Enhanced National electricity market design for Great Britain

Key Messages

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1. An enhanced national market design could be delivered with more certainty of achieving benefits than a zonal market, with less risk of delay. Within an enhanced national market, changes could be made to the treatment of interconnectors, small-scale and storage assets which would yield material benefits with limited downside risk. The zonal alternative has a wider range of outcomes, with benefits that are possibly higher but also more uncertain, with a high potential for significant downside risk (see Exhibit 1.2).
2. Any improvements to interconnector arrangements would require negotiation with neighbouring TSOs and potentially also the EU for both enhanced national and zonal market designs; a zonal market should not be seen as a route to avoiding the need for negotiation. For an enhanced national market, we believe that significant gains could be achieved bilaterally (without wider EU negotiations) by expanding existing arrangements for intraday countertrading. Further gains could be achieved with innovations to secure countertrade volumes earlier than is currently possible, although these are more likely to require EU-level negotiation (see pages 19 and 28).
3. The potential welfare gains from improved arrangements for small-scale and storage assets in the enhanced national designs are smaller but more easily achieved than those for interconnectors (see page 35). Some additional benefit could be achievable depending on how far flexible demand can be optimised in the Balancing Mechanism.
4. Other areas of reform (e.g. reformed access rights for storage assets, constraint management markets) could provide some further operational efficiency gains as part of an enhanced national market, although these have not been quantified. Some of these ideas are already being progressed by NESO and others.
5. The potential welfare benefit from a possible move to a zonal market (£3.3 billion, NPV 2030-2050 in our Zonal case) is relatively small (less than 1% of consumer bills over the same period). In practice, the benefits of the Zonal case are likely to be lower than modelled and possibly significantly outweighed (delivering net costs rather than benefits) by one or more of the following:
   i) increases in cost of capital for new renewable investment arising from exposure to zonal prices and volume risk;
   ii) delays to the introduction of zonal pricing (a 2-year delay from 2030 to 2032 would reduce the potential welfare benefit in the Zonal case by £0.8 billion);
   iii) a zonal market that is less efficient than modelled as a result of imperfect foresight of transmission constraints day-ahead, the timing of interactions with interconnected markets in the event market coupling is not achieved, and any impacts of reduced liquidity;
   iv) any compensation arrangements conceded to the EU as the result of the introduction of a zonal market (a significant share of the welfare benefit to GB in the Zonal case is the result of welfare transfers from interconnected markets);
   v) implementation costs; and
   vi) ongoing operational costs for more complicated trading arrangements, including higher costs and risks for suppliers in trading and hedging customer supplies.

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