

**UNESA RESPONSE TO EUROPEAN COMMISSION CONSULTATION ON:  
GENERATION ADEQUACY, CAPACITY MECHANISMS AND THE INTERNAL  
MARKET IN ELECTRICITY**

(1) Do you consider that the current market prices prevent investments in needed generation capacity?

*It seems clear that investment decisions are adopted, among others reasons, based on the expected evolution of the market prices in the long term.<sup>1</sup> Nevertheless, as important as the expected prices would be a stable and predictable regulation. However, many times decisions adopted by Governments, mainly based on political reasons, have a negative effect on the market (i.e., distortions), leading in turn to a sharp increase in the risk perceived by investors (i.e., crowding-out effect).*

*In the Spanish case, the evolution of the renewable generation capacity, which has gone much further than initially foreseen in the energy plan, as well as the continuous regulatory interventions in the market, have had important effects. Market prices have been seriously depressed and the role of some thermal power plants has been reduced to back-up of the intermittent renewable energies, leading to a severe reduction of their operating hours. In this situation, the expectations of recovery of fixed costs from the energy markets have been seriously affected, even putting existing plants under serious risks.*

(2) Do you consider that support (e.g. direct financial support, priority dispatch or special network fees) for specific energy sources (renewables, coal, nuclear) undermines investments needed to ensure generation adequacy? If yes, how and to what extent?

*The introduction of support schemes -to any type of generation technology- affects investment decisions for those technologies without any support scheme. Such affection is due to the obvious distortions introduced in the market, so investment in technologies without any support scheme (refurbishment or new) turn to depend basically on the output target and expected level of support of other technologies.*

*Therefore, support for specific energy sources does not only affect market price formation (i.e., depression) and operating hours of certain conventional generators, but introduces significant uncertainty / risk in the business plan of both existing and new conventional generation units. In such a context, security of supply might be endangered due to the lack of new investments in conventional units and the closure / mothballing of the existing ones.*

(3) Do you consider that work on the establishment of cross-border day ahead, intraday and balancing markets will contribute to ensuring security of supply? Within what timeframe do you see this happening?

---

<sup>1</sup> In this sense, consider that quoted forward prices only cover a minimal portion of the lifetime horizon of generation asset. Therefore, current market prices are only residually relevant for investment decisions purposes.

*Cross-border markets will help to ensure an optimal utilization of the available interconnection capacities and, in consequence, will undoubtedly have a positive impact on security of supply. We must keep in mind that cross-border day ahead, intraday and balancing markets are closely related to real time, and not to medium or long term time as generation adequacy does. However, this might not be enough, as in some borders increased interconnections capacity is needed and in some cases, additional measures have to be taken in order to avoid severe disturbances produced by TSOs justified in the security of supply.*

(4) What additional steps, if any, should be taken at European level to ensure that internal market rules fully contribute to ensuring generation adequacy and security of supply?

*One of the first things to do is to better define the terminology related to security of supply and the way to measure the different concepts. Based on this, and taking into account the national and regional circumstances, Member States could assess its level at national and regional levels.*

*Grid development to overcome national congestion and development of cross-border capacity should be incentivised. In some borders, the capacity of interconnection is still far from the aims fixed by the European Council met in Barcelona in 2002 that established "the target for Member States of a level of electricity interconnections equivalent to at least 10% of their installed production capacity by 2005". In this context it is priority to increase the interconnection capacity in some borders to propitiate a real increase of market integration and security of supply between regional markets.*

*Market designs are under revision due to the introduction of large amounts of RES. These designs must be such that promote investments in the efficient technologies in order to face the system needs. With this purpose, it is necessary avoid counteracting policy measures and defend the market-based mechanism of carbon price as the solely objective to reduce CO<sub>2</sub> emissions. Investors need clear, transparent and stable rules, policies and targets in order to build reasonable expectations that justify their business plans.*

(5) What additional steps could Member States take to support the effectiveness of the internal market in delivering generation adequacy?

*To support the effectiveness of the internal market, Member States have a key role in removing distortions introduced in national regulations (as price caps, regulated end-user prices, barriers on closure / mothballing of generators or ad-hoc taxes) and promote the participation of demand in the market. This would contribute not only to a greater markets integration, but to a clearer and more stable regulatory framework for carrying out the necessary investments.*

*Additionally, better coordination between EU energy policy and the policies of member states avoiding volatile, contradictory and inconsistent policy messages are also needed.*

(6) How should public authorities reflect the preferences of consumers in relation to security of supply? How can they reflect preferences for lower standards on the part of some consumers?

*First of all, taking into consideration that blackouts are publically and politically unacceptable, it seems obvious that each consumer has a different willingness to pay, as each of them give to their marginal electricity demand a different value. In this sense, a well-design fast-clearing market, in which consumers are allowed to take an active part in it (directly or through retailers), could be a solution when a scarcity episode occurs. To make this possible, it is key that consumers are fully exposed and informed about electricity prices (in order to assess adequately the scarcity and reliability), as well as the removal of regulated end-user prices is a must. Further measures to foster DSM are welcomed (nonetheless subject to a positive cost-benefit analysis).*

*However, so long as technical shortcomings do not allow consumers to fully express their preferences or to actively participate in the market, there are elements that justify that public authorities act for certain consumers for specific issues (e.g. by setting an specific figure for the value of unserved energy). These constraints, which will become less relevant as smart grids are deployed, are likely to remain in the near term.*

*However, CRM is not what originally introduces the need of this regulatory limiting action. CRMs can be perfectly compatible with energy efficiency and DSM, but it is important to develop all those mechanisms based on a level playing field. To this end, different approaches are possible depending on the CRM design.*

(7) Do you consider that there is a need for review of how generation adequacy assessments are carried out in the internal market? In particular, is there a need for more in depth generation adequacy reviews at:

- a. National level
- b. Regional Level ✓
- c. European Level

*Generation adequacy should not be assessed according to geographical borders, but rather according to the level of interconnection (in a similar way as regional approach for the EU internal market). Overall, we support that generation adequacy assessment should take into account cross-border interconnections (i.e., should be more regional than national). This requires a firm commitment between involved countries in sharing interconnection resources and avoiding interconnection capacity reductions in case of local scarcity, and so respecting trade agreements, but taking into account that the responsibility for maintaining adequate security of supply lies, in fact, at the national level.*

(8) Looking forward, is the generation adequacy outlook produced by ENTSO-E sufficiently detailed? In particular,

- a. Is there a need for a regional or European assessment of the availability of flexible capacity?

- b. Are there other areas where this generation adequacy assessment should be made more detailed?

*The ENTSO-E reports seem to conclude that generation adequacy is fulfilled according to their TSOs perspective. However, according to the point of view of market players, there are aspects that they could not have taken into account.*

*For instance, TSO's position is focused on international transmission lines and cross-border trading to provide available capacity/supply, but there are also other aspects like needs in flexible generation availability or demand side response that should be taken into account. All resources are currently necessary and the ENTSO-E forecast should also take into account both resources, but flexible generation capacity is not sufficiently detailed in ENTSO-E Outlook.*

- (9) Do you consider the Electricity Security of Supply Directive to be adequate? If it should be revised, on which points?

*We consider the Electricity Security of the Supply adequate in general terms and specially regarding the role of Member States in their capacity to "...ensure a high level of security of electricity supply by taking the necessary measures to facilitate a stable investment climate"<sup>2</sup>. Nevertheless, it would be reasonable to include general guidelines to move progressively to a more harmonized approach as far as measures adopted to ensure security of supply are concerned.*

- (10) Would you support the introduction of mandatory risk assessments on generation adequacy plans at national and regional level similar to those required under the Gas Security of Supply Regulation?

*One to one equivalency does not seem feasible since other factors intervene in security of supply in electricity that adds a different complexity than in the case of gas. In our opinion, the ENTSOE Generation Adequacy analysis should be also built on aspects such as availability of system flexibility and demand side response and on different National Plans according to Art. 4 of Directive 2003/54/EC. Then, security of supply should be tackled at regional level, tending to a European approach in the longer term. Stronger emphasis and efforts should be put to elaborate such analysis to become a robust and up to date hand book that serves as a reference to the state of play of generation adequacy in Europe. This analysis shall take into account among other data regional and national plans contained in the Ten Year Network Development Plan.*

- (11) Should generation adequacy standards be harmonised across the EU? What should be that standard or how could it be developed taking into account potentially diverging preference regarding security of supply?

*Security of supply is of key importance to member states and while a specific regulation at European level remains absent, the solely regulation to this respect (i.e. Directive 2005/89/EC) empowers each Member State to tackle its own security of supply. Besides, the structures of the power system (generation mix, presence of hydro reservoirs, etc.) vary*

<sup>2</sup> See Article 3.1 of Directive 2005/89/EC.

*widely among the different member states. Therefore, it seems quite difficult to really obtain such harmonisation.*

*A pragmatic way forward could be that the European Commission outlines general principles. Member states should also cooperate at regional level to gradually move towards an European adequacy approach.*

(12) Do you consider that capacity mechanisms should be introduced only if and when steps to improve market functioning are clearly insufficient?

*No.*

*Although in theory an energy-only market could efficiently deal with generation adequacy, there are a number of market design distortions (as regulated end-user prices, restrictions on plant operations, price caps or barriers on closures / mothballing), regulatory interventions (as massive deployment of energies under support schemes, ad-hoc taxes or specific support to indigenous coal production) and long-term uncertainties / perceived risks (as lack of confidence in no regulatory intervention at price spikes or lack of visibility on post-2020 European energy policy targets and tools) that seriously hinder wholesale market outcomes, making capacity mechanisms necessary to preserve efficiency.*

*In fact, although some of these problems could potentially be removed swiftly (as price caps or barriers on closures / mothballing), some other are expected to remain for a long time (as the massive deployment of energies under support schemes or lack of visibility on post-2020 European energy policy targets and tools) or even permanently (as lack of confidence in no regulatory intervention at price spikes). Therefore, it seems clear that there is a structural component in the need for a capacity mechanism that turns it into a non-temporary measure.*

(13) Under what circumstances would you consider market functioning to be insufficient:

a. to ensure that new flexible resources are delivered?

*In theory, the energy and balancing markets should be able to deliver efficient price signals for flexibility. However, given the existing market design distortions, regulatory interventions and long-term uncertainties / perceived risks, it is not clear whether at present -and for the foreseeable future- such assumption holds. In addition, and considering that conventional generators are turning to a back-up role, it is important to note that balancing markets have not provided stable prices and volumes of energy so as to attract new investments so far. Therefore, it would be necessary to analyse whether existing designs can actually give the efficient price signals for flexibility or whether these are sufficient to ensure the right investment level. In any case, such analysis should consider whether the identified problems specifically affect the flexible resources / technologies or is common to all resources / technologies.*

b. to ensure sufficient capacity is available to meet demand on the system at times of highest system stress?

*In the energy policy framework, for some years it has prevailed the need to generate a large share of RES production (often accompanied with exceeding and un-controlled support mechanisms). This has deviated the energy mix from its original economic optimal point, posing important challenges on grids and markets. As a consequence, electricity markets neither deliver the adequate economic signals to ensure an adequate remuneration to both existing and new flexible resources nor ensure sufficient capacity to meet demand at times of highest system stress.*

(14) In relation to strategic reserves:

- a. Do you consider that the introduction of a strategic reserve can support the transition from a fossil fuel based electricity system or during a nuclear phase out?
- b. What risks, if any, to effective competition and the functioning of the internal market do you consider being associated with the introduction of strategic reserves?

*First of all, it would be necessary to define precisely what a strategic reserve is and how it is used, as the extent of its impact on the market largely depends on this. In most existing design, the strategic reserve is used as insurance against extreme cases – i.e., a last resort capacity only available to the TSO when a scarcity situation appears in the market (not offered in the market but dispatched by the TSO at a regulated price).*

*Under such an arrangement, it seems that if the market is not working properly for whatever reason, the strategic reserve is not going to solve that problem, but just minimise its effect. As the problem is not solved, the market will remain incapable for attracting the needed investments, eventually forcing additions to the strategic reserve. Hence, a vicious circle is created – i.e., a system with an ever-diminishing market and an ever-increasing strategic reserve. Obviously, this cannot be deemed an efficient solution / situation.*

*In addition, the timing chosen for the activation of these bids is also very important. The use of the bids in the day-ahead market can affect the intraday and balancing markets, introducing further distortions.*

*Finally, it is not clear at all how DSM or capacity available through the interconnections can take part in such a scheme.*

(15) In relation to capacity markets and/or payments:

- a. Which models of capacity market and /or payments do you consider to be most and least distortionary and most compatible with the effective competition and the functioning of the internal market, and why?
- b. Which models of capacity market and /or payments do you consider to be most compatible with ensuring flexibility in a low carbon electricity system?

*Capacity mechanisms, if well designed, do not introduce distortions in the market. To this end, capacity mechanisms have to reveal the value of capacity scarcity and avoid any discrimination between technologies or participants. They shall ensure that all capacities contributing to security of supply (not only generators) receive remuneration*



*proportionate to their contribution. In this sense, it's a Member state responsibility to make a cost-benefit analysis to examine alternative approaches for security of supply, such as peak-shaving measures, increased imports through appropriate interconnections and facilitating demand-side participation in the market of industrial as well as retail customers.*

*With regard to market-based capacity mechanisms, it is important note that their implementation is not convenient in markets where there exist significant exit barriers for the closure / mothballing of generators. Under these circumstances, the market would be incapable of adjusting the available capacity in situations of overcapacity by its own, leading to sustained inefficiently depressed prices for capacity.*

c. Are there any models of capacity mechanism the introduction of which would be irreversible, or reversible only with great difficulty?

*It is not the existence of the mechanism in itself that should be reversible, but rather its impact on the market. As already stated in question (12), it seems clear that there is a structural component in the need for a capacity mechanism that turns it into a non-temporary measure.*

(16) Which models of capacity mechanisms do you consider to have the least impact on costs for final consumers?

*Rather than on the impact on direct cost for consumers, the focus should be on the impact on the whole market efficiency. Direct costs corresponding to different CRMs are not comparable, as the CRM is just an element integrated into / coherent with the whole market design. CRMs are not independent modules, they cannot be analysed separately from the whole market design. In this sense, and as an example, it would be senseless to compare the direct cost of a strategic reserve scheme to that of a market-wide scheme. Therefore, considering the least direct costs for consumers as the main design criterion for CRMs would not necessary foster the efficiency of the whole market design. In other words, the main target of CRM is to have a positive impact on the welfare of the market. The impact cannot only be referred to the direct cost of the CRM.*

*The CRMs must counteract the negative effects on efficiency of distortions and barriers existing in the market and, at the same time, avoid creating new distortions and barriers with its design. However, although there are different "families" of CRMs designs (as those mentioned in the consultation paper), their impact on welfare depend mostly on their design details and its coherence within the whole market. Thus, it is not possible to assess in advance which "family" of CRM is most convenient in terms of impact on welfare – such an assessment should be made in an individualised manner and with all the design details available.*

(17) To what extent do you consider capacity mechanisms could build on balancing market regimes to encourage flexibility in all its forms?

*CRM address fundamentally different system needs than balancing markets and the timeframes of action are also different.*

*Balancing markets are mainly tailored to provide flexible solutions in real-time or near real-time timeframes in order to support the stable operation of power systems.*

*CRMs have been designed to meet an entirely different problem, which is to tackle concerns of security of supply, reflected by the availability of sufficient generation to meet peak load demand and cope with RES variability. Obviously, regulators can design capacity mechanisms not only looking for a certain reserve margin target, but also at a certain flexibility requirement (in all of its forms).*

(18) Should the Commission set out to provide the blueprint for an EU-wide capacity mechanism?

*Differences among Member States, as far as specificities of their electricity systems, make it challenging the idea of "one-size-fits-all" solutions. These differences, which end up affecting security of supply, can be found in:*

- *Level of interconnection.*
- *Penetration of RES and particularly iRES (wind and solar).*
- *Situation of conventional generation mix: peaking, mid-merit and baseload units*
- *Administrative permits required for decommissioning of power plants*
- *Existence of price caps in the markets.*
- *Current and envisaged reserve margins.*
- *Regulatory instability*
- *Demand response.*

(19) Do you consider that the European Commission should develop detailed criteria to assess the compatibility of capacity mechanisms with the internal energy market?

*Capacity mechanisms are complementary to energy markets in order to preserve efficiency in terms of generation adequacy and security of supply. In this sense, they should be design in order to counteract the negative effect on efficiency introduced by market design distortions, regulatory interventions and long-term uncertainties / perceived risks in the energy market, which are specific to each Member State. Therefore, and in order to preserve coherence, before developing detailed criteria to assess the compatibility of capacity mechanisms with the internal energy market, the EC should focus on those market design distortions, regulatory interventions and long-term uncertainties / perceived risks – ensure that their situation in each Member State is compatible with the IEM.*

(20) Do you consider the detailed criteria set out above to be appropriate?

- a. Should any criteria be added to this list?
- b. Which, if any, criteria should be given most weight?

*The main criteria for these mechanisms should be its efficiency at keeping the necessary generation adequacy when combined to the energy market (with all its distortions, regulatory interventions and long-term uncertainties). In this sense, we would like to stress that a Capacity Mechanism is an instrument needed to preserve the economic value of the required generation capacity. Without it, generation adequacy and security of supply would*



*be below its efficient level (i.e., at risk) even sorting out all energy market distortions, interventions and uncertainties overnight.*

DRAFT