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ENEF/Opportunities Working Group to the European Commission

**Answering to the European Commission Consultation
on generation adequacy, capacity mechanisms and the internal market in
electricity**

1. Acknowledgement

ENEF welcomes the European Commission's initiative to carry out a consultation on generation adequacy. The issue of investment and generation adequacy is recognized by EC consultation document (page 2):

"Before they build new generation facilities to supply consumers with, investors must expect to make a return on their investment. A well-functioning market should deliver generation adequacy as consumers, suppliers and generators contract with each other for the amount of electricity they require and are likely to need in the future.

If market prices are not high enough for generators to recover the investments needed to reach the desired level of generation adequacy this means there is a "missing money" problem."

2. Introducing Statement: the contradiction between the current internal electricity market design and the European Energy Policy objectives

- European energy policy is committed to decarbonising electricity. This objective implies that electricity and carbon market prices penalize carbonized electricity and encourage investments in low carbon generation. However, in the short term CO₂ emission price within ETS remains very low, too low to drive the market towards decarbonized generation. Moreover, rising share of solar and wind associated with their priority for dispatch make wholesale prices collapse, discouraging market driven investment. Therefore, a stronger EU ETS is needed. Decarbonising policy cannot be effective if capital intensive technologies are not incentivized by the market design, since most of low carbon technologies (such as nuclear, offshore wind, coal+CCS) are capital intensive. Not reaching the carbon decrease in the electricity sector would bear broader implications as regards European climate policy, since everyone agrees the electricity sector is the energy consumption sector where decarbonising is easiest,

when compared with transport, agriculture and housing sectors: it is generally considered that electricity should be privileged as energy service carrier and its utilization extended to those sectors in the future to decarbonise them also.

- Security of supply is also an important component of energy policy. But the rising share of intermittent sources (solar, wind) makes it more difficult to ensure adequate and reliable electricity supply (sufficient dispatchable capacity to respond in peak hours). Back-up capacities such as CCGTs are supposed to be connected when solar and wind generation weaken, but investing in such back-up units is not profitable today because the expected electricity price is uncertain at best and the expected load factor very small. Reserve capacity is needed but how is it paid for?
- Competitiveness is the third policy objective. However the current trend (as observed in Germany for instance) is that low prices on wholesale market will coexist with high charges for the end consumers. That is due to the fact that the high cost of electricity generation by new renewables is not reflected by wholesale prices but directly charged to consumers through out-of-market instruments (like EEG in Germany, CSPE in France) or even charged to taxpayers. Competitiveness is not ensured for most consumers, leading to affordability problems.

From above we conclude that the internal market in electricity has to be improved, even transformed into a more adapted design. The situation will deteriorate with further growth in the share of subsidized renewable generation as postulated in some current post-2020 scenarios. The wider issue of generation adequacy should be addressed now as proposed in the EC Consultation Paper, as part of the total market solution, including capacity mechanisms where required. An integrated technology neutral approach is necessary.

3. Answers to the Consultation Paper

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

Yes. The current market arrangements will not be able to secure the investment required to decarbonise the electricity sector in an efficient manner while delivering secure, reliable energy supplies at least cost to consumers.

(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?

Yes.

As concerns support to intermittent renewables, the resulting shift on the merit order curve and the effect on price through marginal cost lead to a strong depressing effect on load factor for gas fired units, and on average prices for all technologies. This does not support new investments nor generation adequacy requirements (the economics for mid-merit and peaking plants are not sustainable, as is the case for example for some recently mothballed gas-fired plants in DE).

While there is some merit in supporting emerging low carbon energy technologies in the short term through dedicated mechanisms, we believe that in the long term all low carbon generation (including renewables) should be driven by a strong carbon price, combined with a transparent electricity market. This combination will reveal the most effective technologies for decarbonisation of MS economies.

(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?

In the longer term an efficient market driven interconnected **power market** across the different timeframes will enhance optimised usage of available capacities. It will also deliver some of the price signals which will indeed incentivize investments. But it is clear that the establishment of cross border day ahead, intra-day, and **balancing electricity markets** will not solve all issues related to generation adequacy.

(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?

The full implementation of the Third Package as it stands should be adequate. Removal of all market distortions is a must (regulated prices and subsidies), allowing all low carbon

technologies to compete on equal footing. Speeding up market driven interconnection decision and construction, as well as integration of demand side response, are also required.

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

A full implementation of the third energy package and abandoning retail price regulation.

Reserve margins in transmission systems should be priced by market based instruments instead of national regulators.

Participation in demand side management has to be fostered; interdependencies between electricity and gas markets have to be recognized.

(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?

No comment.

(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**

No comment.

(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?**

What is required is to consider how much firm and non-firm capacity is available, and then establish what are the costs of accommodating a large portfolio of non-firm generation capacity. The existing hydro and nuclear plants are providing flexibility to the system, while staying fully competitive cost-wise. Nuclear plants are identified as providing the most firm and reliable base load generation. This strongly pleads for long term operation of existing nuclear power plants.

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

No comment.

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

No comment.

(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?

No comment.

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

Yes. Some member states (i.e. the UK) have already reached a stage where current market arrangements are clearly insufficient and a capacity mechanism is needed.

Indeed true and full market operation should deliver the needed signals to incentivize investments, *inter alia*, high peak prices should at first incentivise the peak generation units and demand response.

Adequate market functioning has first to be improved, by removing barriers and subsidies, and through market driven grid investments (better interconnection) and ETS improvement. However, experience has shown that local oppositions to high voltage lines and national oppositions to ETS slow down the processes. Then capacity mechanisms should be considered as a policy instrument if they can improve the system adaptation at the lowest cost.

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

a. to ensure that new *flexible* resources are delivered?

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

The slow economic growth, increasing energy efficiency and deployment of renewable energy capacities are reducing the residual load demand and price down to a point where no investment in new flexible resource is profitable.

It is imperative that market participants are clear about the role of the different mechanisms within the electricity market. With respect to the purpose of the capacity mechanism, we believe that the distinction has to be made between diversification of supply, operational security and resource adequacy. The purpose of the capacity mechanism should be to address resource adequacy (namely the provision of sufficient reliable capacity to meet demand) and that it should not discriminate between different sources of capacity that contribute to security of supply. This role is different from mechanisms that help achieve operational security of the

electricity system, by ensuring that supply and demand are in balance at all times. If this distinction, and interaction, is not managed correctly, then market participants may not have confidence in either mechanism and this may discourage investment, leaving the system with an insufficient level of resource adequacy.

Any regulatory or political intervention in functioning markets will distort them. This could ultimately lead to a situation where nor sufficient flexibility nor sufficient capacity is provided. Only in case authorities do not intervene in the market and accept price signals, such as price spikes and price volatility, the energy and balancing markets will be able to deliver the necessary price signals for resource adequacy and flexibility.

In addition for all low carbon capital intensive generation sources, uncertainties associated with the market operation can be overcome by allowing appropriate arrangements (such as long term contracts, including contracts for difference).

(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?

a. While one can accept the reference to the "transition from a fossil based electricity system", assuming ones talks about non-CCS fossil plants, the mention of "nuclear phase-out" in this document is totally irrelevant and not acceptable. It is disturbing to see this wording used in a document of the Commission while there is nothing such as an EU agreed nuclear phase out policy.

b. The risk with strategic reserves would be to artificially reward old non-economically, and many times also non-environmentally, viable plants. In that sense the use of strategic reserves can be counter-productive for the objective of a sound operation of the market. The basic idea of a strategic reserve is to use the reserve at a very high strike price close to the value of lost load when supply does not meet demand on the day-ahead market. This is usually the case at the technical maximum spot market price. Thereby, necessary price signals in the energy market for existing assets and new-builds are not hindered by the introduction of strategic reserves. However, there is a risk that strategic reserves might be used for political targets such as to keep wholesale price low, i.e. the strategic reserve is activated at an early stage. This would hinder price signals, distort and negatively affect the respective coupled markets. This could lead to more disinvestments, and thus additional need to place the withdrawn plants under "strategic reserve", resulting in a downwards investment signal (slippery slope) where more and more plants would become unviable without capacity payment and be placed under the strategic reserve.

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

The capacity mechanisms should be market based in order to avoid any discrimination between technologies or participants and in order to reveal the scarcity value of capacity. Capacity market mechanism should generate investment signals sufficiently in advance to allow the preparation and construction of all types of power plants i.e. peak load as well as base load units.

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

No comment.

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

No comment.

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

The return of experience of the UK EMR should help to provide an answer to this question. A framework for assessing European generation adequacy would have value as opposed to a prescriptive approach. . If extensive assessments proof a real need for capacity mechanisms, a EU-coordinated approach would help minimising market distortions.

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

The capacity mechanisms must be free from distorting the internal energy market but must allow MS to develop their own schemes that are consistent with their own energy policy objectives.

(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?

No comment.