



# The Final Hurdle?: Security of supply, the Capacity Mechanism and the role of interconnectors

EPRG Working Paper 1412

Cambridge Working Paper in Economics 1433

**David Newbery and Michael Grubb**

Mechanisms for securing sufficient firm electricity generation capacity are being introduced or considered widely across Europe, in response to concerns about Security of Supply. Such a Capacity Mechanism is included as a key part of the UK Energy Market Reform.

Much of the policy effort and academic discussion has focused on either the need for, or detailed design of, such Mechanisms. We consider here a third aspect: assessment of the amount to be procured, specifically in the context of the UK announced intent (30 June) to procure 53.3 GW through its Capacity Auctions for 2018-19. The associated gross payments are estimated at £2.6bn annually, but with a much smaller claimed net cost to the extent that generating companies pass through most of the subsidies as lower wholesale prices.

This paper criticises the approach taken and conclude that 53.3GW is likely to be excessive, particularly (but not exclusively) in its (lack of) assumed contribution from interconnectors. A conservative approach is understandable, but we also argue costs can be substantially reduced by deferring some of the associated auctions.

The level of capacity to be procured on different timescales involves a delicate balance, and not enough attention has been paid to either the political economy of this process, or the risks and rewards of waiting and developing more options. Procuring too little is obviously risky, but political fear of 'the lights going out' can easily become a catch-all argument for excessive procurement, and associated subsidy to incumbent generators. The risk of over-procurement, particularly of new conventional capacity on long-term contracts, is that it drives up the costs to consumers; undermines renewable energy by implicitly transferring financial support from renewables to conventional generators; and impedes the Single Market including by weakening the business case for other options, including future interconnectors.

The risk of over-procurement is increased by confusion of terms: the traditional measure of 'loss of load' risks is increasingly divorced from any risk of the 'lights going out'. The development of technologies and market structures, particularly with respect to the demand-side and potentially available – 'latent' – capacity - further lowers the risks, and increases options. There is no 'cliff edge' at which the lights go out, but rather an increasing array of options for managing tight conditions – including the regional pooling of capacity implied by interconnectors. This in turn implies greater potential to defer in particular the most expensive option - procurement at levels requiring new conventional UK capacity.

This also enhances the value of a more appropriate treatment of interconnectors in security assessments. As with other commodities (including food and gas) international trade supplements domestic production capacity, and security is not synonymous with self-sufficiency. Yet the UK proposal, following the approach of National Grid, neither includes any positive overall contribution from interconnectors, nor enables their participation in the first Capacity Auction. This is inappropriate; having not taken account of their contribution in the basic assessment of margins, the overall capacity procured in the first auction should be adjusted to reflect the likely future contribution of interconnectors.

Overall, we argue that there is considerable 'latent capacity' in the electricity system, including but by no means confined to interconnectors, which could be brought into play in the next few years and thus help to maintain security in the face of uncertain trends in electricity demand. Given this, the potential costs of the (probably excessive) caution implied by the decision to procure 53.3GW for 2018-19 could be substantially mitigated by deferring a much greater proportion of this to subsequent, shorter-term auctions.