

Generation adequacy, capacity mechanisms and the internal market in electricity¹

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Introduction

We recognise the urgent need for a broader discussion amongst stakeholders about generation adequacy and welcome the opportunity to respond to the Commission's consultation. Our comments are grouped under the three headings of the Consultation Paper⁵ relating to (1) market failures, (2) generation adequacy assessment and (3) capacity mechanisms.

1. Identification of market failures in the European electricity markets

As the Consultation Paper rightly points out, there is no consensus in the European policy discussion whether generation adequacy concerns are justified and whether a centralised mechanism designed to control or encourage investments in generating plants is necessary.⁶

The concerns about ensuring generation adequacy build on the so-called 'missing money' problem, i.e. the inability of generating companies to recover their investments from money they make on selling electricity. Among reasons behind the missing money problem the Commission names price caps on wholesale markets and, less specifically, '*potential technological, political/regulatory and operational barriers which can prevent the market delivering the necessary price signals to ensure the appropriate generation mix.*'⁷ In this respect, the Commission refers to the work by Paul Joskow, which discusses the empirical evidence for the missing money problem in the U.S. electricity wholesale markets and identifies its causes.⁸

In our view, results based on the U.S. experience cannot be extended to the European electricity wholesale markets, given stark differences in market structure and regulatory environments. More specifically,

¹ http://ec.europa.eu/energy/gas_electricity/consultations/20130207_generation_adequacy_en.htm.

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⁵ European Commission, Consultation Paper on generation adequacy, capacity mechanisms and the internal market in electricity, 15.11.2012, p. 1.

⁶ *Ibid.*, p. 1.

⁷ *Ibid.*, p. 4.

⁸ *Ibid.*, n. 7.

- in many European countries firms are not obliged to sell electricity through the pool. Instead, they can sign bilateral contracts which are not bound by price caps.
- Further, many generating companies in Europe are vertically integrated which facilitates hedging the risk associated with new generation investments and reduces their incentives to abuse their market power.
- Power exchanges and TSOs in Europe operate within a different regulatory framework than their U.S. counterparts.
- Renewable energy plays a more important role in Europe than in U.S. and its integration in the European electricity systems is expected to have a much greater impact on the functioning of the markets.

By pointing out these differences, we would like to draw attention to the European context and stress the importance of understanding the nature of market failures which are likely to occur in the European electricity markets. Only after defining a particular market failure, one could design an appropriate remedy. For instance, some market imperfections are regulatory failures (e.g. setting price caps too low) which can be addressed by improving existing regulation without necessarily resorting to more intrusive measures in form of additional capacity mechanisms (proportionality). Further, defining specific market failures will help to assess an appropriate level of intervention. An action at the EU level can be justified only if a specific market failure cannot be resolved by Member States themselves without undermining the internal market (subsidiarity). Helpful in that respect might be placing the burden of proof on Member States and require them to demonstrate that their current systems of wholesale and/or retail price regulation are not the underlying reason for the market to fail.

To summarise, defining specific market failures in the context of the European electricity markets will help to choose appropriate measures to address them, in line with the principles of proportionality and subsidiarity. This would ensure that any intervention in the market is well designed and effective.

2. A more economic approach to generation adequacy assessment

The first question directly raised in the Consultation Paper is whether current market prices prevent investments in needed generation capacity.⁹ In our view this question can only be answered empirically. Thus, we propose to assess profitability of new generation investments as a part of generation adequacy assessment. Collecting price information and the expected revenues of power plants per type of generation technology would allow determining whether current prices are sufficiently high to recover any investments made in new generation capacity or whether country-specific price regulation hampers these investments. Similar to the current methodology of ENTSO-E, data on prices and the expected revenues could be extracted from national investment plans. However, in the second step of the proposed profitability assessment, it would be necessary to test whether national investment plans are mutually compatible, and would still be economical, given investments planned in other Member States.

⁹ *Ibid.*, p. 4.

Currently, the only EU-wide generation adequacy assessment is carried out by ENTSO-E. Its forecasts¹⁰ primarily serve to identify the generation and load trends at the European level and to determine network planning required to accommodate these changes. However, ENTSO-E does not focus on the new generation investment projects as such. In our opinion, the type of generation adequacy assessment proposed here goes beyond responsibilities of network operators and would require involvement of other European bodies, e.g. ACER with support of external consultants.

3. Criteria for designing capacity mechanisms

For the time being, it is unclear whether the existing European energy-only markets are sufficient to ensure generation adequacy or whether they need to be supplemented by additional capacity mechanisms in order to secure necessary generation investments. Further research is required before the Commission or individual Member States take action.

Given that some Member States have already implemented capacity mechanisms or are considering their implementation, it is necessary to ensure that these measures do not have a negative impact on the development of the internal market. In our view, the following criteria might be helpful to bring a capacity mechanism in compliance with the internal market considerations.

- If capacity mechanisms involve subsidy payments, these should not be paid out unconditionally, but explicit provisions need to specify (i) clearly defined commitments on the part of generating companies receiving these payments, (ii) a test to determine whether firms satisfy these commitments and (iii) a possible penalty for not providing the services.
- Minimal harmonisation of conditions for granting subsidy payments and imposing penalties would be advantageous, as this would eliminate the need to harmonise capacity markets as such.
- Capacity mechanisms with least impact on electricity spot price should be preferred in order not to distort competition and investment incentives between Member States.
- Capacity mechanisms should not discriminate between domestic and foreign generators. External electricity suppliers should be allowed to participate in the capacity procurement process as long as there is available cross-border transmission capacity.
- By the same token, Member States should not forbid national power plants to participate in capacity mechanisms abroad, whether directly or indirectly (e.g. by reducing their import capacity at times of peak demand in the neighbouring country).
- Member States should not impose unnecessary access restrictions to capacity mechanisms (e.g. by excluding certain types of generation or non-generation options), as this would make the capacity procurement less competitive and increase the scope

¹⁰ ENTSO-E Scenario Outlook and Adequacy Forecast Reports are available at <https://www.entsoe.eu/publications/system-development-reports/adequacy-forecasts/>.

for market power abuse. In order to provide sufficient control over potential anticompetitive behaviour capacity mechanisms should be considered separate markets for the purpose of applying Article 102 TFEU.

Conclusion

For the time being, the question whether generation expansion can be entirely market-based or whether it needs the implementation of capacity mechanisms is far from clear and requires further research. It is perhaps a good starting point to understand the nature of market failures in the European context and to take a more economic approach to generation adequacy by analysing the profitability of generation investments. Any potential state intervention to ensure generation adequacy should be carefully considered in the light of the internal market objectives in order to ensure it does not have negative effects on the neighbouring countries and the European electricity market as a whole.