

Wholesale demand response – consultation paper: stakeholder feedback template

The template below has been developed to assist stakeholders in providing their feedback on the questions posed in this paper and any other issues that they would like to provide feedback on. The AEMC encourages stakeholders to use this template to assist it to consider the views expressed by stakeholders on each issue. Stakeholders should not feel obliged to answer each question, but rather address those issues of particular interest or concern. Further context for the questions can be found in the consultation paper.

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GENERAL COMMENTS ON BACKGROUND SECTIONS - EXECUTIVE SUMMARY & CHAPTERS 1-3

EXECUTIVE SUMMARY

Broadly we agree with the Executive Summary (as an encapsulation of the Consultation Paper).

However – the basis of the Paper is set out as (with our emphasis):

- *Recognising demand response providers on **equal footing with generators in the wholesale market** and as such, being able to more readily offer wholesale demand response in a transparent manner.¹*

We would argue that this is too simplistic in that “generators” – as market force – do NOT exist in isolation and that “generator sector” is dominated by vertically integrated “gen-tailers” and therefore thinking a DRSP could be on anything like “equal” footing is – bluntly – fanciful!

¹ page i – and source - AEMC, Reliability frameworks review - final report, July 2018, available at: <https://www.aemc.gov.au/markets-reviewsadvice/reliability-frameworks-review>.

It would appear that the three Rule Change Requests (in chronological order) could be *perversely* summarised as:

- ERC0247 – seeking to ‘shaft’ Gen-tailers
- ERC0248 – seeking to ‘shaft’ the WDRM proponents ‘(shaft their shafters)’
- ERC0250 – seeking a way through the minefields thrown up by ERC0247 & ERC0248 proponents especially in respect to achieving the policy objectives of the SA Government in respect to renewable PV and battery projects (irrespective of whether or not those may be politically motivated or not)

Consequently, none of the above is holistic in its approach to what is nonetheless clearly an important issue and opportunity confronting the NEM.

The Paper sets out what AEMC sees as the “Benefits of wholesale demand response”² as (again our emphasis added)

Benefits of wholesale demand response The focus of this consultation process is on approaches to facilitating wholesale demand response in ways that benefit consumers. **For a wholesale demand response mechanism to advance the NEO, *the benefits it brings to consumers* need to outweigh the associated costs.**

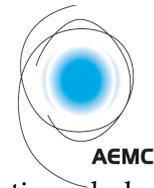
Wholesale demand response changes the quantity of electricity bought in the wholesale market and can be used to manage spot price exposure, or to help market participants manage their positions in the contract market.

In the short-term, wholesale demand response helps to address a tight-supply demand balance since it can be a lower-cost resource than peaking generation. It also provides another source of flexibility within the market. In the long term, efficient wholesale demand response could lead to reduced need for peaking capacity as the demand side responds to higher prices.

Effective use of wholesale demand response can also help consumers manage their energy costs. Consumers can avoid high prices and shift consumption to times such as in the middle of the day when increased solar output lowers wholesale prices.

*Facilitating wholesale demand response has the potential to lower wholesale prices and help manage the supply-demand balance at a lower cost. In order for these benefits to be realised, **it is important that demand response is facilitated in the least cost way.** The benefits of facilitating demand response needs to be weighed against the associated costs and implications of any mechanism that would be introduced.*

² page ii



There are a number of issues that need to be clarified in trying to address this issue – primarily – who are “consumers”? – the collective whole market, residential or business, those with/out DER (be that local generation, batteries, demand management systems) etc.

The Paper makes only one reference to the role (or not) of DNSPs – network charges³ – and otherwise is silent on DNSP issues impacting on the success or otherwise of DR (Demand Response). In our view, ANY consideration of Rule Changes for, or around, DR must have the harsh light of reality shone on them – all DR opportunities are DER (Distributed Energy Resources) in the DNSP network!

While aggregated DR – be that VPP of batteries or orchestration of load – may ‘look’ (or be perceived) as ‘generation’ they are NOT generators (from an historical perspective/definition of an asset connected to the transmission network/s. Further, while in aggregation they can be seen as “unit” realistically each ‘DER part’ is discrete and has a direct impact on the consumer where it is located and the consumers around it (within the same DNSP).

AEMO has been, with others, conducting workshops etc. investigating DER and DM (amongst other things) in which we have participated and consequently understand there are a number of other critical factors that could/would impact on Wholesale Demand Response – not the least being DNSP tariffs and technical operating envelopes that could/would impact on DR.

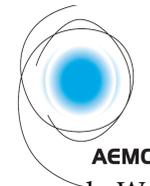
The Paper sets out the three rule change proposals and further outlined an AEMC proposed fourth mechanism – compensating customers in the event of reliability related load shedding⁴ (which, in short, we strongly support).

The three rule change proposals are however driven by constraining DR within the confines of an “energy only market” – Appendix 4 (LSCM) also includes discussion of RERT – both are capacity issues in the NEM – further we believe that there are similar DR capacity issues within the Distribution Networks (capacity to host and operate DER in the network/s) that need to be addressed/accommodated.

We believe none of the three proposals is entirely satisfactory however the proposal ERC0250 by the SA Government is probably the best (starting) framework when the complexity of the issues and competing self-interests of the proponents (protagonists) are considered.

³ page 72 – C.4.2

⁴ page iii; Appendix D pp75-79 – Load Shedding Compensation Mechanism (“LSCM”)



Building on the AMEC LSCM proposal and the concept of a Separate (Wholesale) Demand Response Market seems a logical way forward. We will comment in detail later but in short we believe that timing is of the essence and that addressing the issues raised in the Rule Discussions by a introducing separate (developing) demand response market – not necessarily just wholesale (energy) – in an expedited way is crucial to consumers over a drawn out extended process.

CHAPTER 1

1.1 The AEMC position in its Reliability Frameworks Review⁵ are supported

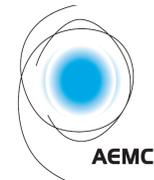
- *A voluntary, contracts-based short-term forward market be implemented that would allow participant-to-participant trading of financial contracts closer to real time than is currently readily possible. This would provide the demand side with more opportunities to lock in price certainty, and so make it easier for large consumers to engage in the wholesale market and provide demand response (i.e. change consumption) in response to expected wholesale prices.*
- *Consumers should be allowed to engage multiple retailers/aggregators at the same connection point (known as multiple trading relationships), promoting competition between retailers, supporting new business models for demand response and providing consumers with greater opportunities to engage in wholesale demand response with parties other than their incumbent retailer.*
- *Demand response providers should be able to be recognised on equal footing with generators in the wholesale market and so be able to more readily offer wholesale demand response in a transparent manner to the Australian Energy Market Operator (AEMO).*

The Paper addresses three rule changes requests that relate (ONLY) to the third recommendation above - we believe that the AEMC should be looking at this Demand Response issue holistically and that the former/first two recommendations should have equal, even greater, weight.

Taking this view into consideration would support an argument for ERC0250⁶ and the AEMC's LSCM proposal be taken together for a DR market that provided for BOTH a short term forward market and a real time (wholesale) market that interacted together.

⁵ AEMC, Reliability frameworks review - final report, July 2018.

⁶ This rule change request is available on the AEMC website under project code ERC0250. See: <https://www.aemc.gov.au/rulechanges/mechanisms-wholesale-demand-response>



Demand Management – that has ANY element of load (time) shifting – particularly advance load (consumption) to provide for later load curtailment – needs to have some certainty to manage costs/risk (and it is important to note that there are Market Participants trying to manage countervailing risks).

An object stated by ERC0247 proponents is to “offer demand response into the wholesale market in a transparent, scheduled manner” however we argue that the wholesale market – with its domination by “gentailers” (vertically integrated generators & retailers) is not that transparent – esp. in regard to the (i) the forward market price and (ii) 30-minute spot price (versus 5-minute intervals).

In respect to the later – 5-minute v 30-minute – it is of little value to the NEM, let alone the DR aggregators, to find out at the 25-minute mark of a spot interval that the proceeding 25 minutes are suddenly worth more (after the opportunity to action DR has passed).

We see a possible significant benefit of the proposal for a separate (Wholesale) Demand Response (Management) market if it were – from inception – able to operate at 5-minute settlement (in advance of the whole of NEM transition 1 July 2021).

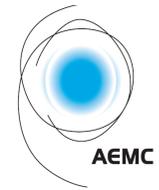
CHAPTER 2

The Paper sets out detailed and valuable background information in Chapter 2.

It argues that there are, by services provided, four types of **demand response** – wholesale, emergency, network and ancillary services. However, it is arguable that DR really only has ‘true’ value when there is a coalescence of value (high wholesale prices in conjunction with ancillary services and quite possibly (or at the extreme) in an emergency).

While the Paper sets out that it is a response to Rule Change requests with respect to Wholesale Demand Response Mechanisms we argue that the better Rule Change arising from this Consultation would be in respect to Demand Management “DM” (not just Demand Response which is one element of DM albeit “real time” action/reaction (i.e. direct/immediate response)).

The difference between DM and DR we define as being able to include the time dimension – that is load shifting from a time of high forecast load to either before, or after, a high wholesale market price (signal).



We argue that the market would be more efficient if consumers (or third parties on their behalf) could MANAGE their load/s over time to (i) consume power when it is at lower cost, and/or (ii) be rewarded for shifting consumption from a period of forecast higher cost; thereby reducing demand during that forecast period ... with the expected efficient market outcome of reducing that peak price before it occurs (by quantitative lowering of demand) benefiting the market as a whole (i.e. all consumers).

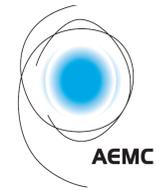
If we consider a simple one household that has reasonable air-conditioning load – the house is not occupied and closed (secured) with expected return of occupants at say 1600 when there is a forecast LOR event (due to heatwave) and consequent high forecast wholesale energy spot prices.

Under the proposed DR only solution the occupants (to be 'rewarded') would arrive home but must not turn their a/c on and swelter though the heat (with attendant risks) and their reward may not be truly reflective of their 'contribution' as it would be reasonable to expect on such a day their actual usage would be higher than the usual baseline (average usage) – or the baseline may not even be accurate.

With an alternate DM solution the householder could (i) pre-cool the residence when energy was cheaper, (ii) short term forward contract not to use a/c in LOR event period and therefore arrive home to cooled house that stays comfortable perhaps with circulation/fan only during the event. The forward contract price would be lower [to reflect both the probability of the event occurring or not and risk management strategies] than the forecast spot price/s consequentially lowering both forecast demand and spot price and the overall cost of energy over period. This 'offset' is required to overcome some inefficiency that would occur as part of the pre-cooling exercise. This approach also negates the need for baseline complicated settlement processes.

It is blindingly obvious which of DR or DM (as above) options is the more attractive to the consumer and is more likely to be successfully marketed and taken up in the market!

To be 'honest' and avoid gaming of the market actual data of DER capacity (load), and actual usage at the site should be used. There are metering and data solutions that provide for this requirement already.



The Powershop “Curb your Power” demand response program is arguably a halfway house DM solution, the issue (“missing link”) being that a consumer would have to take their own action/s to achieve the same energy use outcomes (cooling or heating via air-conditioning, filtering pool water, cooking etc.) that they would have otherwise have done in the event period (their “baseline”).

Similarly integrated solar and batteries (SA VPP & DR trials) provide DM features particularly in respect to optional charge/ discharge of batteries (the later most closely resembling actual controlled/ dispatchable generation) but also lack features of time shifting consumption.

We put forward the view that, over time (in the long term) and importantly from the consumer perspective, the real opportunity for DM (including DR) is wholly within the Distribution Network and is an opportunity that will be available to a significant percentage, if not a majority, of consumers.

Further the consumers who are NOT participating in DM will be materially affected by it and need to be seriously considered from an equity perspective.

Importantly we’d argue that the role of DM in Networks is much greater than set out in Table 2.1 (DMIS & DMIA)⁷ including but not limited to voltage regulation and efficient use of (local) network resources (demand/supply balance within part/s of a DNSP areas) in opportunities such as local energy trading – which have significant value to the NEM over and above aggregation into the wholesale energy market.

Further it is logical, even expected, that DM market issues will be fundamentally driven by network issues and DER which may, or may not be able to participate in whole of NEM (attempted) orchestration (at any particular point-in-time).

One area that is of crucial relevance to DM/DR is the applicable network tariff frameworks – while wholesale market is very dynamic (30-minute spot market) and will become more so with 5-minute settlement the network tariffs are antagonistic to an efficient DM utilisation –

⁷ ACCC, Restoring electricity affordability and Australia’s competitive advantage, Retail Electricity Pricing Inquiry—Final Report, June 2018, available at: <https://www.accc.gov.au/publications/restoring-electricity-affordability-australias-competitive-advantage>.

particularly in respect to load shifting. It is worth noting that this has not always been the case – before the changes wrought on the NEM (the wholesale market) by dramatically increased renewable generation (introducing variability to the supply side particularly with respect to “opportunistic” solar/wind generation) the use of controlled load for hot water was the norm (and still places a crucial role) to manage baseload generation to ensure there was adequate demand.

For DM/DR to have a full/complete impact on the market – particularly its efficiency – Network Tariffs must have the ability to be in sympathy with the wholesale market price when combined with DER.

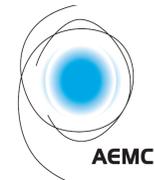
The issue of Demand Management Incentives for DNSPs was comprehensively addressed in “Demand Management Incentives Review”⁸ though we believe that paper’s foundation and conclusions were severely, if not fundamentally, constrained by the acceptance of the market doctrine that the DNSPs can NOT participate in the generation or retail businesses. In our opinion the full potential (for the whole NEM) of DER and DM can only be achieved by a commercial and symbiotic relationship between new age aggregators or specialist retailers (without conflicts of interest present in the current gentailers)with DNSPs. The current frameworks and tariffs frustrate those opportunities.

We put forward view that the market design – the wholesale price – has moved from a time where it was primarily, if not exclusively, used to signal supply side management (investment) to the new reality where demand side management is of equal or greater weight. The issue is that currently (with exception of the small amount of existing DR discussed in the Paper) the majority of the demand side market has little (e.g. coarse Network driven ToU tariffs and load controlled off-peak hot water) or no (universal flat retail (inclusive of Network) flat tariff) price signals to facilitate control of demand.

The seminal issue for the market – in the new reality of variable (uncontrolled) renewable energy resources – is to have dynamically controlled demand (load) that can be matched with available supply. This requires a new breed of DM aggregators, facilitators, and/or retailers operating (exclusively) within the distribution networks (this view implicitly supports the argument for a new separate wholesale demand management market which is independent of, but co-optimised with the Wholesale Energy Market (and also FCAS).

Bluntly, there is no incentive for the current ‘crop’ of retailers (particularly the dominant “gentailers”) to provide (price) signals to consumers that would lower their consumption, to be more efficient, or lower their cost of it overall (even if their consumption increased to provide better

⁸ <https://www.uts.edu.au/research-and-teaching/our-research/institute-sustainable-futures/our-research/energy-and-climate-4>



outcomes/utilisation/productivity). The gentailer 'cartel' has only one primary objective – to sell as much generated energy for the highest possible price! They are hopelessly conflicted.

Our view is driven by the simple observation that technology driven change and the access to data (and the internet in general) is increasing exponentially such that it not just possible, but expected, that most consumers will be able to access real time information, and be provided with tools, that enable them to easily observe and manage their consumption and costs. These services are available now and will become mainstream driven by higher speed internet (NBN/5G), increased cloud infrastructure, and Moore's Law on computing power (esp. in handheld/personal devices), Artificial Intelligence, Smart Home and IoT devices, and personal assistants (Google Home etc.).

This Rule Change process must provide for that reality, and not be myopic by focusing on (real time) Demand Response - in fact implemented correctly, and efficiently, it would be expected that DR activation value would only occur after, or because of, DM failure (i.e. DR activation would be last measure in a DM market response process).

We acknowledge that AEMC sets out and sees the opportunity in *"a more active demand side"* and the value of *"matching supply and demand in the NEM"* and the likelihood that it *"can be more cost effective than building new generation capacity"* in s2.2 p9 of the Paper.

CHAPTER 3

With respect to Issues Identified – s3.1 – we accept the issues put forward by PIAC, TEC & and TAI and the SA Government but consider the issue raised by the AEC and their proposed solution as being self-servicing and obstructionist.

With respect to Proposed Rule changes:

- 3.2.1 Wholesale demand response mechanism – broadly we agree with the outline – a new category of market participant (DRSP) and DR value being excluded from retailer billing but believe the baseline approach and settlement methodologies are difficult to create/manage.
- 3.2.2 Wholesale response register – while having a register of DER/DM register is logical, and probably beneficial under any model the application of it on AEC's proposed rule change is self-serving and likely to be highly counterproductive to creating a competitive

efficient environment. The gentailers are hopelessly conflicted and the only way to overcome that is if their generation and retail arms were separated by “Chinese Walls” and there was open and transparent contracting between the arms with third parties able to participate in those markets (to buy or sell generation at an open transparent market price).

- 3.2.3 Separate wholesale demand market – we believe that that is the best base model of the three proposed rule changes however, as with 3.2.1 above, we believe the baseline approach and settlement methodologies are difficult to create/manage. Further, as outlined above we believe that this model presents an unmissable opportunity to take up 5-minute settlement in that new market before the 1 July 2021 move in the existing wholesale market.

With respect to Proponents’ expected costs and benefits

- 3.3.1 Agree broadly with the summary therein. One particular cost issue that merits serious consideration is the (cost) impact of DR (or DM/DER) in the DNSP network. The SA Government and PIAC/TEC/TAI have opposing views and we are of a mind to side with the SAG view as the cited COAG Energy Council report is well out of date. In other areas, there has been significant debate as to who should bear the cost of DER in the DNSP – with view of proponents of DER arguing it should be the Networks. We fundamentally disagree with that argument based on the principle of “causer-pays”. In our opinion, any proponent of DER for any purpose, but especially for commercial ‘third party’ purposes like DR/DM, should be responsible for costs incurred by the DNSP arising from that purpose. This may take the form of a fixed (connection) fee or variable fees and/or provide for “trade-offs” where the DER provides offsetting services to the DNSP.
- 3.3.2 we do support the proposed rule change but do think a register of DER assets would be beneficial to AEMO – this has already been contemplated in the AEMO VPP Demonstration Trial Program.
- 3.3.3 we support the creation of separate market for wholesale demand response (though preferably, a wholesale demand management market over “response” by including the element of time) – we note the lack of provided information by SAG as to how that separate would market operate (and how our preferred expansion (incorporation of time) would add to that).

Questions		Feedback
Chapter 4 – Assessment framework		
Question 1: Assessment framework		
A)	Do stakeholders agree with the proposed assessment framework? Alternatively, are there additional principles that should be taken into account?	<ul style="list-style-type: none"> • None of the proposed rule changes “tick all the boxes” – consequentially we expect the assessment framework will be orientated to achieve a positive outcome based on s4.2 • We agree with the proposed assessment framework and highlight the issue “risk allocation” – we are particularly concerned with the risk that consumers assume with asset ownership, and operation, of local generation equipment and batteries and whether or not they understand and manage the risks and undertake proper maintenance etc. A rule change that promotes, of facilitates promotion, sale/installing of DER for DR/DM should be cognisant of those risks and place proper safeguards in place.
Chapter 5 – Issues for consultation		
Question 2: Nature of the issue raised		
A)	Is it difficult for consumers to participate in wholesale demand response? If so, which consumers face the greatest amount of difficulty? What is the cause of this difficulty?	<ul style="list-style-type: none"> • Yes. • Customers of gentailers – inherent conflicts of interest • Biggest challenge to DR/DM is Network Tariff restrictions and how DNSPs may contract with a DRSP/DMSP (or with a specialist retailer operating in the DER/DM realm). • To extend an active demand side market to residential consumers and/or small businesses (who are not on special/capacity network tariffs) the dynamism of the wholesale energy market has to be extended to the network tariff component – i.e. we say “you can’t be half pregnant!”
B)	What demand response providers and products are currently available in the market?	<p>Through metering and other capabilities, we have an interest in the following DER, DM, DR</p> <ul style="list-style-type: none"> • Data Monitoring & Real Time Aggregation • Community Battery Storage • Air-conditioning Load Time Shifting & DM • Pool Environment Control (Chemistry Maintenance and Pump Control) • Dynamic Hot Water Controlled Load for Inertia / FCAS Support • Conversion of Standby Generators to Parallel Operation • UPS Battery-as-a-Reserve System • Vehicle to Home (V2H) & Vehicle to Grid (V2G)

Questions		Feedback
C)	<p>Is there effective competition for demand response as a service to be used by retailers? If not, are consumers able to access the benefits of wholesale demand response directly? Is competition for wholesale demand response as a service increasing?</p>	<p>No.</p> <p>There is currently a significant barrier to entry to any (new) demand response services – the current arguments where the NMI is the exclusive responsibility of the FRMP means it’s an “all or nothing” (i.e. be the retailer) to supply DR/DM services (which is probably overstressing the expertise and capabilities of the DR/DM provider). Case in point – to participate in the AEMO VPP Demonstration Program Trial you (any VPP, DM, DR) <u>had</u> to have a retailer as a part of any consortium.</p> <p>There are many wholesale demand response products and services (and they’re growing by the day).</p> <p>Our view is driven by the simple observation that technology driven change and the access to data (and the internet in general) is increasing exponentially such that it not just possible, but expected, that most consumers will be able to access real time information, and be provided with tools, that enable them to easily observe and manage their consumption and costs. These services are available now and will become mainstream driven by higher speed internet (NBN/5G), increased cloud infrastructure, and Moore’s Law on computing power (esp. in handheld/personal devices), Artificial Intelligence, Smart Home and IoT devices, and personal assistants (Google Home etc.).</p>
<p>Question 3: Wholesale demand response currently in the NEM</p>		
A)	<p>Do stakeholders have views on the existing levels of wholesale demand response in the NEM? Please provide evidence or data to substantiate these views where possible.</p>	<p>What existing wholesale demand response is in the NEM is undoubtedly very low hanging fruit.</p> <p>There is plenty more fruit in the trees but the orchard is owned by the gentailers.</p> <p>Qualitatively there is a lot of interest by consumers in anything that can cut their costs and wholesale demand response is one of those means. Quantitatively the large penetration of DER, and new (and better equipped) DER coming onto the market presents and enormous untapped resource for DR/DM.</p> <p>Compared to overseas markets our forays into demand side management are miserable.</p> <p>The Paper makes the following points on p26-27</p>

Questions		Feedback
		<p>The <u>efficient level of wholesale demand response is constantly changing</u>. As it involves consumers making the trade off between consuming and not consuming, the efficient level of demand response is a function of the ability for consumers to understand and make this trade-off. Additionally, the trade-off being made by consumers is influenced by a number of different, variable factors:</p> <p><u>Estimating</u> the efficient level of wholesale demand response becomes more difficult when also considering increasing consumption during low priced periods, or shifting consumption into these periods. Typically, wholesale demand response is viewed to be a reduction in consumption during high wholesale prices. However, wholesale demand response would also include, for example, a dairy factory shifting refrigeration loads to midday when wholesale prices tend to be lower. <u>Trying to quantify this demand response will become increasingly challenging</u>.</p> <p>There are <u>significant difficulties associated with determining the actual or theoretically efficient level of demand response</u>.</p> <p>In short, we strongly dispute the difficulty/challenges outlined above – there are many products – and we supply one – Curb – that provide very accurate reporting of circuit/device level metering data – to 1 second resolution if required. Devices and AI associated with, or controlled by, this data can already facilitate least cost, efficient or productive (personal) outcomes. Our responses to the AMEO VPP Demonstration Program Trial (provided separately ‘attached’ hereto will be informative.</p>
B)	Can retailers indicate to the Commission what they are currently doing to facilitate wholesale demand response?	We are not a retailer but our view is... not much and what they, esp. gentailers, are doing is “smoke and mirrors” to suggest they are while (as per the AEC proposal) in our opinion doing their best to frustrate it.
Question 4: Approach for facilitating transparent, price responsive demand		
A)	<p>Do stakeholders consider there are other regulatory solutions to:</p> <p>(a) providing the demand side with greater access to wholesale prices, and</p> <p>(b) increase the transparency of demand side</p>	<ul style="list-style-type: none"> • Consumers should have the ability to have wholesale price exposure • introducing flexibility for DNSP tariffs • unless a DNSP is locally constrained a flexible DNSP tariff should (broadly) follow the wholesale energy market or even “overdrive” the signal (lower or higher price to further stimulate response (would be particularly useful for load shifting and they would more closely correlate with a DNSP managing its own constraints). • providing for local energy (and capacity) markets within a DNSP area.

Questions		Feedback
	response to these prices?	<ul style="list-style-type: none"> • integrating short-term forward contracts in a separate wholesale demand response/management market. • Introducing as a mandatory requirement (if providing DR/DM services) the provision of accurate detailed metering (DER and/or circuit/service level metering) and provision of that data to Consumer <u>and</u> AEMO. • In our view one of the biggest errors in the NEM was putting (renewable) generation behind-the-meter as that has obscured both the generation and actual consumption. We cannot repeat the same mistake with the uptake of batteries (a significant and manipulable DER energy/capacity source) and DR/DM in general. • As per the requirements of the AEMO VPP Demonstration Program Trials any participation in DR/DM should require that controlled load (or generation) to be discretely metered. • fundamental requirement to (dramatically) improve transparency is requiring ALL contracts between generators and retailers (even where they are arms of the same business) to be conducted in the open market (spot, short term, or futures markets).
Question 5: Efficient consumption of electricity		
A)	Do stakeholders agree with our characterisation of how efficient wholesale demand response would improve outcomes in the wholesale market?	<p>YES, with the caveat the proposed rule changes and topics canvassed in the Paper do not provide for what is probably the key demand ‘stimulate’ – timing (of choice of when or when not consume, or to substitute that consumption at a different time).</p> <p>We further make the point that efficiency is not just about LOWERING consumption but getting the most value for the consumption (including more of it at lower prices).</p>
B)	What are stakeholders’ views on how facilitating wholesale demand response could affect outcomes in the wholesale energy market?	<p>We believe that facilitating Demand Management – an active cogently involved demand side – would have an enormous positive effect on the NEM in general and the wholesale energy market in particular. It is quite possible that availability and uptake of energy intelligent devices and services – coupled with the “cloud” and AI with greater “connectedness”, SmartHome, electric vehicles, remote and intelligent controllers are going to dramatically change energy consumption/demand patterns.</p> <p>All these systems create data and AEMO will need to be on top of using that data as older models of modelling NEM demand are superseded by a more organic controlled demand side.</p> <p>AEMC must provide a Rule environment for a dynamic demand side that acts in concert with the a more volatile supply side (and not just in response to a “NOW” Wholesale Energy (supply) Market.</p>

Questions		Feedback
Question 6: Competition for wholesale demand response services		
A)	Are consumers able to access competitive offers from retailers or third parties to assist consumers to undertake wholesale demand response? Is the level of competition greater for larger consumers?	<p>It's arguable that these rule change proposals are, as they stand, best suited for "low hanging fruit" and do not facilitate broader market adoption by the mass consumer. In the same way that larger, more financially adequate, consumers benefited with lower prices because of retailers pay-on-time and other quantity discounts over (smaller) customers with a lower financial adequacy. This need not be the case. There should be encouragement, if not incentives or penalties, for DRSP or other DMSP or retailers to promote/provide this technology widely to ensure the community benefits as a whole.</p> <p>We do not need to see an extension of DNSP problems where the shift of cost from those who could afford it also could afford to avoid it and did, and therefore extra burden passed onto those that cant!</p>
Question 7: Demand response participating as a scheduled load		
A)	Has the Commission appropriately characterised the benefits of increasing transparency relating to wholesale demand response?	<p>Yes – however, we question if forecast prices would be sufficiently accurate (to facilitate time shifting load) – especially in the light that (as a general observation) it would appear they are generally not. It would be interesting see hard statistical data analysing final spot prices with previous forecasts.</p> <p>As we mentioned above – there is a concern of the lack of visibility of gentailers wholesale market (forward) position.</p> <p>We would see a great benefit – if as part of AEMO's research into short term forward market contacts it investigated developing an index or algorithm that assessed and reported the accuracy of forecasts – ideally if AEMO could isolate other impacting elements it should be possible to price in the cost of decreasing, or increasing, load an interval in the future – or – in the absence of a change in forecast load what the probability that the spot price will be lower or higher (not unlike a wagering market).</p> <p>As mentioned above – Question 3(A) – we believe the AEMC is not fully appraised of some of the options available for collecting and aggregating real time granular data (circuit and DER/device level metering data). This products/services are available now and a requirement for their use should be seriously considered over the alterative of estimating data and creating baselines (which will never be 'accurate').</p>
B)	Do stakeholders consider that if demand response were to participate in the wholesale market, it should do so as a scheduled load (rather than scheduled "negawatts")? Would the pros and cons of participating as a scheduled load differ for different types of demand response providers, e.g. those that have demand response controls on all	<p>We see the whole baseline issue as a difficult one to get close to right – let alone actually right.</p> <p>As raised above we believe that there are systems and services already available that provide accurate and real-time time data. This cost of having that would reasonably fall on a combination of the consumer and the DRSP or DMSP or Retailer HOWEVER the data alone would be of great benefit to the consumer, the aggregator and AEMO.</p>

Questions		Feedback
	or only part of their load?	<p>These systems can provide highly granular data so that the actual amount of controlled load in use (to be curtailed), or load that can be added, can be accurately identified.</p> <p>An issue with scheduled load is the circumstance where load shifting is an objective – take the circumstance where an a/c load in a house would normally be active at 1630 – the load is scheduled (in the (separate) WDR market – how would be possible to be paid to remove that load from the future forecast (and trigger earlier load (i) at a cheaper wholesale time and (ii) further subsidised by the dropping scheduling of load (negawatts) at the event time?</p> <p>It would appear that the AEC rule change request outlined options for DR participating as schedule loads is to impose conditions that might (i) be a significant barrier to entry to new NEM participants and (ii) would suit their (the gentailers) mode of operation as dispatchable generators.</p> <p>All things considered except for special/specific use cases it seems unlikely that scheduled loads is an appropriate way to undertake DR (or DM).</p>
C)	Do stakeholders consider the obligations placed on scheduled load remain appropriate in the context of demand response? If not, how might they be changed to better allow loads to participate in central dispatch?	<p>A big issue with scheduled load is having accurate data and being able to respond accordingly. An aggregator could manage risk by having a large enough portfolio and managing scheduling in the same way a generator may have spare generation capacity. That however brings issues with which, or how, consumers in portfolio are rewarded (pro-rate or actual or otherwise) or even penalised. The further complication is that DNSP constraints might otherwise affect dispatch. Considering the above – causer-pays seems somewhat problematic.</p>
D)	Which information provision processes should a demand response provider participate in, i.e. pre-dispatch, ST-PASA, MT-PASA?	<p>Residential and business metering products and systems exist that would enable a DRSP/DMSP to provide accurate real time and forecast data to AEMO pre-dispatch and PASA systems.</p>
E)	How should compliance with dispatch targets and the causer pays procedure apply to demand response providers?	<p>We see this as a matter for further consideration however it is arguable – especially so long as wholesale demand response is small part of “generation” capability and that it is a lot (hopefully millions) of moving parts that causer-pays procedure should NOT apply to DRSP/DMSP. It should be noted that unlike (big) generation assets in the transmission network where nearly all issues are under the control, or at least responsibility, of the generator owner/operator with DRSP/DMSP you are talking about assets that are scattered between multiple DNSPs (which may apply constraints), serviced by multiple technology providers (and ISPs) any one or more could <i>cause</i> a failure to meet dispatch targets (and they won’t pay).</p>

Questions		Feedback
Question 8: Reducing barriers to a range of demand response		
A)	To what extent will these mechanisms facilitate more demand side participation throughout the NEM?	<p>As pointed out above – Q2(C) – a rule change that removes the interference barrier posed by the FRMP (especially the gentailer version thereof) will dramatically facilitate demand side participation.</p> <p><i>Our view is driven by the simple observation that technology driven change and the access to data (and the internet in general) is increasing exponentially such that it not just possible, but expected, that most consumers will be able to access real time information, and be provided with tools, that enable them to easily observe and manage their consumption and costs. These services are available now and will become mainstream driven by higher speed internet (NBN/5G), increased cloud infrastructure, and Moore’s Law on computing power (esp. in handheld/personal devices), Artificial Intelligence, Smart Home and IoT devices, and personal assistants (Google Home etc.).</i></p>
Question 9: Costs of implementing mechanisms		
A)	What is the extent of the upfront costs that would be imposed on participants to introduce the proposals outlined in the rule change requests? Please provide evidence or data to substantiate these views where possible.	<p>The costs associated with, and the risk impositions, proposed by the AEC seem designed to impose the biggest barrier to entry to new DRSPs/DMSPs. If the AEC Rule Change Proposals were adopted it would be significantly high and possibly stunt development – or would just hand the DR opportunity to the incumbent gentailers (who have a conflict of interest in it being successful).</p> <p>We generally view the proposed baseline methodology and associated settlement methods to be expensive, cumbersome, difficult to market to the residential of small business consumer and unlikely to develop the best outcome for the NEM in the long term. It’s also case this rule change limits the application of broader DER & DM – as against DR that could come from battery centric systems (which it seems to favour).</p> <p>We believe the rule changes should facilitate a wide portfolio of DR/DM solutions.</p> <p>We believe the costs outlined for AEMO are more than offset by the benefits that would flow from an active demand side of the market. Further the flexibility afforded by a separate wholesale demand response (management) market and the ability to add features to it to accommodate time shifting DM make it highly desirable and justified.</p>

Questions		Feedback
		<p>We believe that the mandating of a standard of information gathering and supply to facilitate Demand Response and Demand Management would impose costs on participants but also deliver valuable services to the Consumers, the DRSPs, and AEMO and provide for an efficient market based on accurate data.</p> <p>We also believe that as existing sites with DER (solar or other embedded generation) come into a DR/DM system being able to gather their existing behind-the-meter generation and consumption data will be valuable not just to the customer at that site but to all NEM participants – particularly AEMO, AEMC, AER and DNSPs.</p> <p>It should be noted that proposed register of DR (DER/DM) assets will be implicitly available as part of the an enhanced DER/DRSP/DMSP metering data service.</p> <p>The provision of these data services would be competitive or could simply have to meet a (technical and functional) standard stipulated by the AEMC.</p>
B)	Will demand response providers have sufficient information regarding expected revenue to make commercial decisions regarding the cost/benefit trade-off to participate in the mechanism?	<p>Above, Q7(A), we made the point that there needs to better data available wrt to time accuracy of forecast prices – and being able to act reliably on them.</p> <p>In our opinion using baseline data – or at least blended baseline data (relying on data from existing gross (import, export & net) interval NMI meters is both unreliable and complex. A DRSP/DMSP should be able to rely on data from a granular meter that records accurate data that provides detailed information of generation (embedded or battery discharge) AND the specific controlled and uncontrolled load. This does NOT have to be the FRMP’s NMI meter.</p> <p>The DRSP/DMSP (in our view mandatory required) metering equipment/service data can easily, and should, be used to reconcile with either AEMO settlement systems and/or the FRMP retail systems.</p>
Question 10: Reducing extent of upfront costs		
A)	Do stakeholders have suggestions for ways these upfront costs could be minimised? E.g. could there to be savings by making changes at the	<p>The Paper makes some valuable suggestions. Most relevant of which is the co-incident changes required for 5-minute settlement.</p> <p>If we consider (reasonably) that the one of the biggest costs is around data collection and processing,</p>

Questions		Feedback
	same time as other systems changes?	<p>producing data sets such as baselines etc., matching and cross processing data, settlement etc. – that cost is multiplicative – each/every party must incur similar costs – costs not necessarily aligned with, in fact likely in conflict with, their commercial objectives.</p> <p><u>If there was a standard platform that provided all essential data to all DRSPs/DMSPs, and AEMO & DRSPs – and data (or even an interface/product) that could be reliably used by the Consumer to compare DRSPs/DMSPs products/services or even third party independent technology (SmartHome, IoT etc.) – there would be a VERY significant benefit to the NEM.</u></p> <p>A standard platform, based on Customer Premises Equipment (CPE) and a Cloud service (with APIs etc.) would enable a Customer to easily migrate between DRSP/DMSP if desired (in the same way that Customers migrate their NMI to different retailers). In effect, such a platform would be a type of Metering Provider (MP) and/or a Metering Data Provider (MDP) to DRSPs/DMSPs – and to service Consumer Information Service (“CIS”) providers.</p>
Question 11: Indirect costs of proposals		
A)	What is the likely extent of any indirect costs imposed through these proposals?	<p>We believe that the adoption of blended baseline data (relying on data from existing gross (import, export & net) interval NMI meters is both unreliable and complex and unjustified and is likely to</p> <ul style="list-style-type: none"> (i) lead to inefficiencies; and (ii) significantly frustrate and stymie the growth in DRSP/DMSP and Customer Information Services (CIS) that could have a profound effect on consumer behaviour and provided for greater more productive/efficient use of energy.
B)	How could any such costs be minimised?	Institute a mandatory DRE data requirement, standards and procedures.
Question 12: Risk allocation for baselines		
A)	Do stakeholders have views on how risks and costs can be best allocated under a baseline used for demand response?	<p>The risks associated with blended baseline data (relying on data from existing gross (import, export & net) interval NMI meters cannot be understated. Arguably the incumbent FRMP is on the “right side” of the argument that they should NOT be responsible for ANY of the costs/risks (based on the principle of causer-pays). This is further complicated by the fact that it is the retailers, and to a greater extent the gentailers, that are being disintermediated by DRSP/DMSP services.</p> <p>The best way to avoid the risk/cost of baselines is to avoid them in favour of real time detailed data.</p>

Questions		Feedback
Question 13: Retailer participation		
A)	Is it necessary to place an obligation on retailers to participate in the mechanism for it to address the issues raised by the proponents?	<p>Yes – but in line with our views on the issues around the NMI meter data that FRMP rely on – we believe the better solution would be to have a detailed, high granularity, metering – which would remove an obligation on FRMP to create baseline data.</p> <p>All data requirements could be achieved from the new ‘better’ data set and cross verified at a gross level against the NMI dataset (already available in a standard format).</p>
B)	Are there additional obligations these proposals would place on retailers, and do they differ between the proposals?	We believe that the proposals for settlement need to be revisited in the light that a better data set is available and could be mandated – having this detailed, real time granular dataset (which has much wider implications for the NEM and consumers) will result in more appropriate and efficient use and settlement models .
Question 14: Embedded generation and storage		
A)	Do stakeholders have preliminary views about the ability for the proposed mechanisms to accommodate embedded generation, in the form of reduced consumption of electricity from the grid in high price periods?	<p>The Paper sets out two key observations:</p> <ul style="list-style-type: none"> <i>where possible, these mechanisms should be designed such that they can accommodate increased consumption during low price periods, including by charging batteries, as well as decreased consumption during high price periods as a result of using embedded generation, as these are growing sources of demand-side flexibility.</i> <i>there may be challenges in accommodating embedded generation in baseline methodologies. To the extent that baselines cannot accurately capture this behaviour, it is likely to result in inaccurate quantities of demand response being credited.</i> <p>In respect to the first – as we have made the point many times above – a key element the current proposals are missing is the element of time – battery charge/discharge (or withholding export to opportunistically charge) is the same factor.</p> <p>We consider the second point to be a major understatement – and a key issue to be resolved. In our view blended baseline data can NOT do the job.</p> <p>It would appear that no one is prepared to call a “spade a shovel” and say baseline data is a fundamental flaw because it has, to date, been assumed as the only way of “measuring” DR (or any DM). We dispute this because there is equipment and services available that can deliver accurate, granular real time data – and they should be used.</p>

Questions		Feedback
B)	Do stakeholders have preliminary views about the ability for the proposed mechanisms to accommodate, as demand response, increased consumption during low price periods (whether due to charging batteries, increasing production or any other action by the customer)?	It is essential for the development and sustainable growth for DR/DM that there is an “ <i>ability for the proposed mechanisms to accommodate, as demand response, increased consumption during low price periods</i> ” – our view, as stated above, is that the proposals submitted do NOT accommodate them (in fact, in all likelihood, will frustrate it).
Question 15: Thresholds for participation in a mechanism		
A)	What thresholds, if any, should apply to participation in the mechanism for individual consumers and aggregated portfolios? For example, large consumers as opposed to small consumers; a MW size threshold?	NO (but cost efficiencies and obligations will probably “sort the wheat from the chaff”. There is a likelihood that service providers to DRSPs/DMSPs will appear that take on part of the responsibilities for individuals or smaller (targeted) technologies providers so that can focus on core strengths.
B)	Should there be thresholds at which different scheduling obligations apply?	YES. As a related point, it is arguable that to promote innovation within this sector that peak government bodies (AEMO, ARENA etc.) should establish an “incubator” or “sandbox” were new players, or existing players with new technologies, can experiment without the (full) restrictions of the market rules. Some of this activity is already achieved through trials but an organised environment (that provided tools/interfaces) to ‘standard’ or ‘generic’ system components would speed innovation efficiently.
Question 16: Implementation timeframes		
A)	How long do stakeholders think would be reasonably required to implement the proposals as set out in the rule change requests?	As stated above we believe that the AMEC should revisit the issue of baselines and its impact on the Rule Change Proposals. That said, in line with the views of the SAG – and our view that all DRSPs/DMSPs should use a reliable and accurate data platform – there is a strong case to move quickly with the principle of a separate Wholesale Demand <u>Management</u> Market “WDMM” (we prefer for reason outlined above the broader definition of management then purely Response).

Questions	Feedback
<p>B) How could the implementation timeframe be reduced? What trade-offs may need to be made to the design to achieve this?</p>	<p>The Paper states: <i>One such option for reducing the implementation timeframes would be to place the obligation on the third party undertaking wholesale demand response to convey metering data (including, where relevant, baseline data) to the retailer. This could mean that the retailer would not need to change its billing and settlement systems as the third party would take on the responsibility for sending through baseline and actual consumption data together. This would likely mean that these third parties would need to be accredited to read meters, and would need to be prepared to provide regular meter reads.</i></p> <p>We absolutely concur but do NOT believe that blended baseline data (relying on data from existing gross (import, export & net) interval NMI meters can be used.</p> <p>The introduction of a standard DER metering platform would dramatically improve development time lines – no longer will DRSP/DMSP have to rely on FRMPs to calculate baseline, actual use, and delta datasets. They would not have to develop their own metering solutions. They will have immediately available data to reliably inform their decision making and measure their actual response.</p> <p>Further – we believe that mandating an (enhanced) metering standard for DER utilised for DR/DM is fair and reasonable under the “CAUSER-PAYS PRINCIPLE” irrespective if that platform is paid for by the Consumer or the DRSP/DMSP – further a standard platform would offer significant efficiencies, allow Consumers to swap not just FRMP (as they currently do) but also DRSP/DMSP and to use third party CIS that would support better (more efficient/productive) consumption all at the same time.</p> <p>Further we’d argue that a further principle – BENEFICIARY-PAYS – should reasonably be applied. The Consumer (and/or both the DRSP/DMSP) is seeking to be a financial beneficiary from the application of their technology (which is likely an extension of existing embedded (solar) generation or batteries) and therefore an expense that allows them to participate is fair and reasonable – especially since it would come with added benefits that it would ensure a fair and fully (accurately) informed Consumer and Market.</p> <p>We do not believe the above represents a trade-off but a dramatic enhancement.</p>

Questions		Feedback
Appendix A – Wholesale demand response mechanism		
Question 17: Centrally determined baselines		
A)	How important is it to design against the possibility for bias and gaming?	<p>These (centrally determined baselines) are useless – there are much better options available.</p> <p>It is important to design to protect against bias and gaming – having accurate real time data (and accurate historical data for previous (corresponding) periods/intervals) in a common format will be accessible to AEMO, AER and other parties and will make it very difficult to game the market.</p>
B)	How can a baseline methodology appropriately align incentives such that the risk of systemic bias is minimised?	<p>NO.</p> <p>A real time data central system that maintains an accurate detailed disaggregated meter data (i.e. not gross data but detail on specific controlled and controlled loads) will be the DRSP/DMSP to forecast forward load/consumption based on aggregated accurate data for each site/DER device – AEMO could see the same data – but aggregated across ALL DRSPs/DMSPs. Data about what was happening now – current load versus comparable historical load. Along with previous load shifting activity if required.</p>
Question 18: Accuracy of baselines		
A)	How important is it that the baseline methodology is able to accurately estimate consumption?	<p>It's absolutely essential but it can't be done with blended baseline data (relying on data from existing gross (import, export & net) interval NMI meters).</p>
B)	What administrative mechanisms would improve baseline accuracy without imposing excessive burdens? For example, regular review of baseline methodologies by independent experts, or cross-checking against consumption data from customers that are similar to the demand response provider but are not engaging in demand response.	<p>Use real time data from a common platform used by all DRSP/DMSPs and data fed from it (centrally) to AEMO (in a format specified by AEMO).</p> <p>This platform could conduct cross DRSP/DMSP data analysis, and analysis from Consumers with this detailed metering technology for CIS purposes only, to ensure that the WDRM (or WDMM) system is not being gamed.</p>

Questions		Feedback
C)	Can a baseline accurately account for embedded generation and other dynamic resources that might exist behind the meter?	NO – not a hope. But there is technology available to do it in real time (which is a reasonable imposition on Consumers or Aggregators wishing to participate in commercially beneficial activity).
D)	Should a wholesale demand response mechanism apply only to the types of customers for which baselines can be accurately set, and if so, what types of customers should be eligible?	NO – it should be available to all customers that have requisite real time detailed metering data available.
E)	How should long-term or permanent changes in a customer's overall level of demand be addressed in baselines? For example, factories may add or retire production lines; households may increase or decrease in size, and may install or remove equipment such as batteries, pool pumps or solar panels.	We do not believe that blended baseline data (relying on data from existing gross (import, export & net) interval NMI meters can be used. The only fair and reliable methodology is to require a mandated standard detailed metering platform that addresses requirements of the Market and the Consumers.
Question 19: Settlement under the wholesale demand response mechanism		
A)	Do stakeholders consider one of the settlement options outlined to be preferable? How would this approach to settlement impose costs and risks on market participants?	We believe that the Settlement Options outlined in the Paper should be revisited to take into consideration the real opportunity to move away from the fundamentally fatally flawed baseline methodologies.
Question 20: Other considerations for the wholesale demand response mechanism		
A)	Do stakeholders have views on these other considerations set out in the appendix? (See pp. 62-63 of the consultation paper).	We have no specific views on the <u>very</u> relevant issues raised – HOWEVER we would make a general comment that a lot of these issues are pertinent because there is no accurate data available – and the <u>limited</u> data that is available is currently in the hands of FRMPs who are not of a mind to be “helpful” as they are the target of disintermediation.

Questions		Feedback
B)	Are there other considerations not raised that should also be considered when designing a wholesale demand response mechanism?	The primary consideration is that the AEMC should seriously consider (especially now that there are better data options available than had been assumed during the production of the Paper) including the dimension of “time” – for load shifting – be that load actually consumed – e.g. air-conditioning, pool pumps, hot water heating, etc. – OR – ‘generation’ assets – charging/discharging batteries or shedding opportunistic consumption behind the meter so that embedded (solar) generation now exports (which will appear as generation rather than load).
Appendix B – Separate wholesale demand response market		
Question 21: Cost recovery for the separate market		
A)	What do stakeholders think about the proposed cost recovery arrangements for the separate market?	<p>We believe that the proposed cost recovery arrangements are flawed because they are based the underlying assumption of “baseline” settlement. If the much broader benefit of mandated DER detailed metering solution is adopted we would expect the overall costs to drop.</p> <p>Further we see significant benefits to AEMO in there being an improved metering system for DER assets and consequent accurate Demand Side forecasting. Therefore it is likely that broader benefits would arise from the instruction of the Wholesale Demand Management Market – WDMM – (broader than just “Response” and separate from the Wholesale Energy Market).</p>
Question 22: Introduction of a separate market		
A)	Would the proposal set out in this appendix be faster to implement than the wholesale demand response mechanism?	Yes (subject to caveats already mentioned).
B)	If stakeholders do not consider that it would be faster to implement, is there merit in exploring this as an alternative to the other proposed demand response mechanisms? What are the costs and benefits that should be considered in doing so?	As outlined above we believe there is significant merit in investigating improved DER metering systems that could be used for DR and DM (and other system security purposes by DRSPs and AEMO).

Questions		Feedback
C)	Are there any additional mechanisms that could be implemented more quickly than a wholesale demand response mechanism?	Yes – but relies on the adoption of common DER advanced metering platform. We believe any associated costs are fair and reasonable under both causer-pays and beneficiary-pays principles and further that there are overwhelming broader benefits to the NEM – especially Consumers, AEMO and DRSPs.
D)	What are stakeholder views on the feasibility of co-optimising this separate market with the existing wholesale market?	We believe that – with real time data – a WDMM will easily be co-optimised with BOTH the Wholesale Energy Market and FCAS – as DER assets (as detailed in the AEMO VPP Demonstration Program Paper) can deliver both Energy and FCAS.
Appendix C – Wholesale demand response register		
Question 23: Wholesale demand response register mechanism		
A)	What are stakeholder views on this option to facilitate demand response?	As detailed above we believe it (the wholesale demand response register mechanism) is driven by an object to both “protect the turf” of existing FRMP and frustrate new developments!
B)	What do stakeholders consider the benefits of this option would be?	The only “benefit” of this option is the proposed creation of a central database of DR assets. The proposal we have put forward for a DER detailed metering platform will deliver this recommendation (it’s implicit in capturing data of the circuits/devices that are discretely metered to capture granular real time data).
C)	What do stakeholders consider to be the costs associated with this option?	Horrendous and of little benefit in isolation (except to the FRMPs).
D)	Are there any implications (regulatory or otherwise) that are not raised in the discussion of this option?	It’s anti-competitive and a challenge could be mounted against it by the ACCC.

Questions		Feedback
Question 24: Standard wholesale demand response offer and mandatory wholesale price pass through offer		
A)	What are stakeholder views on these options to facilitate demand response?	<p>We strongly support the AEMC's standard wholesale demand response offer and mandatory wholesale price pass through offer proposals (but not as an extension to the AEC's proposals).</p> <p>The proposals would provide, in part as posited above – Q15(A) – in effect, a means for a new entrant to focus solely on their area of expertise – without the full burden of being a FRMP (Retailer).</p> <p>If our recommendation are taken up that Network Tariffs also become more flexible then these options become even more attractive as the DRSP/DMSP could contract with the DNSPs directly (as retailers do) and also remove that substantial element of a pass through offer/charge.</p>
B)	Do stakeholders consider these options to be preferable to a wholesale demand response register?	<p>YES – though should not be the only option/s available (though if a DRSP/DMSP wanted to assume FRMP obligations they could do so).</p> <p>One issue will be the price setting (and margin) for the services provided by the FRMP. It is arguable, that lot of the margin received by retailers is in the hedging and financial market activity in offering fixed tariff contracts – even more so for gentailers. Gentailers will suffer a “double whammy” of lower wholesale energy prices, loss of hedging revenue and margin, loss of margin on generation and wholesale energy.</p> <p>If, as above, network tariffs we not passed through but separately contracted by the DRSPs/DMSPs then FRMP would see another major loss of margin (on DNSP charges).</p>
C)	Do stakeholders consider these options to be complementary to a wholesale demand response register?	<p>NO – however in light of the logical view that the AEMC or AEMO may see a benefit in the <i>wholesale demand response register</i> (i.e. the AEC sees it WDRR as a “Trojan Horse”) we again make the point that a mandated standard DER detailed metering platform would deliver it.</p>

Questions		Feedback
Appendix D – Load shedding compensation mechanism		
Question 25: Issues addressed by LSCM		
A)	Do stakeholders agree that reliability related load shedding inefficiently allocates risks to end consumers? Does the proposed LSCM address this issue?	<p>Yes & Yes (emphatically on both points)!</p> <p>The three rule change proposals are however driven by constraining DR within the confines of an “energy only market” – Appendix 4 (LSCM) also includes discussion of RERT – in our view LSCM & RERT are both <u>capacity issues</u> in the NE.</p> <p>Further we believe that there are similar <u>capacity issues</u> within the Distribution Networks (capacity to host and operate DER in the network/s) that also need to be addressed/accommodated (and could be by a similar methodology/mechanism).</p> <p>As we made the point in our introductory comments – Building on the AEMC LSCM proposal and the concept of a Separate (Wholesale) Demand Management Market seems a logical way forward. We believe that timing is of the essence and that addressing the issues raised in the Rule Discussions by introducing (developing) a separate demand management market – not necessarily just wholesale (energy) – in an expedited way is crucial to consumers over a drawn out extended process.</p>
B)	Would an LSCM facilitate greater levels of wholesale demand response?	<p>YES – it (Load Shedding Management) should be an integral part of Wholesale Demand Response / Management. To be clear we believe adding Voluntary Load Shedding Control to the portfolio of DM makes the overall package better.</p> <p>A real time DER detailed metering platform would give AEMO real time information on exactly what load could be shed and where. This system could (and should) also be used within DNSPs to facilitate energy security and operational issues (not just load shedding but voltage control).</p> <p>To take the principle of “shedding” further, the AS4777 standard that will automatically drop inverters in an over-voltage condition within a DNSP zone substation level is a coarse control instrument. It would be much better to control voltage “dynamically with purpose” by price signals (or other signals) that either</p>

Questions		Feedback
		increased load (in that area) or shed/diverted generation (lowering the price paid for export or imposing a cost on export in a constrained zone). Offering dynamic pricing within a DNSP has multiple benefits for ALL Consumers not just those with DER in general or embedded generation in particular.
Question 26: Benefits and issues associated with an LSCM		
A)	Do stakeholders agree with the outline of the benefits and challenges associated with the introduction of an LSCM?	Yes – However the Paper again raises the risk of “baseline” methodologies as a significant issue – as stated many times, we believe that this risk can be removed by a DER detailed metering solution. The value of the capacity of such a platform to provide AEMO with what load can be voluntarily shed in real time cannot be understated.
B)	What other issues would need to be considered?	<p>On page 79 the AMEC outlines three points of consequential impact of introducing a LSCM.</p> <p>We do not believe enough weight has been given to the benefit of Voluntary Load Shedding (“VLS”) over Involuntary Load Shedding (“IVLS”).</p> <p>Involuntary Load Shedding is a disastrous event – even when what some might consider to be “controlled” Involuntary Load Shedding (DNSPs dropping zone substations off/on in rotations) it is still very “clunky” and causes frequency disturbance with the risk of further widespread blackouts cause by trips within networks and generators. It is not accurate – for example when bringing a zone back online it will have lower load then when dropped.</p> <p>Current IVLS is a very blunt instrument – everything in a zone is dropped – traffic lights, businesses, homes with people that are ill etc. there is significant financial loss by business and individuals, even lives are lost!</p> <p>Consequently the cost of USE is VERY high.</p> <p>VLS would be a “surgical” instrument – a fine scalpel that could excise just the load required to stabilise the grid that had <u>no impact</u> on crucial infrastructure or essential services or businesses.</p>

Questions	Feedback
	<p>Being able to discretionally control KNOWN non-essential loads or just elements of non-essential load e.g. active air-conditioning, non-essential loads only at unoccupied properties (detected for example by house alarm status), etc. has extraordinary value – a <u>capacity value</u> that should be rewarded rather than (just) compensated.</p> <p>A real time metering system – such as Curb - that accurately disaggregated load into discrete reportable controlled loads and segregated and reported by essential or non-essential status could easily deliver this outcome.</p> <p>We think that LSCM is more of capacity market instrument than a wholesale energy dispatch and therefore the preparedness of a customer to be shed should be rewarded for that, rather than just compensated for being shed. That is, it would be better as a Load Shedding Reward Mechanism (LSRM).</p> <p>That said there could be means to prioritise Customers “first in line” to be shed – noting that being shed might (should) only be for all non-essential load not all load.</p> <p>Customers (all) pay a lot for the value of 100% energy security whether they want it, or value it, or not.</p> <p>At the recent AEMC & AEMO workshop consumer representatives were very vocal about the cost of RERT and other measures wrt to the cost of USE. The point, as made again in the Paper, nearly all (99.73%) of outages are non-reliability caused (and consumers are not compensated for it).</p> <p>This (USE) is a (significant) cost that is smeared over all consumers could be materially reduced – or better – distributed (through lower service cost or a capacity fee) to customers that were prepared to be shed of their non-essential load. That opportunity (LSRM) distribution should be first offered low income consumers.</p> <p>Rewarding low income consumers who might not otherwise be able to benefit from technological advancement by being offered a lower cost service (reflecting a preparedness to be shed of non-essential load) may be a way more efficient and lower cost to the NEM (not to mention much more socially responsible).</p>