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PLATFORM FOR HEDGING CAPACITY OBLIGATIONS

Section 1: Summary

1. This paper considers whether Government should develop pre-emptive interventions to attempt to ensure liquidity exists in the CM hedging market by providing an exchange platform for trading of financial options to occur.
2. In theory, if hedging is beneficial to the market then it should develop organically. However it is recognised that there are risks to the development of a liquid secondary market for hedging capacity market risk – particularly given the market failures and lack of liquidity that have been observed in the markets for wholesale electricity and PPAs. However the design of the Capacity Market – in particular the liability cap and the four-hour warning - already gives providers tools to manage the risk of penalties. There are also significant risks to intervention in the CM secondary market.
3. It is therefore appropriate for the Government to leave the market to develop trading but that the Regulator/Government should keep the role and liquidity of CM secondary trading under review.

Section 2: Definition and Role of Hedging

4. Capacity providers may wish to hedge their obligation through trading financial options around the capacity market penalty. For instance Party A, who has spare capacity, may sell a financial product to Party B, who wishes to trade out of his position. Under this trade, Party B would pay a fixed payment to Party A, but Party A would pay out if a system stress event occurs. The price of such an option should reflect the loss of load probability multiplied by the size of the penalty.
5. It should be noted however that this trade does not move the physical capacity obligation. Party A will be paid for overdelivery and Party B will still be held liable for underdelivery in the stress event. However the position of both parties should be equivalent to if the obligation was physically traded.
6. While any type of party may offer such a financial product, including financial players, only parties holding CMUs will have a physical hedge against the risk of taking on capacity obligations as these are the only parties that are paid for overdelivery.

Section 3: Role of Hedging Markets

7. Trading of hedging products is potentially helpful to the market for a number of reasons:

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- i. It facilitates parties to efficiently manage their risk and to ensure the market makes the most efficient dispatch of plant possible.
 - ii. It evens the playing field for non-portfolio players who do not have a within-portfolio hedge and are exposed to some risk of penalties while undertaking maintenance, not operating outside of times of peak, or when undergoing unplanned outages
- 8. There are risks to the development of a liquid hedging market:
 - i. The existence of portfolio players may limit incentives to trade as, over a large enough portfolio, the rewards for over-delivery should balance out the penalties for under-delivery.
 - ii. Parties might find it difficult to price hedging products as a result of stress events being infrequent. This reduces the utility of hedging as a tool for managing risk and increasing the likely collateral requirements for smaller players to participate.
 - iii. Financial regulations (EMIR, MFID) may create barriers to trading of financial products on an exchange – although parties should be exempt if they can demonstrate that the trading is for commercial purposes.
- 9. However the current design of the Capacity Market ensures that while secondary trading is beneficial to the market, the presence of a liquid hedging market is not indispensable to the functioning of the mechanism:
- 10. So long as participants are able to largely manage their risks internally, then a potential lack of trading may not matter for the energy system. Conversely, so long as there are significant gains to participants from exchanging hedging products then parties will still choose to trade.
- 11. Moreover the design of the CM helps participants to manage their risk without trading hedging products. The CM design largely mitigates the need for secondary trading in the following ways:
 - i. Providers are paid for overdelivery and incentives are based on derated load-following obligations – so, within a portfolio, the rewards for plants overdelivering should balance penalties for plants underdelivering. This helps to mitigate performance risk as well as the risk of an event occurring outside of peak demand.
 - ii. Providers receive a four hour warning – and so need not worry about exposure to liabilities while out of merit provided that they can ramp up within a four hour period
 - iii. There is a cap on annual liabilities to protect providers against catastrophic loss
 - iv. Penalties will be scaled down so providers are not exposed to the full value of VoLL
- 12. It is recognised however that there are disadvantages to independent participants and potential entrants if a financial options market does not develop, as they may

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not have an internal hedge against the risk of penalties. This has parallels with the wholesale market where portfolio and vertically integrated players have the opportunity to manage risks across their interests which reduces the reliance on the wholesale market.

13. However the CM design is already strongly supportive of competition and to independents – and is strongly pro-competitive relative to an energy-only market:

- i. The Capacity Market provides a stable revenue stream alongside volatile energy market revenues. This revenue is fixed four years out and can be for up to 10 years for new plant. And performance risk is lower than it would be in an energy-only market because liabilities are limited through an annual cap, a four hour warning and penalty scaling factor.
- ii. The size of capacity payment is determined through a pay-as-clear auction – which avoids creating advantage for portfolio players that are better able to guess the clearing price.
- iii. The liability cap is calculated on a CMU portfolio basis. This means that small players (who have the greatest risk of penalties due to the lack of portfolio) have the greatest protection, and large portfolio players are unlikely to ever reach their cap.

14. So while the presence of a liquid hedging market would be helpful for independent players, the overall position of independents should be helped by the introduction of the Capacity Market – even if a perfectly liquid hedging market does not quickly materialise.

Section 4: Risks to Government Intervention

15. Government could take pre-emptive action to attempt to create a liquid secondary market for hedging products. It could do so by tendering (i.e. paying) for a new trading platform to be created. It could also look to compel parties to participate in the market in some form to stimulate its development.

16. However there are a range of significant risks associated with Government intervening in this way:

- i. **Commercial Risk:** Setting up a trading platform is a significant commercial exercise and likely to incur significant expense. Government may not be best placed to negotiate the cost of establishing the platform – particularly given that the number of parties capable of providing this may be limited. Government may also not be well placed to prescribe the products that industry may wish to trade on a secondary market. By setting up a particular platform or mandating trading Government could stifle the market's ability to identify the most useful products or platforms for trading.
- ii. **Incentives to trade:** Government intervention may not succeed in prompting greater liquidity if the reason for poor liquidity is that parties

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do not have strong incentive to trade. This means that creating a platform would not be a sufficient measure to prompt liquidity if parties did not then have incentive to make use of that platform. And compelling parties to participate in the market may be very difficult to design given the complexity of financial options (particularly as hedging products may not be simple to price).

17. Government intervention may in time be justified to promote liquidity in the CM hedging market. However pre-emptive intervention would be a disproportionate response to the risk of market failure as there is as of yet no evidence that a problem will emerge. There is also reason to think that intervention could prove costly and ineffective if undertaken hastily and without a good understanding of the nature of the potential problem and the barriers to trade.

Section 5: Conclusions

18. Any proposal for intervention in a market needs to assess the extent of market failure as well as the potential risk of government failure associated with intervention:
19. There is good reason to think that if a hedging market can help parties to reduce their risk then this market will develop organically without government intervention. No markets are perfectly liquid – and parties are unlikely to wish to fully hedge their position. However the potential for hedging contracts alongside the annual cap on liabilities should ensure that the overall risk on participants remains manageable – and lower than it would be under an energy-only market.
20. It is recognised that there are potential barriers to the development of a liquid hedging market. However any intervention to facilitate trading has to weigh the risks of market failure against the risks of policy failure. It is therefore not appropriate for Government to pre-emptively intervene to provide a platform for trading or compel parties to participate as there is limited evidence justifying the need for intervention and there are significant risks to pre-emptive intervention.
21. It is therefore recommended that the market should be left to privately hedge their risk and that Government not intervene to provide a platform for financial trading or compel parties to participate. However Government and the Regulator should monitor the ability of parties to manage their risk once the mechanism is implemented. If market failures are then identified, Government should consider proportionate options for intervention that would overcome those specific market failures.

Question for Discussion:

1. Do you agree with the recommendation that Government should not intervene pre-emptively to stimulate a liquid hedging market for capacity providers?