled as monopolies in the public consultation. In contrast, TSOs are not explicitly described in that way. This is particularly remarkable for us since this assessment appears to be highly inadequate. Indeed, we are convinced that the concept of a monopoly is applicable and valid in a more general and comprehensive manner for TSOs and the ENTSOs. In fact, they benefit from a structural/natural monopoly as most conduction bound infrastructure companies. On the contrary, as evidenced in practice for instance in UK or Germany, power exchanges operate in a highly competitive environment. **TSOs are natural monopolies and the regulation of ENTSOs needs to address this fact.**

Irrespective of these preliminary statements, we strongly support the approach to treat the potential strengthening and additional regulatory oversight in combination. However, the advantageous position of TSOs (and therefore the ENTSOs) should be clearly articulated and the articulate definition of the role of ENTSOs should be emphasized.

As regards clear definitions, we take the CACM guideline as an impressive example. For the first time, this regulation provided clearly distinguished rules for TSOs and power exchanges. In our opinion, this approach needs to be pursued. We have a short list of well-defined players: regulators and watchdogs (ACER, NRAs), market operators exposed to free competition and enabling the liberalized markets (power exchanges, NEMOs) and

infrastructure companies with special emphasis place upon security of supply (TSOs, ENTSOs). A new electricity market design needs to provide a clear idea of responsibilities and powers attributed to these players in the first place. **Future regulatory oversight need to provide clearly defined rules and roles for ENTSOs.**

Besides that, we need to address that the work of ENTSOs has suffered from insufficient public involvement in the past. Public participation should particularly be ensured for topics beyond the interest of single TSOs. We would like to cite the bidding zones review process. Many stakeholders expressed serious concerns about the process and complained that it was missing clarity and transparency. In reference to our answer on question 12, we would like to reiterate the general claim for more public involvement as regards the future work of the ENTSOs: **Transparency and public involvement need to be fostered in the future work of ENTSOs. In particular, stakeholder involvement should be ensured at an early stage and feedback should be adequately taken into account during the decision making process.**

16. As power exchanges are an integral part of market coupling – should governance rules for power exchanges be considered?

- ▶ **As far as market coupling is concerned, new governance rules for power exchanges are already foreseen in CACM Regulation.**
- ▶ **These rules are promising and should be evaluated first before considering new regulations.**

The CACM Regulation (“CACM”) entered into force after this Public Consultation was launched and provides for such governance rules, clearly defining the roles of TSOs, NRAs and NEMOs. CACM is applicable since 14 August 2015 and has a clear timeline for implementing the new governance rules in connection to market coupling. CACM establishes the application of Qualified Majority Voting (QMV) which will foster the governance of the MCO function where cooperation is required. Deadlocks sometimes observed in the past will be avoided with QMV. The MCO plan will be submitted by NEMOs to NRAs for their approval, showing clear regulation and governance rules. **As far as market coupling is concerned, new governance rules for power exchanges are already foreseen in CACM Regulation.**

NEMOs intend to establish a well-structured NEMO Committee as soon as possible. Such a new European body will be the key for the governance of market coupling in aspects pertaining to NEMO only tasks, NEMOs will speak with one single voice. The Governance Rules of the NEMO Committee and its links to the EC, ACER, NRAs and ENTSO-E will be transparent. Effective governance is key for implementing change in a very dynamic power

market where the target models will need to evolve over time. This could be fostered by the authorities by providing the NEMO Committee with an institutional role in future legislation. CACM also strictly defines the areas where NEMOs need to cooperate (i.e. in collectively providing the MCO function) and where NEMOs should compete. There already exist cases (i.e. GB) where increased competition of power exchanges has proven successful. Two years after entering into force, it is already foreseen that CACM will be evaluated by the EU authorities in this respect. CACM principles will possibly be taken one step further and harmonize the status of NEMOs by removing the exemptions applicable to MS with NEMOs qualifying as legal monopolies and making the so-called NEMO passport the rule in all European MS. All this will result in more freedom of choice for market participants. **These rules are promising and should be evaluated first before considering new regulations.**

It should also be noted that Power Exchanges also need to comply with other regulations and in particular with REMIT.

17. Is there a need for a harmonised methodology to assess power system adequacy?

- ▶ **Yes, a harmonized methodology to assess power system adequacy is required.**

A harmonized methodology to assess power system adequacy is required. The current fragmented methodology, in which each TSO applies its own standards is increasingly incompatible with a more and more integrated market. A common methodology should be developed that makes power system adequacy assessments comparable across countries. Assessments also need to take into account the interactions and connections between markets.

18. What would be the appropriate geographic scope of a harmonised adequacy methodology and assessment (e.g. EU-wide, regional or national as well as neighbouring countries)?

- ▶ **The appropriate geographic scope of a harmonised adequacy methodology and assessment should be at least regional.**

The appropriate geographic scope of a harmonised adequacy methodology and assessment should be at least regional. National governments, Regulators and TSOs need to closely coordinate within their region and / or neighbouring countries when assessing generation adequacy. The need for this is increasing with renewables being integrated into the market.

19. Would an alignment of the currently different system adequacy standards across the EU be useful to build an efficient single market?

- ▶ **An alignment of system adequacy standards would support an efficient single market.**

An alignment of system adequacy standards would support an efficient single market.

Using the same system adequacy standards will ensure that Member States' security of supply policies are based on the same principles. These principles should be consistent with the integrated market, which in turn will allow for better integration of EU energy markets. This would also help increasing solidarity between member states and reduce the risk to close borders in case of simultaneous scarcity, or decrease the incentive not to share some reserves with neighbouring countries.

20. Would there be a benefit in a common European framework for cross-border participation in capacity mechanisms? If yes, what should be the elements of such a framework? Would there be benefit in providing reference models for capacity mechanisms? If so, what should they look like?

- ▶ **Cross-border participation in capacity mechanisms will have to be built upon market coupling with the predominant aim to maximize overall welfare and close TSO cooperation in order to work properly.**
- ▶ **Any elements of a possible European framework have to be consistent with the Internal Energy Market and the electricity target model. Distortions of cross-border trade need to be minimized to avoid inefficiencies and higher costs for end-consumers. Capacity markets need to meet the criteria of being market-based (and market-wide), non-discriminatory and coordinated across borders.**
- ▶ **In member states with mature energy markets, market-based reference prices shall be the dominant basis of decision making for market participants.**

It is broadly agreed that there is a benefit in having cross border exchanges between countries. If there is plenty of idle capacity in one country it makes economic sense that this capacity is used to supply the neighbouring countries rather than having to build more resources in the country which is facing shortages. Nevertheless, the issue of cross-border participation in capacity mechanisms is not trivial. Essentially, cross-border contribution rests on two pillars:

Firstly, market coupling, which directs flows to maximise the overall social welfare and reduce curtailment in case of scarcity needs to be further developed. Being more specific in

this regard, any cross-border participation should not imply the reservation of (cross-border) capacity as this would logically reduce the available capabilities for market coupling. A decrease of social welfare and less integrated markets would be the consequence in most standard cases because market coupling already allocates cross-border capacity in the most efficient manner. Moreover, it is important to keep in mind (1) that generation capacity secured in another country will not necessarily be able to contribute to importing security in the event that import capacity is congested and that (2) cross-border capacity mechanisms will need to take into account market coupling rules in case of multiple curtailments.

Secondly, TSO cooperation, e.g. real-time support in emergency situations or provision of adequate cross-border capacities in case of scarcity, has to be ensured. Even in cases where multiple adjacent countries face scarcity, TSOs should not curtail cross-border capacity.

Cross-border participation in capacity mechanisms will have to be built upon market coupling with the predominant aim to maximize overall welfare and close TSO cooperation in order to work properly.

Moreover, the cases of joint curtailment situations in several coupled countries need to be addressed. This is an issue which is currently being discussed between the TSOs and stakeholders in the wholesale power market.

EEX and EPEX SPOT firmly believe that any elements for a possible European framework have to be consistent with the Internal Energy Market and the electricity target model. Moreover, distortions of cross-border trade need to be minimized to avoid inefficiencies and higher costs for end-consumers.

As it has been stressed in the sector inquiry (Case No COMP/HT.4624), capacity mechanisms under flawed designs can lead to distortions and fragmentation of the goal of having a fully connected and integrated Internal Energy Market. Therefore, each member state has to consider carefully whether capacity markets are required at all and if potential gains clear outweigh the mentioned drawbacks. This is definitely not the case as long as the full potential of energy-only markets has not been fully exploited. **In member states with mature energy markets, energy-only markets shall be considered the preferred solution to address the flexibility challenge and to ensure security of supply at a satisfactory level. Market-based reference prices shall be the dominant basis of decision making for market participants.**

Rather than reference models, we believe a set of minimum requirements should be established to guarantee capacity mechanisms are not interfering negatively with the internal energy market. Capacity mechanisms have already been introduced by some member states; the situation at hand has to be dealt with in the most efficient manner. **Therefore, capacity markets shall comply with the overall goal of an integrated European internal market for electricity, i.e. they need to meet the criteria of being market-based (and market-wide), non-discriminatory and coordinated across borders.**

21. Should the decision to introduce capacity mechanisms be based on a harmonised methodology to assess power system adequacy?

- ▶ **As the assessment of power system adequacy is concerned, EEX and EPEX SPOT believe that member states should have the final say. However, a harmonization of the type of measures/benchmarks should be considered for the sake of a better comparability of the different national standards.**

EEX and EPEX SPOT note that, currently, the necessity to assess whether or not to introduce a capacity mechanism lies with the Member States⁵.

As the assessment of power system adequacy is concerned, we believe that member states should have the final say. However, a harmonization of the type of measures/benchmarks (i.e. not their exact value) should be considered for the sake of a better comparability of the different national standards. Such an assessment should not necessarily lead to harmonized decisions with respect to capacity mechanisms.

The comparability of the requirements on the power system would be a benefit of its own kind as it is likely to initiate further discussions on the European level. This would be the necessary pre-requisite to agree on an adequate dimensioning of the required level of generation capacity and/or demand response, also taking into account import and export capacities.

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⁵ For example, Germany has tackled this issue which has been labeled as a fundamental decision for an Energy Only Market 2.0 or for capacity mechanisms in the Green Paper (An Electricity Market for Germany's Energy Transition. Discussion Paper of the Federal Ministry for Economic Affairs and Energy: <http://www.bmwi.de/English/Redaktion/Pdf/gruenbuch-gesamt-englisch,property=pdf,bereich=bmwi2012,sprache=en,rwb=true.pdf>), which was open to be consulted by stakeholders. Following this the German White Paper has been published end of July 2015. In this text, the fundamental decision states that the German government has, after careful consideration, decided to choose for an Energy Only Market 2.0 and to not introduce capacity mechanisms.

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The European Energy Exchange (EEX) is the leading energy exchange in Europe. It develops, operates and connects secure, liquid and transparent markets for energy and commodity products. At EEX, contracts on Power, Coal and Emission Allowances as well as Freight and Agricultural Products are traded or registered for clearing. Alongside EEX, EPEX SPOT (incl. APX-Belpex), Powernext, Cleartrade Exchange (CLTX) and Gaspoint Nordic are also part of EEX Group. Clearing and settlement of trading transactions are provided by the clearing house European Commodity Clearing (ECC). EEX is part of Group Deutsche Börse. For more information: www.eex.com

The European Power Exchange EPEX SPOT SE operates the short-term electricity markets for Germany, France, United Kingdom, the Netherlands, Belgium, Austria and Switzerland. Striving for the creation of a European single market for electricity, EPEX SPOT shares its expertise with partners across the continent and beyond. EPEX SPOT is a European company (Societas Europaea) in corporate structure and staff, based in Paris with offices in Amsterdam, Bern, Brussels, Leipzig, London and Vienna. More than 280 companies trade 500 TWh of electricity on EPEX SPOT and APX every year – 40% of its countries' electricity consumption. EPEX SPOT is held by EEX Group, part of Deutsche Börse, and European electricity transmission system operators. For more information: www.epexspot.com

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