



AEP¹ Response to CEER Call for Evidence on Generation Adequacy Treatment in Electricity

General

The Association of Electricity Producers (AEP) welcomes the opportunity to respond to this call for evidence. Europe faces a major challenge over the next twenty years, given the need to replace ageing generation plant and to move to a lower-carbon energy mix in line with EU objectives. Europe has benefited from an extremely reliable power generation fleet and high standards of supply security in recent times, but it is sensible to keep these issues under review, given the scale of the future investment challenge.

AEP agrees with the general thrust of the document, and notably the emphasis on allowing markets to work. However, if CEER carries out further work in this area, AEP would recommend that, as a starting point, proper consideration is given to the definition of generation adequacy. To ensure that generation is always adequate to meet demand, as suggested in the document, would require an infinite amount of money and is therefore impossible to achieve. Mechanisms to achieve generation adequacy can only be designed if there is a definition of what this means. The first question to resolve is whether a centrally mandated standard of security should be established, e.g. failure to meet demand once every twenty years, whether a value of lost load should be set or whether neither is necessary.

ANSWERS TO SPECIFIC QUESTIONS

Question 1: What are the key elements for ensuring generation adequacy in the competitive electricity market in EU MS and the EU as a whole?

AEP believes that competitive markets are the best means of ensuring generation adequacy (and security of supply in general) in a cost-effective manner. We therefore welcome CEER's statement that "*European Energy Regulators clearly support the view that the well-functioning electricity market should be able to deliver security of supply and generation adequacy...*"

Electricity markets in the UK have a good record of delivering competitive prices and security of supply over a period of twenty years. Any problems which the UK market

¹The Association of Electricity Producers (AEP) represents large, medium and small companies accounting for more than 95 per cent of the UK generating capacity, together with a number of businesses that provide equipment and services to the generating industry. Between them, the members embrace all of the generating technologies used commercially in the UK, from coal, gas and nuclear power, to a wide range of renewable energies.

is currently facing are primarily due to the framework of environmental policy, which is not sufficiently robust and coherent to encourage the massive investment which the industry faces. As the environmental policy framework is essentially set at European level, we believe that a similar situation exists in Europe generally.

CEER makes several references to the importance of market monitoring for promoting greater confidence in markets. AEP agrees that regulators must have the powers to monitor markets and to sanction abuse, and believes that the current EU market framework, including competition law and the Third Package, provides the essential tools to do this. However, it must be remembered that increased regulatory powers and activity can also be damaging to markets and can inhibit normal competitive behaviour. Electricity is already a very highly regulated sector, with regulatory bodies and competition authorities at both national and EU level having extensive powers and taking an active role. Electricity markets are also significantly affected by financial regulation. Under these circumstances it is essential that energy, competition and financial regulators coordinate their activities and avoid duplication. For the immediate future, very careful consideration must be given to the impact of future EU derivatives and market abuse legislation on the energy sector.

In AEP's view, the key elements for ensuring generation adequacy are as follows:

- The EU and Governments must set a stable legislative and regulatory framework which properly balances the objectives of competitive prices, security of supply and environmental protection; stability is essential given the high capital requirements and long-lived assets of the electricity sector;
- A stable framework is needed for carbon, setting out clear targets beyond 2020 and ensuring that the challenge of decarbonisation is spread across all sectors, not just electricity;
- Environmental policy should be stable and proportionate; it is not good regulatory practice to propose major and costly changes to the framework for large combustion plants before it has even been implemented, as happened recently with the Industrial Emission Directive; this inevitably introduces additional risk and uncertainty;
- Europe must be an attractive location for investment in energy infrastructure; this means that investors must be confident of being able to achieve an acceptable rate of return, and regulatory and political risks must be minimised, particularly given the current state of capital markets;
- It follows that energy prices must be allowed to reflect market fundamentals and that particular care must be taken to avoid undermining investment signals; in particular, regulated energy prices which discourage investment in new generation, must be removed and the market must have confidence in peak pricing;
- The existence of correct price signals also has the benefit of encouraging customers to adjust their consumption according to prices, thus smoothing demand peaks and promoting efficient use; in the future, smart grids and meters should facilitate greater demand side participation in the market;

- Authorisation procedures for new power plants and transmission lines, including interconnections, should be speeded up and generators should have a free choice of fuels, covering coal, gas, nuclear and renewables;
- The EU gas market should be fully liberalised, with transparent and non-discriminatory access to pipelines, storage and LNG terminals;
- Regulators should promote EU market integration by fostering the development of new interconnection and ensuring optimum use of existing interconnectors;
- Where policies to promote particular forms of generation, e.g. renewables, are implemented, this should be done in a way consistent with a market framework; for instance, renewables should compete on a level playing field in relation to network access.

Question 2: Do you observe any barriers to investing in new generation capacity? If yes, please list and explain them

In AEP's view, CEER has identified the main barriers to investing in new generation: environmental policy, retail and wholesale price regulation, and authorisation procedures. We believe, however, that more emphasis needs to be placed on the implications of renewable development for investment in conventional plant, something which is barely mentioned.

Under the Renewables Directive it is intended that renewables should rapidly increase their market share by 2020, in the UK from the current 5% of the electricity market to around 30/35%. This will clearly displace some existing fossil plant, but backup capacity will still be required, since wind will represent the biggest proportion of the renewables build. Backup plant will have to recover its costs over a small number of hours, leading to more volatile prices and more frequent price spikes.

This issue is exacerbated by the fact that, in parts of Europe, wind generation has been built on the basis of feed-in tariffs and operates outside the market. In particular, such plant frequently does not pay network or balancing charges. The result has been a concentration of wind generation in particular locations, so that at times of high wind, there can be an excess of capacity over demand and negative prices. This of course provides a signal that no new generation is required. Even where prices are positive, a major expansion of renewables reduces the prospects for baseload low-carbon plant, such as nuclear, CCS and gas, since it reduces the operating hours available to such plant.

Increased interconnection will be an important factor in accommodating more renewable electricity in the future and regulators have an important role in facilitating such infrastructure. In the longer term, storage technologies and the development of electric transport will also contribute to dealing with these issues. Whether changes to market structures are needed in addition, is a matter which needs careful consideration.

AEP considers that the main barriers to new generation investment are as follows:

- There is considerable uncertainty about the carbon framework in the EU post-2020 and even more so about the international policy framework. EU ETS, while a fundamentally sound policy, does not yet provide a sufficient signal for the large capital investments which will be required to decarbonise the power sector. The result could be a number of piecemeal national schemes, e.g. carbon taxes and obligations, which could add further uncertainty;
- A wide variety of restrictions on fuel choice exist across the EU Member States; these include nuclear moratoria and phase-outs, prohibition of new coal plants, measures to discourage the use gas for power generation and obstacles to renewable generation, e.g. competing uses such as shipping and aviation in the case of offshore wind farms.
- Although it is widely recognised that electricity prices will have to rise to meet investment needs and cover the costs of decarbonising the power sector, price increases remain unpopular and thus politically sensitive. This leads to political pressure on regulators and on the industry to reduce prices. Regulated retail prices remain the rule in most of Europe (though not the UK), and we note an increasing trend to intervene in wholesale markets, particularly in relation to peak prices.
- Regulatory structures in Europe are developing, with the creation of ACER and increased powers for regulators as a result of the Third Package. Bearing in mind the involvement of competition authorities and financial regulators in the energy sector, there is scope for regulatory overlap as these new structures bed down.
- Renewable support schemes will accelerate the deployment of renewable technologies but, depending on the circumstances, could reduce the business case for other low-carbon baseload generation; the provision of backup capacity either from existing or new plant, and how this will be remunerated also needs to be considered, as mentioned above.
- EU environmental legislation tends not to take adequate account of security of supply and represents a major source of uncertainty for the power sector. For instance the Commission proposed the Industrial Emissions Directive (IED), which would require significant investment in older fossil plant, before the Large Combustion Plant had even been fully implemented, let alone evaluated. This is poor regulatory practice. The proposal would impose major additional costs on non-baseload plant for relatively limited environmental benefit and in the UK could lead to up to a quarter of generating capacity closing in 2016 (though it is hoped that the final version of the Directive will allow some plant to stay open on a limited-hours basis for a number of additional years).
- The “NIMBY” syndrome and lengthy planning processes represent a considerable obstacle to building power stations – the lead time for nuclear plants, including construction time, is around ten years in the UK, and many fossil-fired plants also encounter problems. Lead times for transmission lines can be even longer than for generation and interconnector projects often face the additional problem of two dissimilar regulatory regimes.
- Progress with gas market liberalisation on the continent has so far been disappointing, though the Third Package should now bring some progress.

Question 3: In case of additional measures for ensuring generation adequacy, what would be the key issues to take into account?

AEP believes that energy-only markets have a good record of ensuring generation adequacy and therefore agrees with CEER's general conclusion that: "*... any additional mechanisms must be introduced only after a careful consideration of barriers to investment and possible adverse effects of such additional mechanisms*".

Europe's electricity markets face a major new challenge, given the ambitious climate change and renewable targets. Greater physical interconnection, smarter grids, more integrated markets and storage technologies can make a contribution to meeting these targets. Even so, it is legitimate to ask whether some form of capacity incentive is required, in view of the level of investment required and the growing requirement for flexible backup capacity.

Capacity mechanisms can mitigate price spikes, which are often a source of political concern, and can increase the predictability of revenues for investors, which may improve the willingness to invest. On the other hand, they can introduce additional distortions to the market and have historically proved unpopular with customers and subject to political lobbying. It is therefore particularly important that the impacts of such mechanisms are carefully weighed before they are introduced. In this regard, AEP strongly supports CEER's view that Europe must avoid an uncoordinated and incompatible development of such mechanisms at national level.