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FORTUM'S (TRANSPARENCY ID 03501997362-71) RESPONSE TO THE COMMISSION CONSULTATION ON THE NEW ELECTRICITY MARKET DESIGN (COM(2015) 340 FINAL, 15.7.2015)

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

   Yes, scarcity prices are an essential ingredient of the future market design, enabling market-based and efficient balancing of supply and demand in all situations.

   Market prices in the day-ahead, intraday and balancing markets, as well as in the forward markets, should always be based on competing bids delivered from both supply and demand resources. During tight market situations the actual scarcity is thus shown in the short-term prices and the expectation of a scarcity situation is reflected in the forward prices as well. With increasing smart infrastructure installed (e.g. smart meters utilising digitalisation) and with liberalised retail markets, consumers with demand response potential can benefit from a lower volume weighted average price. All consumers can benefit from the lower total costs and higher security of supply.

   Regarding transmission capacity, the available transmission capacity on structural bottlenecks at bidding zone borders does impact scarcity pricing within each bidding zone. Stable market development and competitive retail markets require large and predictable bidding zones. Within bidding zones, the scarcity of transmission capacity is reflected in the re-dispatching energy prices, which also give incentives for the TSOs for grid reinforcements. The re-dispatching prices and volumes should be published by the TSOs.

   Internal bottlenecks should not lead to limitations of the available commercial capacity on bidding zone borders, but cross-border re-dispatching should be used instead.

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

   The main challenge is the low political acceptance of high price peaks. Another challenge is the difficulty to hedge the right volume in advance in the financial market, as it is very difficult to know when the scarcity situation/peak prices occur and how high the customers' actual consumption goes. The risk of high imbalance cost can also be a challenge.

   These challenges could be addressed by further developing the market products available at the exchanges. These products will emerge when there is a demand for them. One could e.g. introduce call options that allow hedging against both price and

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volume risks. These options should be available not only for day-ahead but also for intraday and balancing markets. Scarcity prices will also increase attractiveness of the demand response services and will speed up the establishment of the necessary business framework and infrastructure. An important prerequisite for this to happen is that scarcity prices are transferred to the end consumer. If the prices in the day-ahead and balancing markets are allowed to reflect the actual scarcity – and no other interventions exist in the electricity markets (such as subsidy-driven growth of supply) – the capacity mechanisms would be redundant.

However, scarcity-reflecting prices will not help if the wholesale market continues to be destroyed with non-economical investments driven by subsidies, as the scarcity may never occur or it may occur too seldom to give a credible enough investment signal.

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

Yes, the EU should definitely accelerate the process. The goal should be an efficient and integrated balancing market with a limited amount of standardized products that can be offered. One important principle should be to allow market participants to balance (as close to real-time as possible) their demand and supply on a functioning intraday market. The balancing market should be a residual market only and not hinder intraday trading, nor should it be possible to activate bids in the balancing market before the intraday trading gate closure has expired. The balancing market and the intraday market must not overlap. The TSOs should act as one entity from the point of view of the balancing responsible party.

The Nordic balancing market with a common merit order is an example of good development in the cooperation of TSOs with respect to the balancing market. The ambition should be to develop a common European balancing market, enforced if necessary through legal measures and without any complementary national or regional market designs, products or settlement periods.

The lack of a target model in the current draft balancing guidelines and the absence of a convincing path towards a common European model leave the door open for the development of different – and even conflicting – models. This is very unfortunate, as there is a real need for a common balancing market that can deal with the increasing flexibility in the wholesale markets. We strongly encourage the Commission to scale up the ambition for a common balancing market.

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

More emphasis should be placed on the swift implementation of the intraday platform with clear focus on the needs of market participants. For a market participant to be able to take full control of their balance responsibility, a functioning intraday market is needed. The EU should take the political lead on driving the development and finalisation of the cross-border intraday platform and ensure that local implementation plans are developed in parallel. Market participants should be given a stronger role in the development, as they are the experts in their needs from the platform in many aspects. The power exchanges should also improve their communication on and transparency of the project and on how the local implementation will take place.

Markets that already have a functioning cross-border intraday trading platform could be a natural starting place to go-live, as the TSOs there already have routines for allowing cross-border trading, if a full European-wide go-live is not possible. Key questions to be addressed include how would the capacity allocation work in the new system (flow based or not?), and should there be auctions after the gate closure.

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?**

All generation investments require a stable and predictable energy policy that enables market participants to base their investment decisions on future expectations of energy prices for the remuneration period of the specific investment. The price expectation can be derived from the short-term markets and supported by some financial products, which, as such, would give credible investment signals – as long as the general energy political framework remains credible and stable. However, notable public interventions like strong subsidies and poor coordination of EU and national energy policies can deteriorate and distort the credibility of these signals. A credible short-term market supported by financial products would be the most cost-efficient and technology-neutral way for society to secure sufficient capacity to meet demand.

Today contracts up to ten years ahead, which can be considered long-term contracts, are available through financial power exchanges. The prices of these contracts in Northern Europe today are too low to remunerate new investments, and thus reflect the consumers' view that, in the short term, there is no need for new capacity. Another form of long-term contracts today is, in fact, the Feed-In Tariffs for renewables.

The role of the public sector should, first and foremost, be to enable a predictable energy policy and to restrain from unpredictable or even retroactive changes. Long-term contracts as such do not solve the overall credibility question of energy polices, but, in fact, almost the opposite. Long-term contracts should primarily be based on voluntary and commercial contracts between generators and consumers, and between generators and retailers to hedge future prices and price volatility.

The liquidity and low transaction costs of financial power trading are important for transparent medium-term and long-term contracting. It is important that financial market legislation, such as EMIR and MiFID II, is working in favour of – not against

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– the development of a liquid and dynamic power market and active market participation at the exchange. However, the power industry currently has serious concerns regarding EMIR and the unintended effects that the full implementation of the rules (including the prohibition to use bank guarantees as collateral after March 2016) will have on the functioning and liquidity especially of the Nordic power market. These serious concerns should be addressed in the forthcoming EMIR review process.

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 in hampering the free flow of energy?**

The divergence of energy-related taxes and charges is notable and creates both operational and strategic distortions. A common European approach to better align and coordinate energy-related taxes and charges would therefore be useful.

In general, there should be a clear political will to limit and decrease the ever-increasing share of taxes, subsidy costs and other non-energy-related components in the end-consumer bill. All unrelated charges that do not reflect costs of production, transport and distribution should be eliminated. High end-consumer prices are a cause of concern also from the competitiveness point of view.

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

As costs of mature RES technologies (onshore wind and solar) continue to decrease, market-based investments in these technologies will very soon be fully feasible. Hence, in the short term the first priority should be to enforce the EU ETS and CO2 price steering and let the ETS drive investments in the ETS sector – both in renewable and other low-carbon generation. No additional support besides CO2 price steering should be applicable in the ETS sector. However, it is likely that some RES subsidies are needed in the non-ETS sector.

Any remaining subsidies for mature renewable energy production should be phased out as soon as possible in line with the EU state aid guidelines. At the same time, renewable energy, including decentralised generation, should be fully integrated into the electricity market, i.e. an equal and level playing field for balancing and other market obligations should be ensured. Success in integrating renewable (including decentralised) energy in the market will be the key for the future market design development.

It is worth noting that there is no specific target for renewable electricity for 2030 as such, only a target for renewable energy. In implementing this target member states should commit to a genuinely market-oriented renewable deployment in which renewable volumes and prices are determined by market fundamentals.

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The broad exemption framework provided for micro generation in the new EU state aid guidelines for energy and the environment should be removed from the post-2020 state aid rules. Remaining subsidies should be strictly limited to R&D.

8. **Which obstacles, if any, do 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 merit order?**

The main obstacle today is that in most member states renewable generators are completely outside the energy market arrangements without any market obligation (balancing responsibility etc.). In many markets renewable electricity also has priority access to the network while also enjoying over-compensatory subsidies. This needs to be changed as soon as possible in line with the updated EU state aid rules for environmental protection and energy. Also regarding negative prices, the rules of the state aid guidelines should be strictly followed, i.e. no subsidies should be paid during negative hours and this rule should apply already from the first hour.

Another obstacle is the rapid deployment of renewable electricity without taking into account domestic or cross-border network planning. The network planning does not reach the speed of RES growth. Hence, there is insufficient domestic and cross-border interconnector capacity on many European borders or the available commercial cross-border capacity is restricted by the TSOs clearly below the maximum capacity value.

A delay in smart meter implementation also creates an obstacle for the integration of small renewable generation in the distribution grids. Therefore, smart meters should be installed as soon as possible at least for all customer groups with solar DES generation possibilities.

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)?**

Yes, there should be a coordinated approach for renewables support schemes. Without coordination, the credibility of an internal energy market is endangered.

Today the diverging and over-compensatory national renewables schemes have adversely affected the development of the internal electricity market. Moving towards 2020, it is essential that the interaction of renewables schemes and the cooperation amongst member states are improved.

Current renewables support schemes should be opened for cross-border participation at least at the regional level, and no new subsidy schemes should be implemented when the current subsidy schemes expire. A clear rule should be that all remaining subsidies for mature technologies must be phased out at the end of the current subsidy schemes or at the latest after 2020 when the CO2 price should be the only driver to steer decarbonisation and growth or RES.

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Regional schemes, such as tendering mechanisms or certificates, would allow renewable plants to be built where they are most needed and where it is most cost-efficient. Currently, it's the subsidies more than the economics or demand that drive renewable investments.

10. What do you see as the main obstacles that should be tackled in order 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 end customers the possibility to participate in the balancing market through a demand response scheme, etc.)?

In general, the European market regime and policies should enable customers to utilise demand response. However, the retail markets that are still regulated in many countries, the absence of infrastructure (smart metering, smart grids, contract structure), low wholesale energy price levels, and the lack of political courage to incentivise consumers to take a more active role in energy markets can be identified as the main obstacles to kick-starting demand response. Moreover, the increasing end-consumer costs through inflexible grid fees, subsidies and taxes also dilute the consumers' incentives to take a more active role.

Market design should thus be approached from a broader perspective to tackle retail markets and their related market failures. As rightly pointed out in the EC Communication 'Delivering a New Deal for Energy Consumers', '*while the past decade has transformed the energy sector in Europe, retail energy markets [...] have not kept up*'. To increase competition, customer choice and participation, a pathway should be set to allow greater convergence of retail markets whilst leaving freedom on their design and in full respect with subsidiarity. As for wholesale markets, a set of no regret options are crucially needed to ensure that retail markets can meet up with the ambition of customer empowerment:

- linkage of the wholesale and retail markets,

- a European strategy to remove end-users prices,

- a clarification of the role and responsibilities of market and grid operators,

- the same unbundling rules irrespective of the size of grid operators,

- a comprehensive roll-out of smart grids

- and the market integration of decentralised generation.

Such an environment is also key to enable and encourage demand-response. Today the non-energy related components are much bigger than the energy component, which prevents consumers from seeing the personal benefits of more active demand side management. However the above principles combined with more market-driven energy policies after 2020, will -amongst other things- allow to decrease the non-energy components of the customer electricity bill.

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For industrial consumers, the demand response market is already more mature, but the prevailing low wholesale power prices do not incentivise industrial consumers to be more active in this area. Over time when price volatility in the wholesale markets grows, incentives for demand side management will grow too. Most of the demand side management potential is likely to be in the industrial side. Hence, it is crucial to keep the industrial consumers incentivised to take part in demand side management and energy efficiency by dismantling all regulated tariffs in this area.

The Nordics have implemented liberalised retail market and a smart infrastructure. Some demand side management already occurs today, but the potential is clearly much bigger. To fully utilise this potential, the following preconditions should apply:

- The end customer must see a clear benefit from participating in demand response. To that end, the service or concept incorporating demand response must be simple to understand (also in terms of benefits) and easy to use.

- Industrial customers should start to consider electricity price as a variable cost that can be impacted, rather than a fixed cost.

- Standard home automation technology should be available at the customer's premises and the cost of additionally required technology should not be too high in relation to the potential savings.

The energy industry needs to do its part in improving the customer offerings and in convincing customers of the benefits of demand response. At the same time, a clear political commitment is also needed to steer the development towards a smart system.

11. Electricity markets are coupled within the EU and linked to its neighbours, but 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 to also include 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?

Yes, regional or European-level responsibility for system security would be better for the European power market.

The goal should be that the market, in practise, sees only one TSO. Whether it is done by a European TSO/ISO or by current TSOs improving their cooperation is not an issue. This concerns the operative phase and balancing markets. It is at least equally important that TSOs – while prioritising grid investments – take a perspective from the full European or at least regional market rather than merely looking at domestic bottlenecks.

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There are many advantages to TSOs acting as one to the market. Ancillary reserves can be procured in a more economical manner. Balancing markets would be developed from a European view. Issues concerning security of supply could also be addressed with capacity from neighbouring countries, while taking into account the transmission possibilities. The TSOs should develop a common regional marketplace for ancillary services, including reserves, balancing power and, where applicable, also strategic reserves.

The Ten-Year Network Development Plan is a good example of how cooperation of TSOs can easily be just a collection of investment plans. With no clear prioritisation based on the benefits of the grid investments to the whole region, or Europe as a whole, such grid plans may turn out to be of little relevance. The same goes for system adequacy analyses: they should be performed on at least a regional scale and preferably on a European scale.

The cooperation between the Nordic TSOs is a good example of how a common approach to the balancing market can facilitate benefits for the whole region when TSOs work as one. The Nordics is also a good example of how the cooperation should be improved. An enhanced cooperation both in operational and strategic system planning would benefit the whole region. Currently the very important cross-border grid investments have clearly been valued differently in terms of their priority (the third line between northern Sweden and Finland as an example) in neighbouring countries.

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 creation of ACER has been a first step in the direction of greater convergence of regulatory practices, but more coordination and alignment of these practices are needed to push forward market integration. In reshuffling the Agency, further consideration should be given to an automatic seizure combined with a resolution role of ACER in case of a cross-border dispute as well as a more proactive involvement and European mindset in the implementation/adaptation of the Network Codes. The Agency could also create awareness of the gaps and discrepancies deriving from policy interactions and play an advisory role in the convergence of energy policies. To fulfil these tasks, the structure, governance and independence of ACER should be improved, including allocation of resources, so that it can act more decisively on European regulatory issues.

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

There are clear benefits in strengthening the role of ENTSOs (ENTSO-E). Prior to doing so, a clear division of their functions is needed.

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ENTSO is not only a body elaborating legislation at the EU level (network codes), but also associations for members that primarily act with their own interests in mind. These differing objectives should be clearly separated.

Ultimately, the European power market should see one TSO interface working for the benefit of Europe as a whole, without national agendas, both in the operative and grid development horizons. Whether this takes the form of a TSO/ISO legal company or, as it currently stands, a grouping of TSOs cooperating on a voluntary or regulated basis is of lesser importance. New layers of bureaucracy should not be built, but national powers from TSOs could be moved to a European TSO/ISO.

14. What should be the future role and governance rules for distribution system operators? How should access to metering data be adapted (data handling and ensuring data privacy etc.) in light of market and technological developments? Are additional provisions on management of and access by the relevant parties (end-customers, distribution system operators, transmission system operators, suppliers, third-party service providers and regulators) to the metering data required?

Easy and equal access of suppliers and other commercial service providers to metering and other key data is a key prerequisite for efficient retail markets and the development of new customer oriented products and services. There should be a clear allocation of responsibilities - the suppliers/service providers handle the customer interface and offers services under competition, whereas the DSOs are neutral market facilitators. The DSOs should not participate in the energy service markets (e.g. energy efficiency or demand response services), since it would interfere with the commercial activities and might distort competition. If the DSO would be allowed to participate in such activities, the unbundling regulation need to be tightened.

The DSOs should be responsible for implementing smart metering and for the collection of metering data. The data should be stored in a national data hub run e.g. by the TSO in order to ensure non-discriminative access by all relevant parties. By default, the data should be accessible only on a aggregated level. The data identification of individual consumer should not be possible without the permission of the consumer.

15. Shall there be a European approach to distribution tariffs? If yes, what aspects should be covered; for example, tariff structure and/or tariff components (fixed, capacity vs. energy, timely or locational differentiation) and treatment of self-generation?

A European approach to distribution tariffs would definitely increase the efficiency of the integrated electricity markets, as the steering between the investments into centralised generation and self-generation and between the investments into self-generation in different countries would not depend on the tariff structure of a certain country but on the market signals. The capacity and the energy components of the distribution tariffs should reflect the real structure of the cost. The energy component should mainly cover the costs related to procurement of the electricity to cover the losses in the distribution grids (about 10% of the grid fee). The rest of the distribution tariff should be in the form of a fixed capacity fee or a combination of a fixed fee and a time-dependent energy fee (e.g. with a higher day-time price on winter working days). With the rising number of consumers with self-generation (so-called prosumers), the grid tariffs could be more in the form of capacity or time-dependent charges, not energy charges. Otherwise, prosumers pay less for the grid, and those who do not have possibilities to install self-generation have a higher burden to compensate the cost to the grid companies. Another benefit of capacity-based or time-dependent tariffs is consumer motivation to avoid short-term and winter-day peaks in own consumption, which should lead to less need for grid investments and thus lower grid charges.

Locational price signals are important to guide investments to the generation and consumption sides. As the division of the electricity markets into bidding areas is a compromise between reflecting the actual grid bottlenecks, ensuring the necessary level of competition, industry competitiveness in certain regions, and reflecting the state borders, the locational signals given by the area prices may not necessarily be enough. If the volume of counter trades performed by the TSO to balance the grid is seen to be unsustainably high, there is a need to strengthen the locational signals. Locational grid connection fees may be used as a solution. Differentiation of the connection fees should be preferred to locational distribution tariffs, as the target of the locational pricing is to steer the future investments, not to introduce an additional burden on consumers who just happen to be connected to the deficient part of the grid.

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

Power exchanges (both financial and physical) play a vital role in the functioning of the power market. In the physical power markets, the exchanges have specific tasks – from legally binding network codes and other regulations – for the smooth operation of the power market. Yes, there should be some degree of regulatory oversight and transparency on governance rules.

In the physical markets, there are some key functions for the power exchange that cannot be placed under competition, such as the operation of the “algorithm” that match bids and offers in an optimal manner given the transmission and other constraints for the day-ahead market (and intraday when developed). There should be a clear division between tasks that are a “natural monopoly” and tasks that should or could be placed under competition between the power exchanges. For instance, the operation of the algorithm is currently done by multiple exchanges in multiple locations simultaneously, while one exchange is in charge and others are as backup. From a contingency point of view, this is very good. But from a cost-to-market-participants point of view, how many copies of the same system infrastructure are really needed to give adequate redundancy? As the slow progress of the intraday platform also indicates, it is difficult for the exchanges to develop common software while simultaneously competing for the delivery of the said system. Therefore, it might be more efficient if the infrastructure crucial to the physical power market were developed by a separate entity as a natural monopoly and the customer user interface could be the competitive realm for power exchanges, should such competition exist.

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As such, the best provider of user interface would prevail in the end. The natural monopoly, either a company owned by power exchanges together and supervised by ACER or owned and operated by a European TSO/ISO (see question 11), could be the goal.

The purpose of the financial markets is to hedge prices between producers, consumers and traders. We welcome competition, as the hedging products can be traded multiple times before delivery. There is already an ample level of governance on the financial markets, and it is not worthwhile to increase it.

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

Yes. A common methodology of defining generation adequacy and a common understanding of relevant geographical areas are prerequisites to assessing the status of security of supply in the relevant area. Otherwise, it is very difficult to have aligned approaches towards sufficient capacity adequacy in an integrated European internal energy market.

Today, methodologies for assessing power system adequacy differ in various member states; hence, drawing far-fetched policy recommendations on regional or national sufficiency in security of supply or power market design is very brave without the proper power system adequacy assessment. Agreeing on a common European-level methodology and the relevant geographical scope for this assessment depends on the level of market integration.

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)?

Such an assessment should be done both on a European basis and a regional basis. The relevant regions need to be defined based on an appropriate power market interconnectivity analysis. Regions that have a strong interconnectivity and a truly integrated market should be addressed jointly (e.g. the Nordic region). Today, the relevant regions likely closely follow the proposed Regional Security Coordination Initiatives (RSCI), but it might well be that in the long term the number of regions decreases as system interconnectivity improves. Over time, the borders of such geographic regions do not necessarily need to be based on national borders, but on natural geographical scopes.

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

Yes, by creating a common methodology for the assessment, but not necessarily exactly the same criteria in all regions/countries. For instance, imports/exports should be taken into account realistically in the assessment, and the assessment should be made at least on a regional level and not as independent islands. Demand response should also be taken into account when assessing system adequacy. Some loose

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minimum adequacy standards could be presented, but it should not be allowed to impose costly criteria that can be hard to fulfil.

20. Would there be 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?

Both a common European framework for cross-border participation in capacity mechanisms and reference models for capacity mechanisms would be beneficial as they would mitigate the distortions brought to the integrating electricity markets by the capacity mechanisms implemented in some EU countries. The easiest solution for implementing a common framework for cross-border participation would be based on the principle of direct participation of the cross-border capacity into a national capacity market. The cross-border capacity owner would offer a de-rated volume of the cross-border capacity with the price of zero. If the cross-border capacity owner is a TSO, the use of the income from the capacity sales would be restricted to building more cross-border capacity or to the reduction of grid fees. As for the reference models for the capacity mechanisms, decentralised trading with reliability options could be a preferred solution.

The direct participation of the cross-border capacity into a national capacity market is a preferable solution for the common framework due to simplicity and applicability to all capacity market designs implemented or planned in the EU. An alternative solution would be when the generation, flexible demand or storage owners would sell their capacity to the capacity market implemented in the neighbouring country. However, this framework would face challenges with practical implementation, as the member states have been implementing national capacity markets with different requirements to the capacity providers and different trading arrangements, and the majority of the member states do not have capacity markets at all. So it would be rather challenging to monitor capacity delivery by the providers located in a neighbouring country.

Decentralised reliability options could be a preferred solution for the EU reference capacity market model to be used in the countries which find it necessary to have a capacity market. This solution is recommended due to a much lower degree of distortion to the integrating electricity markets. The idea is to introduce an obligation for the demand side to cover own actual peak load by purchasing decentralised reliability options. In exchange for an option fee, the options sellers would have an obligation to have the capacity physically available at times of system stress and to pay the difference between the reference market price and the option strike price, if positive, to the buyer. There would be high penalties for capacity under-procurement and under-performance. The market players themselves would choose the reference market: day-ahead, intraday at certain time points, or balancing. The counterparties would be allowed to freely decide on the strike price and the contract duration. To support liquidity and transparency, initially, all trading would be conducted on a central platform with a limited number of strike prices, and a small number of reference markets: e.g. DA, balancing and two expiry times intraday.

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The approach based on the decentralised reliability options offers multiple benefits. It gives politicians an instrument to ensure the desired level of security of supply. It provides consumers with a hedging instrument against price volatility and makes regulatory set price caps redundant. It allows the market wider participation of different technologies and lowers the risk of oversupply compared to the centralised capacity auctions: e.g. wind and solar capacity owners can sell options cleared in the balancing market a short time before delivery (when they are certain about the volume of available capacity), while in the centralised capacity auctions the wind capacity is heavily de-rated and the solar capacity cannot be sold at all. The freedom to choose the reference market, the strike price and the contract duration make the model highly adaptable to the evolving system requirements. The market would put the most value on the capacity with the right degree of flexibility. Among the shortcomings of the approach are complexity and absence of the motivation for the demand response with the price above the strike price (the shortcoming is mitigated by setting a high enough strike price).

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

Yes, it should. A harmonised methodology to assess power system adequacy would limit the degree of suboptimal planning and political steering of the investments in the power industry. A common framework is especially needed for proper accounting for the cross-border interconnections and demand response.