

Statement

Generation adequacy, capacity mechanism and the internal market in electricity

Public Consultation of the European
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Berlin, 07. February 2013. We very much appreciate the commission's initiative to consult on questions of capacity mechanisms. In fact, we feel problems of capacity adequacy definitely need to be solved on European level if we are to realise the internal market. In what follows we answer the questions posed in the consultation document.

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

Yes. For Germany it is quite certain, market prices do not allow sufficient investments. Both the fact that there are no new investments in capacity and the results of many studies prove this point.

(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 high share of renewable energy in Germany is partly responsible for little investments needed to ensure generation adequacy. The reason is that especially conventional power plants run less hours and face fewer price peaks, especially around noon.

However, since the deployment of renewable energy sources is politically agreed on and needs financial support the results for capacity adequacy need to be dealt with.

In addition there is international evidence that missing-money-problems do not stem from deployment of renewables alone but are a common phenomenon of liberalised markets with energy-only wholesale-markets. Backup-capacity runs very few hours per year and price peaks are too hard to predict to trigger sufficient investments.

(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?

We believe that cross-border integration of energy-markets will contribute to security of supply since they allow fluctuating generation and flexible demand to balance on larger scale. The sum of national maximum loads that need to be balanced is much higher than the maximum aggregate load of the internal market in energy.

Cross-border integration thus enhances security of supply and/or makes a given level cheaper. If the internal market is to be completed within the next years work on the establishment of cross-border markets should be high on the priority list.

(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?

A major physical prerequisite for market integration is an energy-infrastructure allowing for cross-border markets, namely cross-border interconnections. In cooperation with the member states, the Commission should promote and coordinate the further development of the European power grid.

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

Member states need to support the further development of the European power grid (see above, question 4). In case a European capacity mechanism cannot be established, member states need to carefully consider not to distort the internal market when implementing national instruments.

(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?

To our knowledge, no group of consumers in Germany has displayed a preference for a lower standard of security of supply than the standard established.

(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**

If, as we strongly believe, generation adequacy is a challenge that needs to be met on European level, a report compiled from national estimates is not sufficient. This stems from the fact, that both interconnection and the amount of back-up-capacity needed are key elements in generation adequacy and need to be analysed on European level.

Studies on generation adequacy could, once responsibility for guaranteeing it is transferred to European level, be worked out on European level alone. But even now, with national responsibility in this area, a state-of-the-art-analysis of European generation adequacy is highly recommended to highlight both the role of interconnection and the efficiency-potential of a European capacity mechanism.

(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 assessment of generation adequacy is becoming a much more complicated task due to the rising share of volatile generation from renewables. For that reason in many member states the situation is being analysed more and more thoroughly and scientifically. The ENTSO-E report seems to fall short of the evolving standards. Namely, the data supplied seems to have been both incomplete and compiled on methodological grounds varying among member states. The role of volatility in electricity generation needs to be dealt with explicitly and systematically.

A European report meeting the new challenges in assessing generation adequacy needs to meet state-of-the-art methodological standards and needs to be compiled on a regular basis

(e.g. yearly). Special attention might need to be paid not only to amounts but also to qualities of capacities.

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

As argued above, a genuinely European assessment of generation adequacy is needed. The Directive should be amended to provide for such an assessment.

(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?

We believe that as long as responsibility for generation adequacy stays with the member states at least some coordination of European generation adequacy is important. Mandatory plans on European and especially on regional level could be part of such a coordinative effort.

(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?

With further physical and economic integration of the internal market security of supply will as a matter of fact increasingly be a standard shared across Europe. However, we believe standards of generation adequacy will not be a highly controversial issue (at least not as controversial as questions concerning what causes challenges to security of supply and who pays for meeting them).

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

In general we believe that capacity instruments should only be introduced when the established energy-only markets deliver insufficient results. At the same time, for reasons mentioned above, we are quite certain, that the energy-only market will not do the job.

(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?

Case b. is clearly a case of insufficient functioning. Case a. is only a case of malfunctioning if the costs of inflexibility outweigh the costs of a capacity mechanism (payments, market distortions, bureaucracy). Since we believe that case b. describes what is happening, we recommend to take concerns of flexibility seriously when designing capacity mechanisms.

(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?

We do not believe a strategic reserve is helpful. It is conservative by design and therefore does not promote the transformation of the structure of energy generation. What is needed is a market design guaranteeing enough capacity by providing for competition among capacities of all types (power plants, demand side management, storage). In addition these capacities need to be integrated into wholesale energy-markets to earn a certain share of their revenues there. Strategic reserves keep power plants separate from the market, which provokes inefficiencies in dispatch, provokes high prices in the markets by shortening supply and can be exploited strategically.

(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?

We believe the least distortionary instrument is the procurement of capacity. The amount needed should be calculated on a regular (e.g. yearly) basis in a joint effort of TSOs and regulatory authorities. Procurement needs to be organized through auctioning in order to arrive at competitive prices for capacity. Auctioning of capacity of different types requires careful definition of products and needs to be sensitive towards opportunities for strategic bidding of dominant players.

A capacity mechanism of this type will reliably arrive at the capacities needed. In addition, advantages of such capacity markets are competition among different types of capacity and full integration of these capacities in the energy-only-markets. For these reasons they help securing energy of supply in the internal market.

Supplier obligations to buy capacity on a separate market might not trigger investment in the capacities needed. Today already, suppliers are obliged to deliver the energy sold to their customers. For reasons of risk management many of them hedge these amounts two years ahead of time. This is the maximum time horizon, since contracts with customers are rarely longer. However, today, we do not see price signals in these future markets that could trigger investments. Secondly, the two-year time horizon is much shorter than the time needed to build many types of capacity. Thirdly, price signals from a capacity market of this type will be hard to anticipate which will drive prices up, making this mechanism comparatively more expensive than a mechanism that deals with payments that can be anticipated more easily.

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?


Flexibility concerns can be addressed by designing products within a regime procuring capacity through auctions. The risk here is that the triggered investments in flexibility are inefficient since they have been determined administratively. It would be more desirable, if the investments would receive price signals from the energy markets that make efficient investment in flexibility attractive. This requires energy markets (wholesale, balancing, ancillary services) rewarding flexibility.

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

All capacity mechanisms seem to have high impacts on the markets. For economic, juridical and political reasons none of them will be easily reversible. That is why no mechanism should be implemented that is not designed to solve capacity problems in the long run. (Many advocates of strategic reserves support this instrument by pointing towards its nature as a short- and mid-term solution. In our opinion however, for reasons mentioned above this particular point rather seems to be a huge disadvantage.)

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

Strategic reserves are inefficient in our opinion. One way or the other the consumers will have to pay a high price for these inefficiencies. For that reason we advocate capacity markets as argued above. One main question is whether all capacities bid into capacity auctions or only capacity that is associated with new investments. We believe the latter should be the



case. This will save consumers from paying high windfall-profits to existing capacities. Furthermore many of these capacities have been erected in times of monopolies and do not need and deserve economic protection from new capacities. Furthermore, in the long run, all capacities will have enjoyed capacity payments. In the meantime we are dealing with a question of distribution of rents between incumbent-generators and consumers.

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

We believe that in principle participation in balancing markets is an important factor in triggering investments in flexibility. However, revenues seem to be too hard to predict for the generally risk-averse investors to be included significantly in the calculation of the investment case. At this point it remains an open question if this is about to change and/or if this could be helped by reforming balancing and other ancillary markets.

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

Yes, definitely. Capacity adequacy is a truly European matter. National solutions can damage the internal market severely and pave the way towards a more national way of shaping energy policies in the future. The Commission definitely needs to act on this issue quickly.