



**EnergyAustralia**

LIGHT THE WAY

16 September 2019

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Australian Energy Market Commission  
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Lodged electronically: [www.aemc.gov.au](http://www.aemc.gov.au) (ERC0247)

Dear Commissioners,

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### **AEMC 2019, Wholesale Demand Response Mechanisms, Consultation Paper**

EnergyAustralia welcomes the opportunity to comment on the Commission's Wholesale Demand Response draft rule change determination (the draft rule).

We would like to recognise the Commission's considerable efforts in assessing and developing the draft rule. The Commission has run a rigorous and consultative process to identify and address issues affecting all interested stakeholders. In particular we would like to recognise the Commission's response to some of the primary concerns we raised in our submission to the consultation paper. The application of baselines in customer billing would have caused customer confusion and costs and imposts to retailers in adjusting their billing systems and managing customer expectations. The proposed rule change has addressed these concerns. We also recognise that provisions will be introduced for AEMO to report on Demand Side Participation (DSP) data which will help to inform the market of the extent of demand response being offered, which we also requested. We believe this rule should be applied retrospectively to data submitted to the portal in previous years, so that the trends and changes in demand response availability can be analysed.

We maintain our views from our submission to the consultation paper that demand response (DR) has great potential to deliver benefits to customers, but that creating a new participant type will increase complexity in the market and does not clearly result in additional demand response being provided over and above that which is already available, or becoming available, from retailers.

We expect the draft rule will introduce limited additional demand response capability as most loads capable of providing the level of controlled and predictable reduction required for AEMO's dispatch processes would already be providing demand response through their retailer. Further, the proposed changes don't capture the full array of demand response capabilities including behavioural, pre-cooling or delayed starts and network service demand response. However, it does deliver benefits in making this activity visible to AEMO.

Rather than a change in the rules, the successful adoption of demand response in the electricity market depends on three key factors:

- Prices of supporting technology, such as metering, load control devices and communication devices;
- Price levels which signal a value to the customer in reducing consumption;
- Consumer interest and engagement.

Changes in these market conditions have been observed in recent years which has led to the on-going development of demand response products and services by retailers seeking to lower costs for consumers. We maintain that there are no barriers to entry for demand response service providers to offer services to retailers, or offer them to customers by becoming a retailer. In particular, the cost of technology will continue to decrease with economies of scale, and the roll-out of smart meters under Competition in Metering<sup>1</sup>. This, combined with increased interest from consumers in reducing their bills will encourage retailers to continue to develop products that suit customers.

We support the AEMC determining to introduce this rule for large customers in the first instance, allowing time for the AEMC to assess protections that are required for small customers, and for AEMO to develop and test the changes required to its dispatch and settlements systems and processes. We also support AEMC's proposal to conduct a review of the mechanism after 3 years of its operation to ensure it is working to benefit consumers, and the reporting requirements placed on AEMO regarding the use and operation of the mechanism as outlined in Appendix E.5.6 of the draft determination.

Comments on aspects of the draft rule are attached to this letter.

If you would like to discuss this submission, please contact Georgina Snelling on 03 9976 8482 or [Georgina.Snelling@energyaustralia.com.au](mailto:Georgina.Snelling@energyaustralia.com.au).

Regards

**Sarah Ogilvie**

Industry Regulation Leader

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<sup>1</sup> <https://www.aemc.gov.au/rule-changes/expanding-competition-in-metering-and-related-serv>

## **1. Inclusion of mass market customers**

EnergyAustralia supports the AEMC's decision to preclude mass market customers at rule commencement. A staged implementation will allow AEMO to develop its systems and processes to maturity, allow the AEMC to thoroughly consider required customer protection regulations, allow for further work to be completed on the costs and benefits of this change, and ensure the required technology is available to support demand response if a decision is made to proceed.

To implement the demand response mechanism, AEMO will need to develop its systems and processes to schedule and operate demand response in dispatch. It is prudent to mature these changes before introducing the mechanism to mass market customers as there are risks of customer disengagement if the changes are poorly implemented and, at the extreme, risks to system security. The staged approach will allow AEMO to develop and test its baselining methodologies, address complications in scheduling and settling aggregated loads in dispatch (such as constraints, directions, Marginal Loss Factors) and identify suitable approach to telemetry required for frequency control. This approach will also allow participants to develop understanding and familiarity with the rules before they are introduced to small customers.

The staged approach will allow time for the AEMC to complete its analysis of required consumer protections. While demand response may not be considered an 'essential service', it does relate to an essential service and may require consumer protections over and above those provided by Australian Competition Law. This review should include consideration of protections that may be required for:

- Premises requiring life support equipment;
- Customers in hardship and vulnerability;
- Customers who are not registered as requiring life support but may be at risk if they reduce demand on hot or very cold days, for example elderly customers;
- C&I customers, and embedded networks, that are in fact an aggregation of mass market customers, some of which may require life support or hardship support;
- Data privacy and security and energy specific family violence protections
- Maximum timeframes to provide payments to participating customers, these should not be protracted as customers are anticipating income;
- Protections, for customers whose DRSP has entered into administration;
- Dispute and resolution processes when there is disagreement over whether a customer provided a response, including Ombudsman schemes;
- Advanced notification to customers of potential activation so they can make alternate arrangements if required;
- Information about credit-worthiness of supplier is accessible to customer;
- Minimum requirements for contracts;

- Contract termination and final bill settlement processes;
- Notice to customers of changes to reimbursement rates or conditions;
- Whether exit fees or late payment fees are permissible;
- Pre-contractual duty of DRSPs including Explicit Informed Consent (EIC) which ensures customers have been provided simple, clear, fair and complete information about the product including:
  - What the demand response product entails;
  - The service that is being contracted and the customer's obligations and commitments;
  - The DRSPs obligations and commitments;
  - The financial compensation the customer can expect to receive;
  - the respective roles and responsibilities of the DRSP and the retailer
  - clear information on any penalties that may apply to the customer if they are unable to provide the contracted service;
- Clear information on bills regarding:
  - Volume of demand response provided and associated reimbursements;
  - Roles and responsibilities of the retailer and DRSP;
  - Emergency contact details and the process for customers to withdraw from obligations at short notice if required (for example air-conditioning is required on a hot day due to visitors with life support requirements or health);
  - Dispute process if customer believes they have reduced load which has not been recognised;
  - Financial incentive rates and qualifying conditions;
- Other energy service protections such as cooling off periods and interpreter services.

There may also be consumer protections in jurisdictional derogations that need to be considered including safety requirements of behind-the-meter load control devices and metrology, particularly if there is electrical work required.

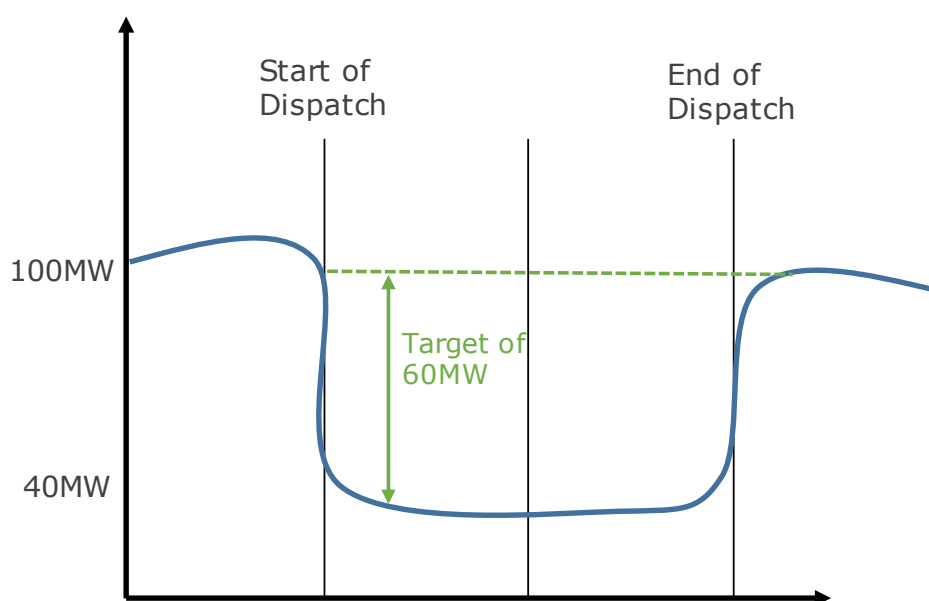
Finally, the demand response mechanism necessarily requires AEMO only contract with controllable and predictable demand response services. There is presently low penetration of load control devices for mass market customers, limiting capacity for customers to participate at this time. We anticipate that COAG's proposal to mandate the installation of load control devices on selected appliances, such as pool pumps and

climate control devices, will support the adoption of the DRM by mass market customers over time. However, given the currently limited ability of customers to participate, we do not expect a prudent staged implementation to have a material impact on the adoption of DR by mass market customers.

In the interim, we have seen growth in supply of demand response products for mass market customers offered by retailers and we anticipate this will continue. For example, EnergyAustralia has scaled up its ARENA Demand Response trials and is now offering its PowerResponse program to all of its customers (provided they have a smart meter installed).<sup>2</sup>

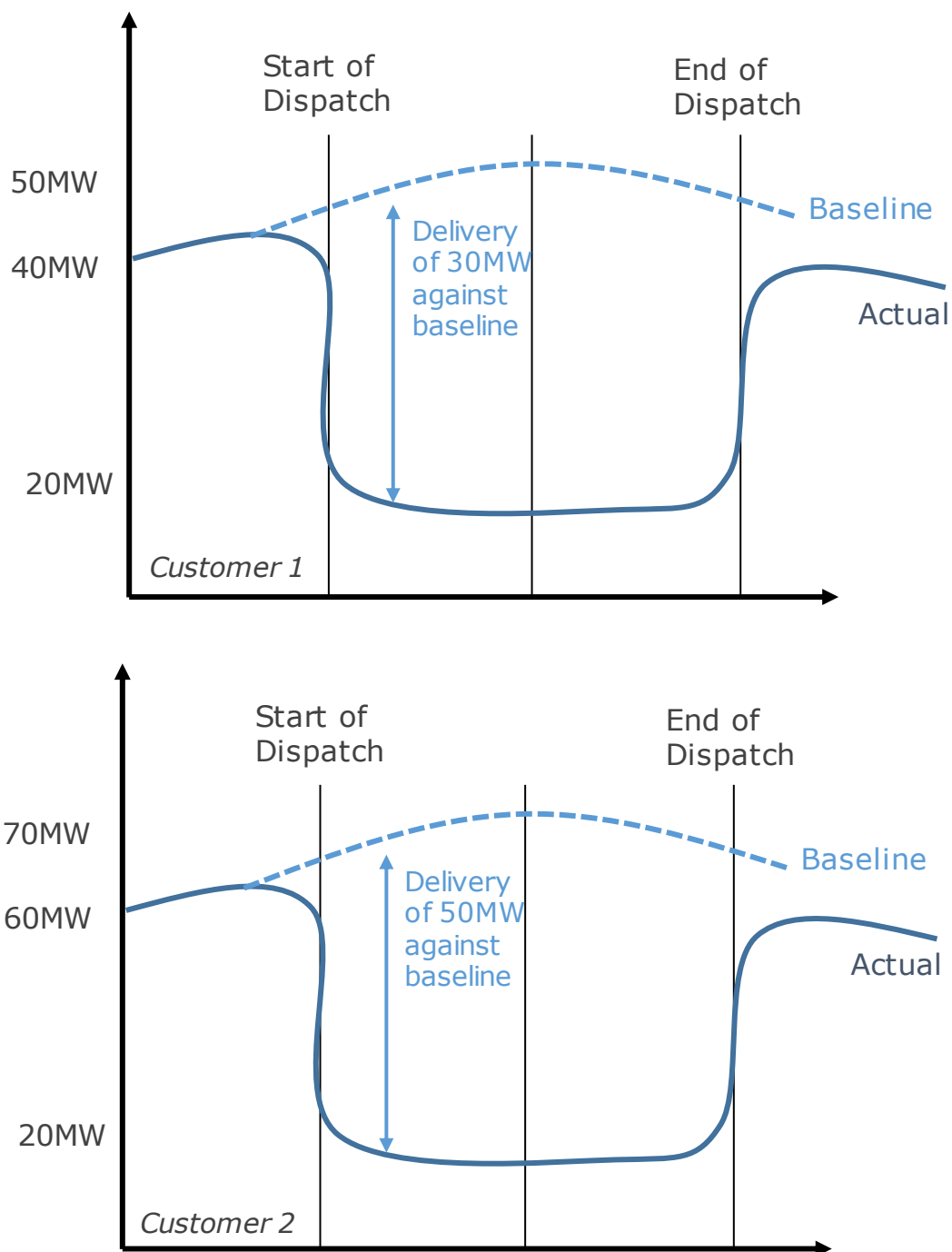
Greater consideration also needs to be given to the interaction between dispatch and settlements for an aggregated portfolio of customers. For example, a DRSP may achieve its dispatch target from a portfolio of customers. However, the settlements process may result in over, or under, recovery of costs from retailers. For example, if the DRSPs aggregated target was a reduction of 60MW, and this was achieved in dispatch, but when AEMO determines baselines for individual NMIs it may find that more than 80MW of reduction was delivered relative to the baseline. This means that AEMO will recover excess revenue in wholesale spot market than required. Alternatively, a DRSP may have achieved its dispatch target, which is measured relative to consumption at the start of dispatch, but when compared to baselines individual NMIs have not achieved the aggregate reduction required. In this case it is unclear how funds will be recovered to compensate the DRSP. Further, as noted in our previous submission, while baselines may be accurate at an aggregate level, they are highly inaccurate at an individual level, which may exacerbate the above issues. This will occur if the baseline developed to apply to an aggregation of loads then needs to be applied to individual NMIs to determine the wholesale charges for the retailers responsible for those NMIs.

Figure 1: In aggregate, a portfolio delivers 60MW of load reduction against its target



<sup>2</sup> <https://www.energyaustralia.com.au/power-response-2019>

Figure 2: Individual customers deliver a total of 80MW when measured against baseline



## 2. Notices and information DRSPs should provide to retailers and the broader market

Just as AEMO needs transparency around DR to operate the market efficiently, retailers and generators need the same level of transparency to efficiently manage their risks in the market.

For retailers, it will be important to have information, provided via MSATS, of which customers have entered into demand response contracts and the corresponding baseline

methodology that applies. This information should be available to a customer's current retailer, but also made available to any retailer that has been asked by a customer to assume financial responsibility for their connection point, prior to the retailer entering a contract with the customer. This information is required for retailers to be able to assess and prudently manage their pool exposure risks, and also to determine an accurate price for that customer.

For on-the-day risk management, ideally there would be real-time, or just ahead of time, information provided regarding the level of baseline consumption that retailers will be financially responsible for. We recognise the complications in providing this information due to the ex-post calculation of baselines. However, we consider it important for retailers to know when part of their load is going to be activated so they can manage their spot risk exposure appropriately. While baselines should, in theory, closely reflect a load forecast, in reality they will not and retailers managing their spot exposure will need to understand how much of their load to forecast using traditional methods, and how much to apply baseline forecasts to. Without this information, retailers are likely to face increased risk management costs to minimise their pool exposure reducing benefits of the demand response rule change.

For generators, having adequate market information will be required to optimise plant operations. The AEMC have specified that both short and medium term Projected Assessment of System Adequacy (PASA), and pre-dispatch information will be required. We seek clarity that all market data of DRSP units will be published the following day, consistent with all current generators and scheduled loads. This includes,

- Price bands and volumes, including availability and PASA,
- Bid and rebid reasons,
- Ramp rates,
- Targets and actuals, and
- Conformance.

This will ensure consistency with information that is provided by generators which allows participants to understand market dynamics to optimise the operation of their assets.

Further, we expect that similar live information will be made available to the market for DRSP's as is for generators, for example SCADA.

### **3. Setting an appropriate Reimbursement rate**

The AEMC's intent of the reimbursement rate is to reflect the retail rate that a customer would be charged. However, the proposed calculation methodology may not adequately reflect the costs and realities of how retailers manage price and volume risks.

The rate that retailers charge customers can be highly bespoke, particularly for large customers, but broadly it reflects the price of the underlying contracts the retailer has entered to manage pool price exposure risk for a forecast volume of energy, based on

the retailer’s appetite for risk. It also includes other costs such as green charges, distribution usage costs and a retail margin.

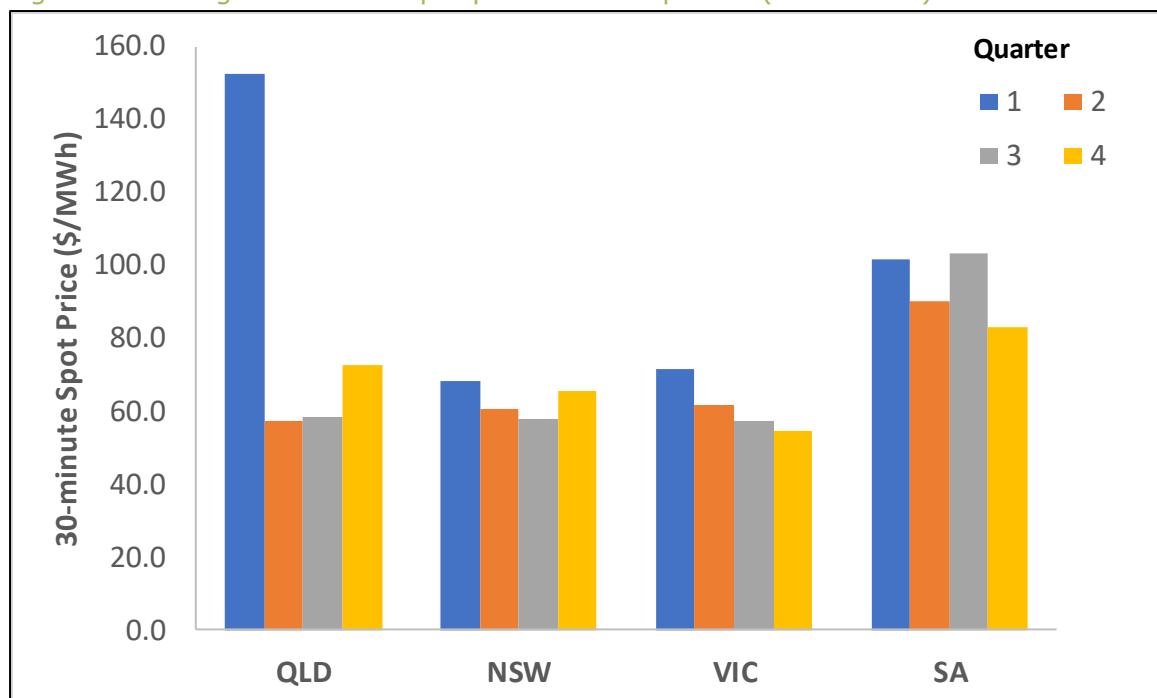
While the cost of contracts (for example swap and cap products) is influenced by spot market prices, a variety of other externalities also impact their prices, including estimation of future spot prices and other market conditions.

Ideally, the reimbursement rate for retailers should cover the full costs of contracting that have been borne by the retailer to take on the risk of the customer. In practice this is difficult to achieve due to competition concerns and practical challenges in determining appropriate hedging costs; hedging costs will be different across all retailers and dependent on the time period they entered contracts and their risk appetite,

A relatively simple approach, that could provide a more accurate reflection of costs than the proposed load weighted average spot price, would be to use the load weighted average of peak prices. To some extent this will reflect the additional risk premium retailers incur to manage risk of high price events. Peak prices could be defined as those between \$300 (as an example) and the market price cap (MPC).

Further, it is not reasonable to use the previous quarter of prices to reflect the expected price in the next quarter as prices move seasonally. An alternative approach would be to incorporate data on previous years of the respective quarter and an adjustment made using information from the previous quarter as a benchmark. This will help to capture both the annual circumstances and the seasonal variability.

Figure 3: Average 30-minute spot price in each quarter (2009-2018)



#### 4. Required system changes

While the change in the design of the rule has reduced system changes for retailers (as significant changes to billing systems to enable retailers to bill customers on baseline



reads are no longer required), system changes will still be required to implement the rule change. This will include:

- Changes in standing data tables to capture the new DRSP fields;
- Changes to wholesale market settlement reconciliation processes to capture new baseline data;
- Potentially changes to B2B systems; and
- Changes to Generator systems and processes to incorporate baselines in load forecasts.

These changes will impact both large and small retailers as the rule will affect any retailer with a customer entering a contract with a DRSP.

## **5. Cost Benefit Analysis**

We note that the AEMC has decided against quantifying the potential net benefits of this rule change.

While both the ACCC and the Finkel Review recommended the introduction of a demand response mechanism, neither completed a substantive cost benefit analysis. The AEMC should therefore ensure this work is completed before implementing this reform

It remains to be seen whether this reform will deliver additional demand response to the market, in excess of what is already occurring. We have observed outcomes in off-market demand response where Reliability and Emergency Reserve Traders (RERT) provisions have resulted in the transfer of demand response from retailers to AEMO, without additional volume of DR being created. It is likely that the DRM will produce similar outcomes whereby existing demand response capability is simply transferred between market participants, without creating provision of additional resources.

At a minimum it is important that AEMO's estimated costs are known and clear before a decision is made. The AEMC should be accountable for implementing changes that have a cost to customers.

The view that DR provided through the DRM will reduce prices for customers is ambiguous. While spot prices could fall due to increased 'supply' of generation/reduction in demand, retailers will still need to contract to baseline levels of energy. This introduces some inefficiency in contract purchasing that may maintain cost levels for customers. In fact, contracting prices may increase as retailers now face greater uncertainty in the volumes they are exposed to as it could be either actuals or baselines and depending on the accuracy of the baselines, this may require additional contracting. It would be more efficient for retailers to directly contract with customers and avoid the cost of contracting, while delivering a reduction in demand.

Further, DRSPs will have an incentive to drive the marginal price as high as possible to extract the most value possible. It is therefore unclear to suggest that the introduction of DRSPs will certainly reduce spot prices and customer bills.

## 6. Allocation of market costs for implementing and operating the mechanism

It is important for the AEMC to consider how costs associated with a demand response mechanism will be recovered.

- **AEMO system costs:** It is unclear whether all customers should be required to fund AEMO's development and maintenance costs or whether these costs should fall on the DRSPs (and their customers) who are the direct beneficiaries of the changes. While it is possible that all customers could benefit, this outcome is not a certainty and it would be inappropriate for all customers to cross-subsidise those who are benefitting from the changes. The AEMC should recommend AEMO to consider changes in its next fee determination, prior to implementation of the rules, that DRSPs incur a portion of AEMO's costs for metering, B2B and dispatch systems.
- **Meter data and services:** It is unclear what rights DRSPs will have in regard to a customer's meter data. This data is procured and paid for by retailers, and distribution businesses (depending on the jurisdiction and the customer's meter type). If DRSPs are to interact with Meter Data Provers (MDPs) to obtain data for commercial purposes, this should be supported by a contractual relationship. Should the DRSP require data, they should seek an agreement with the relevant parties, or otherwise install their own metrology device. It is not appropriate for retailers, or distribution businesses, to be charged for any additional metering works that are required for a DRSP to provide its service including providing unscheduled meter reads, metering disputes, any metering investigations or works, and any system change costs associated with implementing the rule such as changes in B2B and B2M. Further, should a customer entering a contract with a DRSP require a meter to be installed, the retailer should be able to refer these costs to the DRSP, rather than being responsible for them. Further, when developing B2B Procedures, AEMO will need to be cognisant of the fact that DRSPs do not have a commercial relationship with retailers, distribution businesses or MDPs.

## 7. Ensuring DR provided to AEMO is additional to planned operations

The AEMC have included provisions to ensure that demand response participating in the mechanism is only rewarded for changes to consumption that have occurred due to its participation in the dispatch process. We have a few concerns around the AEMC's drafting of this provision (Clause 3.8.2A(c)).

First, it is important that customers who are on wholesale pool pass through contracts are prohibited from participating. These customers, who respond to high prices by reducing load, could bid this reduction and receive financial reward for doing so, in addition to reduced wholesale charges. It appears that this activity will not be excluded by the rule drafting which states that:

*"A DRSP must only make a dispatch offer to provide wholesale demand response in a trading interval where and to the extent that, if dispatched, the wholesale demand response is or will be the result of wholesale demand response activities in that trading interval."*

Wholesale demand response activities are defined as those that “*result in the provision of wholesale demand response*”. This term is defined as “*An adjustment to the amount of electrical energy flowing at the connection point for a wholesale demand response unit in response to a dispatch instruction,...*”.

It is therefore not clear that a reduction in load, due to a response to anticipated prices, is captured within the exclusivity provisions.

Second, the clause implies that customers will be unable to provide demand response in a particular interval for both energy services, under the DRM, and other services, such as network ancillary services. We seek clarification that this is the Commission’s intention and that customers are not precluded from registering for multiple services and providing them in different trading intervals.

Finally, it is unclear how the rules will adequately ensure that demand response provided is genuine and that the load has not shifted to another NMI associated with the site. The AEMC have suggested that this will be addressed in AEMO’s guidelines, but we suggest that prohibitions on this activity should be expressly included in the rules to ensure this activity is prevented.

## **8. Dispatch and Scheduling obligations**

To achieve the full benefits to AEMO of including demand response in dispatch process, important to be considered as similarly to generation, where possible. In general we support the AEMC’s approach to applying provisions as outlined in Appendix A. To provide visibility to market of supply capabilities we believe these obligations should apply, including:

- MT PASA,
- ST PASA,
- Prudentials (due to possible charges for FCAS, retailer reimbursement charges, dispatch penalties),
- daily energy limits (including restrictions from customer on how many hours they can be curtailed for),
- FCAS causer pays contributions and exposure to contingency costs,
- bidding in good faith,
- and re-bid reasons.

We note that the AEMC has not considered whether 3-year closure notice provisions should be required for aggregated loads exceeding 30MW.

We note that the AEMC doesn’t consider it necessary for DRSPs to provide information to AEMO’s Energy Adequacy Assessment Projection (EAAP) report. We disagree as the DRSP’s customers could be subject to fuel, or fuel-like, constraints. This could include demand response being provided by substituting grid consumption with on-site generation (which may be subject to fuel supply constraints), or contractual limits on the

quantity of demand response a customer agrees to supply in a given year (for example to ensure they can meet their own production targets). These limitations should be considered by AEMO in its assessment of fuel availability.

It is unclear in the drafting whether a DRSP will be penalised if it has bid into the market and received a dispatch target of 0 MW, but it continues to provide a reduction in load. This could affect AEMO's assessment of the supply demand balance if it assumes that a DRSP with a target of 0MW will resume consumption at the previous level. DRSP's should be bound by the same requirements to follow their dispatch targets as any other scheduled or semi scheduled unit and DRSPs should also be included in AEMO's non-conformance process.

There is a risk that AEMO's forecasting methods could lead to an under procurement of generation. For example, if there is an extended period of load reduction provided by DRSPs, AEMO's short term forecasting could calibrate to assume there is a lower volume of demand. This could subsequently lead to an under procurement of generation.

Consideration should also be given to how a DRSPs availability is communicated to the market so as there is symmetry of information around Lack of Reserve (LOR) levels across all participants.

## **9. Use of baselines**

A key issue for baselines is the incentives parties have to improve the accuracy of baselines. At the public forum on 22 August 2019, the Commission suggested that AEMO will have incentives to ensure baselines are accurate as they will be used in the scheduling process. However, this is questionable as the baselines will only take effect in settlements, which does not affect AEMO directly. AEMO's scheduling and operations will only consider reference to targets set based on actual levels of consumption, not baselines. The risk that baselines are inaccurate is instead borne by retailers and DRSPs who face financial settlements on its basis. We therefore believe it is preferable for the AER to instead prescribe the performance criteria for baselines, not AEMO.

Further, baselines present a moral hazard issue whereby customers, or DRSPs, could change their operations after they have been approved by AEMO. Baselines can be used to identify statistical levels of consumption but cannot capture actual intentions. As a result, customers could seek to maximise financial payments by increasing their consumption prior dispatch, resulting in a higher volume of subsequent load reduction.

AEMO's guidelines will also need to consider how it will verify baselines that are submitted by a prospective DRSP whose customer is already providing DR with another DRSP as the customer no longer has a 'raw' actual consumption trace upon which to determine a baseline as it has already been providing DR.

## **10. Implementation Timeframes**

AEMO and market participants currently have significant implementation requirements for the five-minute settlement and global settlements programs. It is important that overlap between the programs is considered by the AEMC to ensure that AEMO and industry resources are not stretched to the detriment of a successful implementation.