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Australian Energy Market Commission
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Via email: submissions@aemc.gov.au

Review of Demand-Side Participation in the NEM – Stage 2: Issues Paper

Origin is pleased to provide a response to the Australian Energy Market Commission's (the Commission) Stage 2 Issues Paper on the Review of Demand-Side Participation (DSP) in the National Electricity Market.

Background

The AEMC has initiated a review to investigate if the National Electricity Rules (Rules) are limiting the involvement of demand-side in the National Electricity Market

The Commission has defined DSP as follows:

"Demand-Side Participation is the ability of consumers to make decisions regarding the quantity and timing of their energy consumption which reflects their value of the supply and delivery of electricity"

The Commission is undertaking the review of DSP in three stages. Stage1 considered DSP in the context of the Commission's existing work program namely National Transmission Planner Review, Congestion Management Review and Comprehensive Reliability Review. Stage 2, this consultation, will review the Rules more broadly to identify whether there may be any barriers to DSP in the NEM. Stage 3 will seek to identify if there are any remaining barriers to efficient DSP in the NEM after implementation of ongoing reforms including smart metering. Given the significant opportunity that DSP presents for reducing greenhouse gas emissions, Origin believes it would be valuable to include in Stage 3 a review in the context of how to optimise both DSP efficiency and carbon reduction outcomes.

The AEMC has identified five topic areas where there may be potential impediments or disincentives to DSP in the NEM. These are:

- Economic regulation of networks;
- Network planning;
- Network access and connection arrangements;

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- Wholesale Markets and financial contracting; and
- Reliability.

We provide our comments on the identified issues and potential ways they may be able to be addressed under each of these five headings.

Economic Regulation of Networks

Network owners are obligated to consider demand side options as alternatives to network investment but they rarely implement them. This suggests that the economic regulatory framework may have biases that inhibit the equitable assessment of demand-side options compared to network augmentation.

Customers do not generally see real time marginal network pricing and so cannot respond efficiently. Hence the economic regime for regulating networks must ensure that network owners have the incentive to consider non-network options such as DSP.

Revenue regulation provides greater incentive than price regulation for network businesses to implement DSP as revenue foregone from demand-side activity can be recovered from the remaining customer base. The form of regulation, whether revenue, price or a hybrid should enable the equitable assessment of DSP.

The introduction of time of use meters will facilitate more efficient network pricing to customers including time-of-day, seasonal and capacity charging. Theoretically locational pricing may be attractive but it is expected that it would not be cost effective or practicable over a large number of small customers.

The AER is currently considering making a revenue allowance for research and development for network businesses. Network businesses may not have the appropriate skills and business drivers to undertake research and development into DSP and they should only undertake such activity if there are clear benefits and it is approved by the regulator. If the AER determines that it is appropriate for network businesses to undertake research and development into DSP then this information should be made available to the market to commercialise. Origin notes that in February the AER announced its decision regarding the Demand Management Incentive for the NSW and ACT electricity distribution networks, commonly known as the D-factor. Origin would urge the AEMC to examine the potential for building on the knowledge gained from the NSW D-factor experience and other innovative policy approaches (such as those implemented in California) in Stage 3 of its review.

Origin Energy recommends that:

- The framework for the regulation of networks be reviewed to ensure that network owners have sufficient motivation to consider DSP options equitably in comparison to network based options.
- That if network operators undertake research and development into DSP that they make the results available to the market for as wide an implementation as possible.

- The AEMC examine the potential for building on the knowledge gained from the NSW D-factor experience and other innovative policy approaches (such as those implemented in California) in Stage 3 of its review.

Network Planning

Network planners tend to favour network augmentation over demand-side options. Network augmentation is developed as the default option and is generally viewed by network businesses as a lower risk and more robust solution. Networks need to be encouraged to equitably assess demand side options. When assessing demand-side options network businesses should where feasible consider wholesale market benefits and detriments. With regard to detriments it is possible that demand-side projects that benefit the local network may be inefficient across the energy market as a whole, such projects should be avoided. Where Networks do contract demand-side response it should be made available to the retail segment of the market in order to capture the potential wholesale market benefits of the demand-side response.

The regulatory test and consultation thresholds are a balance between the greater transparency that these disciplines provide and increased cost. In Origin's view the current thresholds of $1 million for consultation and $10 million for undertaking the regulatory test should not be increased. For smaller investments Networks should still be obligated to assess demand side options and provide evidence and transparency of this to the regulator and the broader market.

Origin Energy recommends that:

- Network businesses are encouraged to equitably assess and implement demand side options over their preferred network augmentation options.

- Where Networks do contract demand-side response it should be made available to the retail segment of the market in order to capture the potential wholesale market benefits of the demand-side response.

Network Access and Connection Arrangements

Embedded generators have enormous potential to mitigate network expansion and to reduce greenhouse gas emissions. In the current policy framework of deep cuts to greenhouse gas emissions network access and control arrangements should encourage the use of embedded generators. The full benefit of avoided TUOS and DUOS and avoidance and deferral of network augmentation should be passed onto embedded generator proponents.

Technical standards for access to the network are important for reliability and supply quality but they should not unduly disadvantage small embedded generators. Technical standards vary across network owners and jurisdictions. This acts as a disincentive to the deployment of large scale distributed generation.

Embedded generators currently pay shallow connection costs when connecting to a transmission network but a mixture of shallow and deep connection costs when connecting to a distribution network. Embedded generators should only pay shallow connection costs and these should be clearly defined to encourage investment in

embedded generators and to avoid distribution networks receiving multiple revenues for the one asset.

Embedded generators have limited bargaining power with distribution networks as monopoly providers. There is also an asymmetry of information with the network having superior information on the embedded generators network support benefits and technical aspects of connecting the embedded generators to the network. Arrangements should be simplified and standardised across networks and jurisdictions. Dispute resolution arrangements should also be simplified, standardised and made more transparent.

Origin Energy recommends that:

- Embedded generators pay shallow connection costs only when connecting to both distribution and transmission networks and that embedded generators receive the full benefit of avoided DUOS and TUOS charges and deferred augmentation. Payment for connection should be transparent and integrated with use of system charging to avoid over charging.

- Technical standards, network support benefits and dispute resolution standards should be simplified, standardised and made widely available to the market to encourage the efficient deployment of embedded generators.

Wholesale Markets and Financial Contracting

End use customers generally prefer price certainty and supply availability to price volatility and potential load curtailment. This is true of all customer classes from residential customers to aluminium smelters. This is why almost all customers enter into fixed price contracts with their retailers. Some customers have taken on limited price exposure in the market through exposure to forward hedge rates. Such arrangements typically have limited price exposure and customers have generally reverted to fixed priced contracts on expiry.

Retail price caps limit the pass through of cost reflective pricing and as such act to limit an efficient demand side response. The price of electricity is expected to increase as, amongst other things, the cost of carbon is captured in the price. Also technology is improving with the installation of smart meters. These developments and removal of barriers will increase the level of demand side participation but in our opinion this participation will generally continue to be facilitated by a retailer or other aggregator as an intermediary.

Participation costs in the NEM should be as low as possible and demand and supply side participants should be competitively neutral. However generally for customers the costs and risks of participating directly in the wholesale market far outweigh the benefits. Even industries such as aluminium where the total and proportional cost of electricity is very high prefer to participate through an intermediary to insulate themselves from some of the risks and obligations that arise from direct participation. Therefore reduced participation costs, greater flexibility in the dispatch arrangements, improved forecasting or other rule based mechanisms are not likely to significantly increase DSP in the NEM.

When VoLL increased from $5,000 per MWh to $10,000 per MWh in April 2002 there was no evidence that this led to a material increases in DSP. VoLL has an enormous impact on the risk and participant behaviour in the market and has formal mechanisms for

review that sit outside this consultation. Uplift payments should be avoided as they are a market distortion and a cost impost on retailers that cannot be hedged.

Origin Energy recommends that:

- The level of VoLL, dispatch arrangements, participation costs and other rule based mechanisms not be changed as doing so would be unlikely to significantly increase demand-side participation in the NEM.

- The MCE policy decision to remove retail price caps be implemented to encourage more cost reflective pricing and greater demand side participation.

Reliability

Reserve trader is an emergency response back up that is implemented in the event of market failure. It would be inefficient for NEMMCO to enter into a standing reserve for demand-side in the same way as it would be inefficient to use reserve trader to take generation permanently out of the market. In Origin's view any additional reserve trading whether it be demand side or supply side is an inefficient market distortion and should be avoided.

Origin Energy recommends that:

- That standing reserve for demand side not be implemented as this would remove potential demand side response from the market.

Conclusion

Origin believes that overall the National Electricity Rules are not acting to materially limit the involvement of demand side in the National Electricity Market. However we do believe that network regulation and rules should be simplified and standardised to facilitate greater DSP. The wholesale market gives sufficient and fair incentive to DSP but because of the risks involved participation is normally managed through an intermediary. As price increases to capture the cost of carbon, technology improves and retail price caps are removed the level of DSP in the NEM is expected to increase.

Moving forward, given the substantial opportunity that DSP presents for reducing greenhouse gas emissions Origin recommends the inclusion of a review in Stage 3 regarding how to best optimise both DSP efficiency and carbon reduction outcomes.

Origin looks forward to continued engagement with the Commission on this important matter. If you have any questions or would like to discuss this submission please call me on (02) 8345 5250 or Con Van Kemenade on (02) 8345 5278.

Yours sincerely

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