



18 December 2015

John Pierce
Australian Energy Market Commission
PO Box A2449
Sydney South NSW 1235

Submitted online: www.aemc.gov.au

Dear Mr Pierce

DEMAND RESPONSE MECHANISM AND ANCILLARY SERVICES UNBUNDLING PROPOSED RULE CHANGE

Origin Energy Limited (Origin) welcomes the opportunity to comment on the COAG Energy Council's proposed rule change in relation to the Demand Response Mechanism (DRM) and ancillary services unbundling.

The DRM and ancillary services unbundling were first recommended as part of the Australian Energy Market Commission's (AEMC's) Power of Choice review, which was completed in 2012. Following the review, the Australian Energy Market Operator (AEMO) developed a detailed design of the DRM and Oakley Greenwood was tasked by the COAG Energy Council with assessing the costs and benefits of the model. Origin notes that throughout each of these processes, the market failure the DRM is intended to resolve was not articulated. We also note that Oakley Greenwood's analysis was decisive in highlighting the absence of any net benefits (particularly in the wholesale market) if the DRM was adopted. With these factors in mind, we do not consider that the case for implementing the DRM has been made and given that it would result in a significant change to the market, there should be a sufficiently high threshold if the rule is to be made.

Our reading of the Consultation Paper indicates that the AEMC is now taking a first principles based approach in assessing the proposed rule change. Origin supports such an approach and considers that this should include an assessment of:

- whether there are barriers to the efficient uptake of demand response (DR) in the National Electricity Market (NEM);
- if barriers are proven to exist, whether these constitute a market failure requiring regulatory intervention;
- whether the proposed DRM is the most appropriate means of achieving the desired level of DR if it is found that current levels are suboptimal for a market such as the NEM;
- the impact of the proposed DRM on the functioning of an energy only market such as the NEM, including the implications for dynamic efficiency over time; and
- the extent to which the DRM is likely to advance the National Electricity Objective, taking into account all costs and benefits, including implications for short and long term efficiency.

Origin's specific views on some of the key issues discussed in the Consultation Paper are set out below.

Demand side participation in the wholesale market

The rule change proposal seeks to address barriers to efficient demand side participation by large customers in the wholesale market. This premise suggests the present level of DR in the market is not efficient and below some optimal level.

Origin considers any view on the current level of DR in the market is not indicative of the existence of significant barriers or market failure. While levels of DR in the NEM may be lower than in other energy markets (especially capacity markets), this is not because of a fundamental failing of the market but rather due to little appetite for DR offerings, particularly as a result of prevailing oversupply, and generally low prices and low volatility in the NEM.

Market conditions have changed since the DRM was first conceived with energy demand showing a flattening and declining trend. The *2014 Electricity Statement of Opportunities* (ESOO) reported surplus generation capacity of 7,400 MW in the NEM by 2023–24. Since then, the 2015 ESOO reports that the market has responded in the past year by notifying its intent to withdraw approximately 4,550 MW of capacity by 2022.¹ While this represents approximately half the initially predicted surplus, a surplus is still expected to persist. The outcome of this oversupply is relatively benign market conditions that limit the value of entering into DR contracts. Given consequent low cap contract prices in most jurisdictions, retailers are more likely to use these as a hedging instrument in place of DR contracts. In Origin's view, if market conditions were to change and there is a greater value proposition for demand side activities, there is nothing that precludes these arrangements from going ahead.

In addition, it is our experience that customers generally do not have a strong desire to participate in the wholesale market and are more comfortable with retailers managing spot price risk on their behalf. Retailers are best able to select a portfolio of instruments that most cost effectively manages this risk. Where customers do want to assume a degree of exposure to the wholesale spot market, they elect to include pool pass through and flexible purchasing products in their contracts. These products allow them to respond to high spot market prices in a similar way to under the DRM.

Finally, there are other products and growing opportunities in the electricity market that are further reducing the appetite for demand side participation. The most obvious of these are solar PV and battery storage. These could be considered a form of DR as customers are substituting away from the grid through their installation. Increasing uptake of solar PV and battery storage would also continue to reduce opportunities for DR by effectively shifting or smoothing demand peaks. For example, by shifting peak demand to later in the day (when many industrial loads would be ramping down), solar PV effectively reduces the opportunity for the type of DR envisioned under the DRM. This is because the demand from industrial customers may no longer coincide with the maximum daily demand in the market when DR would be of greatest value.

Given the above discussion, Origin questions the notion that the DRM would result in greater levels of demand side participation than what would have otherwise occurred in the absence of the mechanism.

Distortionary impact in an energy only market

As highlighted in the Brattle Group's *International Review of Demand Response Mechanisms*, most of the jurisdictions where there is a similar mechanism to the proposed DRM have capacity markets that differ significantly to the NEM's energy only design. It is unsurprising that mechanisms similar to the DRM are more prevalent in capacity markets given there are separate energy and capacity payments to generators allowing for the recovery of operating costs and fixed costs while delivering a return on assets irrespective of whether DR is provided to the market or not. Given a participant's revenue stream is supplemented by capacity payments, the pricing signal provided by the spot market is arguably less important compared to markets such as the NEM where such payments do not exist.

In an energy only market, spot and contract pricing provide key signals for decisions made by market participants in both the short and longer term. One of the purported benefits of the DRM is that it could reduce market volatility and lower wholesale pool prices. Origin cautions, however, against a simplistic view that the DRM would result in better market outcomes, particularly where it distorts price signals.

¹ Australian Energy Market Operator 2015, *2015 Electricity Statement of Opportunities*, p. 3.

For energy only markets to work effectively, both existing and prospective market participants must have confidence in the robustness and accuracy of price signals. In the longer term, investment decisions rely on price signals that highlight the balance between supply and demand and hence, inform the timing and type of new generation investment. Where the DRM, which is non-firm, impedes price signals this could hamper investors' ability to recover long run costs and hence impact the long term efficient generation mix in the NEM.

This is of particular concern as the introduction of the DRM results in a reduction in the stock of peaking generation below the levels needed to maintain system reliability. Peaking plant is required not only at times of extreme demand but also as a means of supplementing an increasingly intermittent generation fleet due to greater uptake of renewable energy. Proponents of the DRM have often positioned the mechanism as a likely substitute to peaking generation. We would question this line of reasoning given that DR is unlikely to have the flexibility or firmness of peaking plant. Origin notes that some of the limitations of demand side have been highlighted in the AEMC's consultation on Snowy Hydro's rule change proposal that demand side be required to bid into central dispatch. EnerNOC stated in its submission to the AEMC that:

Much of the load on an industrial site cannot be controlled without serious disruption, and may be difficult to forecast with any degree of precision.

The loads that can be controlled (the ones that are possible to use for DR) can be difficult to predict, and have limitations such as notice period requirements, limited dispatch duration, consecutive dispatch etc.²

One of the possible barriers to DR outlined in the Consultation Paper is that consumers do not get an opportunity to change their demand in response to the likely costs of supply as they do not experience any time based wholesale price signal.³ A number of recent changes, however, are likely to better allow this to occur for residential customers. The combination of the AEMC's recent metering and distribution pricing rule changes will allow for increased uptake of smart meters and cost reflective network pricing. This will enable consumers to observe changes in the spot price and for retailers to offer products that would allow consumers to tailor their consumption patterns if they so desire.

Voluntary nature of the DRM

The principal difference between the rule change proposal and previous work streams on the DRM is that the rule change proposes a voluntary approach where retailers could choose whether to enable their customers to offer DR either through becoming a Demand Response Aggregator (DRA) themselves or allowing their customers to work through another DRA. The objective of this is to minimise the system development costs for retailers who do not offer this service to their customers.

Origin considers that the voluntary concept requires further examination. The proposed rule change is not clear on the extent of the obligations on retailers who do, or do not, enable their customers to participate in the DRM. For example, for a retailer who does enable it, is it required to allow all its customers to participate in perpetuity or is it allowed to make the commercial decision to disable it at a further date? Similarly, for a retailer who does not enable it, should it make a commercial decision to enable to it, is it required to immediately approach all its existing customers to offer them the opportunity to participate?

In addition, while retailers would not need to undertake system development costs should they choose not to allow their customers to participate in the DRM, there are still likely to be significant system development and ongoing administrative costs to AEMO for the DRM. Origin strongly recommends

² EnerNOC 2015, *Submission to AEMC Consultation Paper: Demand Side Obligations to Bid into Central Dispatch*, p. 2.

³ AEMC 2015, *Consultation Paper: Demand Response Mechanism and Ancillary Services Rule 2016*, p 11.

that should the proposed rule be made, all AEMO costs related to the DRM should be recovered solely from the new class of DRA market participants. This is a more equitable approach than smearing the potentially large costs across all market participants.

Ancillary services unbundling

The rule change proposal suggests unbundling the provision of frequency control from the sale of energy. By allowing a DRA to provide ancillary services to the market, this is intended to promote more competition in the provision of these services and allow for a more diverse supply of these services.

Origin supports competition in the provision of frequency control. It is important, however, that the load offered must meet the existing technical requirements for providing ancillary services. For example, a frequency control provider must be able to respond quickly to AEMO's directions and have certain metering infrastructure in place to provide high speed data. We, therefore, ask that the AEMC investigate the feasibility of users providing this service through DR. This should include examining whether DR can be used as frequency control that is as timely and as high a quality as current offerings and whether it can be provided at a relatively comparable cost, particularly given the required metering infrastructure is costly to install.

Should you have any questions or wish to discuss this information further, please contact Lillian Patterson on lillian.patterson@originenergy.com.au or (02) 9503 5375.

Yours sincerely,



Steve Reid
Manager, Wholesale Regulatory Policy