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Chief Executive  
Australian Energy Market Commission  
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Dear Ms Pearson

**SUBMISSION ON DRAFT NATIONAL ELECTRICITY AMENDMENT (WHOLESALE DEMAND RESPONSE MECHANISM) RULE 2019**

We would like to thank the commission for the opportunity to comment on the preferred draft rule change for the implementation of a wholesale demand response mechanism and for the opportunity to participate in the recent stakeholder workshops.

As the Australian energy market continues to decarbonise the increasing adoption of renewable but intermittent sources of generation presents clear challenges to delivering on-going reliability of supply to energy consumers. Furthermore, it is clear that implementing a mechanism to support the matching of demand to available supply will be a cornerstone initiative in helping the industry to successfully navigate this transition.

The implementation of wholesale demand response is an important first step towards realising a true two-sided market. We fully support the AEMC's substantial efforts to move this vision forward while at the same time ensuring that no existing stakeholders are unduly disadvantaged.

We do however have reservations in regard to the limitations that have been imposed in the draft rule that serve to restrict participation of small customers in the mechanism.

We hold substantive concerns that these restrictions may in fact serve to render the rule change in its current form ineffectual, imposing costs that would not outweigh the benefits of implementation, which would accordingly not be in the long-term economic interest of consumers nor contribute to achievement of the NEO or the NERO.

Based on feedback received both from the commission and wider industry stakeholders during the workshop events we are further concerned that the rationale for these restrictions may be flawed.

Our submission focuses on highlighting where assumptions appear to have influenced the commission's decision-making process and presenting data that may assist the commission in conducting further validation. We also put forward a number of recommendations as to steps the commission could consider taking to assist in improving the robustness of the decision-making process in regard to the role of small energy users in the mechanism.

## What is the problem we are trying to solve?

Clearly wholesale demand response is not intended to offer a primary form of capacity in the market. Rather it is intended to be complimentary to generation capacity, to provide an additional form of reserve during periods of constrained supply.

In Australia recent lack of reserve events have occurred during heatwave coincident critical peak events. During these events demand increases as consumers seek thermal comfort, while generation assets (particularly thermal generation) may be constrained due to the inability of their plant to deliver nameplate capacity at high ambient temperatures.

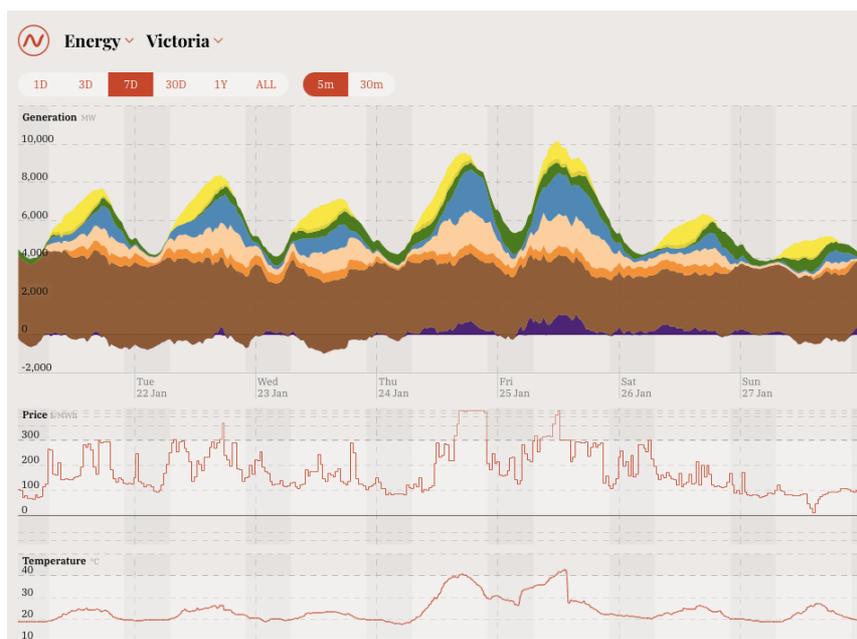


Figure 1 – Generation, temperature and market pricing profile during Victorian LOR event on 24/25<sup>th</sup> Jan 2019 – Source: OpenNEM

While it is difficult to empirically tie the increased load during these events back to a specific source, given the clear correlation with high temperatures it is widely accepted that the additional load likely takes the form of discretionary usage of air conditioning, primary by small customers.

If we accept this assumption then any proposal which attempts to match demand with available supply during these times of lack of reserve must either be capable of reducing the exceptional load itself (i.e. incentivising small customers to reduce their discretionary usage of air conditioning) or to offset this load through reduction in demand in other areas.

The preferred draft rule, by excluding small energy users from the mechanism, in effect restricts the potential market response solely to the second option (offsetting). It is therefore relevant to consider how much potential capacity may be made available by the mechanism for such offsetting to be conducted and the market outcomes such activity might deliver.

## Lack of Clarity on Additionality of Commercial and Industrial Demand Response Capacity

We would note that there are existing opportunities for large C&I consumers to participate in demand response where it would be commercially beneficial for them to do so. For example, they may choose to engage a retail energy supplier that offers spot price pass-through and benefit by adjusting their demand in response to market price signals to minimise their energy costs.

While available data on the number of large customers availing of such plans is not readily available, informal feedback we have received from market participants is that there is active adoption of such plans by those consumers who have the opportunity to benefit by demand responding.

Large energy users also have the opportunity to demand respond through mechanisms outside of the market, such as the RERT and network programs such as the DMIS.

Clearly, despite these existing opportunities for large customers to demand respond, the market is still experiencing periods where the capacity available via the market is unable to meet demand – hence the commission’s draft decision to implement the new market mechanism. Indeed the draft determination states that implementing the mechanism “will increase the capacity of resources that can be relied upon to be dispatched in order to promote reliable outcomes for consumers”.

However, in order for a wholesale demand response mechanism to be effective in delivering additional market capacity clearly there needs to be additional latent demand response capacity available that:

- a) Is not already being delivered through existing opportunities for consumers to demand respond
- b) Would be incentivised to enter the market through access to the proposed wholesale demand response mechanism

Of particular concern is that there appears to be no published estimate of how much latent flexibility there is in large Australian C&I loads such that these loads could potentially be bid into the market as additional capacity, i.e. additional to demand response capacity that is already being made available via alternative mechanisms.

When this concern was raised during the stakeholder workshop the response from the commission was to confirm that no such analysis has been undertaken and to advise that it was not their place to conduct such estimates as part of the rule change process.

Given the criticality of the success of the mechanism to its ability to unlock additional demand response capacity we find it striking that no such analysis has been conducted. The approach of the commission seems to be very much “build it and they will come”, which given the additional costs that will be imposed on market participants (and ultimately passed on to consumers) strikes us as carrying a high level of risk.

***Recommendation 1: We would encourage the commission to seek further data to evaluate and model what level of additional capacity might enter the market as a result of the preferred draft rule change.***

***This could be done by, for example, working with existing Australian demand response providers who may wish to become DRSPs under the mechanism to understand the types of loads they would seek to obtain the right to curtail in order to offer additional demand response into the market, and then estimating the aggregate curtailable load available in Australia of each load type.***

***Any such modelling should take particular care to exclude existing demand response capacity delivered by large energy customers via existing retail offerings and non-market mechanisms.***

## Impact of Excluding Small Energy Users from the Mechanism

As noted above, we make the assumption that heatwave coincident lack of reserve events are primarily driven by discretionary usage of air conditioners by small customers.

By excluding small customers from the mechanism the commission is therefore effectively excluding the potential for DRSPs to address the driver of heatwave coincident lack of reserve events at its source. Instead we must assume that the additional load from small customer air-conditioners during

such events will remain after implementation of the mechanism and will likely continue to increase over time as population growth drives an increase in the number of dwellings to be cooled.

Success of the rule change as drafted will therefore rely on offsetting this small customer air-conditioning load using demand response capacity from large users of energy at a lower cost than meeting the demand through investment in additional generation. Indeed, in the draft determination the commission states that in the short term the mechanism “would have the benefit of suppressing high wholesale spot prices and reducing the total costs of supplying customers’ demand for electricity”.

However, in the most unfavourable situation where the rule change simply attracts a proportion of pre-existing wholesale demand response to the mechanism without adding a material level of additional capacity, the pricing bid by DRSPs for demand response capacity will be immaterial. This is because without additional capacity generators will remain the price setters, likely at or near the market price cap as for recent LOR events. So while reliability may improve marginally (as the demand response capacity would now be dispatchable and therefore more predictable) costs to consumers could be expected to increase as the demand response capacity would now to be settled in the market at the spot price.

We feel it is important to consider the implication of this situation and the financial impact on the small energy users who will eventually end up paying for demand response delivered by DRSPs through the mechanism in their energy bills.

In this situation and assuming that an LOR event may continue for a period of four hours, the cost of purchasing demand response from the market to offset the energy supplied to a single small energy user running an air conditioner with a typical load of 3.4kW during a single LOR event would be  $\$13,500 / 1000 * 3.4 * 4 = \sim\$180$ .

Although the small energy user may not be directly exposed to this cost as it will be amortised in their bills throughout the year and spread across all energy consumers, they will nevertheless in aggregate end up paying for the demand response service provided by the DRSP. This cost is likely to far exceed the utility value of the supplied capacity to the small energy user, so would in effect be an opaque transfer of wealth from the small energy user to the DRSP.

We would question if this is an outcome that, from the perspective of the small energy user, is the best possible outcome achievable and accordingly if it could be considered aligned with the NERO. We would also flag that while this outcome is hypothetical, the risk is (in the absence of data) a real one.

It seems incredible that not even rudimentary modelling of the impact of the proposed rule change as drafted on the operation of the market appears to have been conducted. We would highlight this as a key risk to the proposed rule change delivering outcomes in the long-term economic interests of consumers and as such making a meaningful contribution to achievement of the NEO.

***Recommendation 2: We would encourage the commission to seek further data to help evaluate and model how the preferred draft rule is likely to impact the operation of the market in real terms, or if this is not within the commission’s remit then to engage with other relevant stakeholders to assist with that process.***

***Such modelling could, for example, take estimated additional capacity data gathered from our Recommendation 1 and use this to model the impact on the AEMO bid stacks during recent LOR events. This modelling could then be used by the commission to evaluate and confirm if the preferred draft rule in its current form is likely to deliver a market outcome aligned with achievement of the NERO.***

## The Need for Protection of Small Energy Consumers

In the draft determination the commission highlighted the need to provide adequate protections to small customers who might wish to participate in demand response, and that as no retail rule change has been made the NECF and the NERL would not cover DRSPs. Therefore, if small energy users

were allowed to participate in the mechanism there would be a risk they may not be adequately protected.

We fully support the commission's desire to ensure that small energy users are provided with adequate consumer protections. It is important that consumers are adequately informed through marketing from DRSPs as to how they would be rewarded for demand responding, to ensure they receive appropriate customer support when they do so and most importantly to ensure that vulnerable energy customers don't come to harm.

However, these considerations must be positioned against the very real risk that if sufficient additional capacity does not enter the market in the near term then the only way for the market operator to respond to LOR events will be through involuntary load shedding.



Figure 2 – Reporting of predicted forced load shedding due to lack of market capacity - Source, ABC News

Clearly involuntary load shedding presents a potentially more significant risk of consumer harm as it removes the option for the consumer to choose if they wish to demand respond. It also prevents the small energy users impacted from making alternative arrangements in advance of demand responding (such as pre-cooling their residence) which further increases the risk of harm.

In the summary of reasons for not making a draft retail rule the commission comments on the need to maintain adequate consumer protections for small customers participating in wholesale demand response. However, the commission does not appear to have considered the inverse – that is what are the implications for small customers of not including them in the mechanism.

We would consider that this is a significant deficiency in the commissions approach to considering the role of small customers, and one which presents significant risks to the draft rule contributing to achievement of the NERO.

**Recommendation 3: We would recommend that the commission take a “risk averse” position on the role of small customers, ensuring they are permitted to participate under the mechanism to ensure they are not inappropriately disadvantaged.**

**If during the commissions’ planned holistic review it becomes apparent that existing consumer protections are not fit for purpose and that this cannot be resolved before the proposed implementation date of the mechanism then the role of small customers may be revised based on the outcome of that process.**

## How Small Energy Consumers Might Demand Respond

During discussions at the commission's Sydney stakeholder workshop it was apparent that a number of assumptions were being made as to how small energy consumers might demand respond, should they be allowed to participate in the mechanism. We would like to highlight some data points that may help the commission in assessing these assumptions and associated risks.

One key concern we heard raised repeatedly is that consumers (particularly vulnerable consumers) may be at risk of demand responding inappropriately. The example that we heard repeatedly raised was, to paraphrase, "*vulnerable consumer X may turn off their air conditioner to receive incentive Y and potentially come to harm due to experiencing excessive thermal stress*".

This is based on the assumption that the offer made to the small energy consumer to demand respond would incentivise them both to turn off their air-conditioner and to stay at home in a harmful thermal environment. While we would consider that a consumer responding in this way would be highly unlikely, we agree it is at least possible.

However, firstly it should be noted that any product or service offered by a DRSP to a residential energy user would be covered by the ACL's consumer guarantees. As such a DRSP supplying a product which causes damages or losses that could reasonably have been foreseen would be liable for (uncapped) damages, in addition to potential penalties levied by the ACCC of up to \$10million. As such there are clear incentives for DRSPs to ensure that their offers are positioned such that consumer harm will not occur.

We would further note that it is trivial to structure demand response offers to small customers so that such risks are mitigated.

This is most easily done by structuring an incentive for the consumer to move from a situation of individual thermal comfort to group thermal comfort. This could be done, for example, by offering the small customer cinema tickets, shopping vouchers or a restaurant offer which are only valid for immediate redemption while they are demand responding. In this scenario there is no risk that the small energy user may experience excessive thermal stress as in order to avail of the incentive they are required to move to an alternative and suitably appropriately thermally conditioned environment.

We were alarmed to hear a number of stakeholders at the commission's consultation workshops proposing restrictions on how small customers should be allowed to demand respond be imposed upon them, if they were to be allowed to participate in the mechanism.

In our view this would simply serve to further increase the risk that the mechanism will not make a meaningful contribution to the achievement of the NEO and NERO, while ignoring the world class legal protections afforded to consumers under the ACL.

While we do not feel it is appropriate at this time to make detailed comment on the general suitability of pre-existing consumer protections for small customers participating in the mechanism (given the on-going work by the commission to review the NECF and its interactions with both Australian Consumer Law and the Privacy Act), we would however call out the recent success that other utility regulators (such as the ACMA) have had in deprecating industry specific regulation in preference of the ACL and the Privacy Act as part of the Australian Government's broader deregulation agenda (see <http://www.cuttingredtape.gov.au/>).

***Recommendation 4: We would encourage the commission to ensure that during the review of the NECF, and in particular in the context of demand response, that the general consumer protections afforded under the ACL and the Privacy Act are fully considered such that no unnecessary duplication (or indeed potential weakening) of general consumer protection law occurs in the application of "energy-specific" protections.***

***We would in particular recommend that the commission take due care to ensure that assumptions put forward by stakeholders as to the nature of services that may be offered by DRSPs to small customers do not serve to inappropriately influence the review process.***

## Summary

We understand and appreciate that the commission in its decision to exclude small customers from the mechanism in the preferred draft rule is considering potential risks, particularly in light of the on-going review of the NECF. However, substantial risk already exists to small customers through the prospect of forced load shedding due to insufficient capacity in the market, which should not be overlooked by the commission in its decision-making process.

We hold concerns that risks to small customers of participating in the mechanism may have been overstated due to a lack of understanding as to how small customers are likely to be engaged by DRSPs to deliver demand response under the mechanism.

We further hold very substantive concerns that there appears to be no published data to show that the preferred rule as currently drafted will deliver meaningful levels of additional market capacity, beyond the shifting of C&I demand response capacity that is already being made available via other mechanisms to DRSPs. If this proves to be the case the rule change will not reduce energy costs for consumers, nor contribute in a meaningful way to achievement of the NEO or the NERO. We would highlight this as a significant risk to be considered by the commission.

The above concerns could be alleviated by allowing small customers to participate in the mechanism. This would allow the primary source of exceptional load during LOR events (discretionary use of air conditioning by small customers) to be addressed directly by DRSPs, rather than it needing to be offset by separate (and currently unqualified) additional load curtailment to be sourced from large energy users.

In light of the above we would strongly encourage the commission to take a “risk averse” position and commit to the inclusion of small energy consumers in the wholesale demand response mechanism. This will assist the industry by signaling that they should make appropriate preparations for the inclusion of small customers in the mechanism prior to implementation of the rule change and ensure that the proposed rule change is appropriately aligned with the achievement of the NEO and the NERO. If during the planned holistic review of consumer protections there are issues identified that may impact the role of small energy users there is ample time for these to be considered and resolved before the planned implementation of the mechanism.

We hope our submission is of assistance in considering this matter.

If the commission wishes to discuss any of the concerns raised in our submission or to learn more about demand response services that are currently emerging for small energy users in Australia and how these might be implemented under the mechanism please feel free to contact me on 0407069800 or via [pete@powerpal.net](mailto:pete@powerpal.net).

Yours sincerely,



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