

Minutes

Meeting Title:	Demand Side Response Review Working Group (DSRRWG)
Date:	7 June 2023
Time:	9:33 AM to 11:31 AM
Location:	Microsoft TEAMS

Attendees	Company	Comment
Dora Guzeleva	(Chair) EPWA	
Dimitri Lorenzo	Bluewaters Power	
Tessa Liddelow	Shell Energy	
Jake Flynn	Collgar Wind Farm	
Thomas Higgins	Perth Energy	
Valentina Kogon	Western Power	
Graeme Ross	Simcoa Operations	
Peter Huxtable	Water Corporation	
Oscar Carlberg	Alinta Energy	
Toby Price	AEMO	
Tom Butler	AEMO	First meeting, replacing Toby Price in future meetings
Devika Bhatia	ERA	
Wayne Trumble	Newmont Mining	
Claire Richards	Enel X	
George Martin	Starling Energy	
Michael Zammit	Integrated Management Services	
Noel Schubert	Small-Use Consumer Representative	
Chris Alexander	Small-Use Consumer Representative	
Mitch O'Neill	Grids	First meeting
Erin Stone	Point Global	First meeting, observer for EPWA
Sarah Graham	EPWA	
Thomas Marcinkowski	EPWA	
Bobby Ditric	Consultant – Lantau Group	
Dave Carlson	Consultant – Lantau Group	

Mike Thomas	Consultant – Lantau Group	
Nicolas Taylor	Consultant – Lantau Group	
Apologies	From	Comment
Justin Ashley	Synergy	

Item	Subject	Action
1	Welcome The Chair opened the meeting at 9:33 AM with Acknowledgement of Country.	
2	Meeting Apologies/Attendance The Chair noted the attendance as listed above and invited new attendees to briefly introduce themselves.	
3	Introductions The Chair outlined the two broad issues for discussion by the working group at the meeting: <ul style="list-style-type: none"> • the operation of hybrid facilities in the market; and • whether there should be a regime for loads, similar to the network access quantity regime that applies to supply side resources under the Reserve Capacity Mechanism. 	
4	Hybrid Facilities discussion The Chair invited Mr Ditric to introduce the discussion on the operation of hybrid facilities in the market. Mr Ditric highlighted the following key issues: <ul style="list-style-type: none"> ○ The concept of hybrid facilities is commonly thought of as storage and generation combination. However, the WEM Rules define a hybrid facility as any combination of two different technology types. This means that a load can be part of a hybrid facility. ○ A hybrid facility is considered a single facility for the purpose of operations under the WEM Rules, but Capacity Credits are assigned to each technology type. Therefore, capacity obligations must be met at the technology component level and, therefore, there are sub-metering obligations under the WEM Rules. ○ AEMO will determine a hybrid facility's level of controllability depending on the relative sizes of the technology types. • Mr Price highlighted that the sub-metering requirements being discussed only apply for scheduled and semi-scheduled facilities. Arrangements for non-scheduled facilities are different. Mr Ditric noted that sub-meters are not used for settlement, but are required for certifying capacity and for testing. <ul style="list-style-type: none"> • Mr Huxtable asked why, under the current rules, it was not possible to use high quality metering for dispatch and settlement, and whether this was due to the quality of metering data. 	

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	<p>The Chair noted that the Metering Code, standard metering practices and national legislation require the meters used for settlement to be installed, owned and operated by Western Power</p> <p>The Chair added that the kind of sub-metering cannot be used for settlement under the applicable national legislation.</p> <p>The Chair highlighted the distinction between settlement of energy, which required revenue-grade meters, and the notional allocation of capacity credits under the RCM for which a lower level accuracy of metering is considered acceptable.</p> <ul style="list-style-type: none"> • Mr Butler noted that this was consistent with arrangements for the DER aggregation trial, in which energy aggregation and settlement is being determined at the NMI connection point. <p>The Chair noted that allowing hybrid facilities to install sub-meters at a quality lower than revenue grade metering was to reduce barriers to aggregation, but this was not appropriate to settle energy transactions in the WEM.</p> <p>Mr Ditric pointed participants to AEMO's sub-metering procedure for more information about different Facilities' metering requirements under the Reserve Capacity Mechanism (RCM).</p> <ul style="list-style-type: none"> • Mr Huxtable asked whether Western Power's revenue-grade metering could be installed behind the NMI connection point (i.e. at a sub-component level). <p>The Chair stated that Western Power metering could be installed at a sub-component level but this would need additional consideration and settlement calculations, and Western Power metering procedures would need to be changed.</p> <p>The Chair clarified that if there are two separate connections with two revenue-grade meters, the facility would not be a hybrid. However, if there were two Western Power meters associated with a single connection the calculations would need to be changed to remove double-counting with both meters being read.</p> <p>Mr Ditric added the following:</p> <ul style="list-style-type: none"> ○ Each component of a hybrid facility is certified separately for each technology type with the total capped by the NAQ, except in the case of a hybrid non-scheduled facility. Assessment of an intermittent generator is as an individual facility under the relevant level methodology. ○ Aggregated DSPs are eligible for capacity credits as part of a hybrid facility. Under the new rules DSPs require all of their associated NMIs to have a common transmission network identifier (TNI). Mr Ditric posed the question whether an aggregated hybrid facility with a DSP is possible given the requirement for sub-metering and a common TNI. <ul style="list-style-type: none"> • Mr Price said that if a load can be reduced simultaneously with generation that can be increased, both components have a value to the system. 	

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	<p>The Chair queried whether it would be helpful to the system for a load certified as a DSP alongside storage to be charged by that same storage to meet the load's DSP obligations.</p> <p>Mr Thomas said that it is not just the system benefit that must be considered, but also the linkage to the various market elements that provide revenue to compensate the facility.</p> <p>The working group agreed further work was required to consider:</p> <ul style="list-style-type: none"> • the role of a hybrid facility with aggregated DSP, rather than a DSP consisting of a large load; • aggregating at a connection point; • how non-dispatchable loads in hybrid facilities with storage and/or a generator would work in practice; • how scheduled and semi-scheduled facilities containing a load component would operate and how the rules work regarding DSPs and IRCR avoided by hybrids. <p>The Chair summarised four key scenarios available to a load to allow it to optimise operation and market efficiency, that the group should consider:</p> <ul style="list-style-type: none"> • storage and load neither of which is certified, with the storage simply used to reduce IRCR. • storage is certified as a separate component but load is not, therefore it is necessary to ensure storage is available to the system (i.e. storage is not charging its load to reduce its IRCR). • the DSP is certified and the storage is not. • both the load and the storage are certified, in which case it is necessary to ensure the system actually benefits from both. <p>Mr Ditric discussed the idea of value stacking for hybrids, noting the difference between value stacking and double dipping needs to be clearly defined. He highlighted the example where there is an ESR and load hybrid facility with the ESR only having capacity credits, and the facility reducing its consumption during peak intervals to reduce IRCR values. He asked if this scenario provides a net benefit to the system, or a misalignment between various obligations, incentives and payments.</p> <ul style="list-style-type: none"> • Mr Schubert expressed the view that the answer to that question was determined by what such a hybrid is doing at the time of peak demands that drive the need for capacity and the allocation of capacity credits: <ul style="list-style-type: none"> ○ If the ESR receives capacity credits then it should be available at peak times and it cannot also be used at that time for reducing IRCR consumption because that is double dipping. ○ If, however, the facility reduces its demand from the system at other times (by the ESR supplying the local load) then that would not constitute double dipping. <p>The Chair and Mr Huxtable agreed, and highlighted the importance of separate metering to measure the individual components' performance during peak times.</p>	

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	<p>The Chair queried whether, if a load reduces its consumption for IRCR purposes and is properly metered, it would be able to obtain that value as a DSP in the following year.</p>	
	<ul style="list-style-type: none"> • Mr Huxtable confirmed it could not. 	
	<p>The Chair posed some further questions regarding hybrid facilities:</p>	
	<ul style="list-style-type: none"> • How will a participant convince AEMO it is benefiting the system by both reducing the load and making storage available in storage obligation intervals; • How would compliance be monitored in that scenario; • does a participant pay refunds if sub-metering suggests it had offered storage in storage obligation intervals but charged the loads during those intervals. 	
	<p>The Chair suggested the need for the WEM Rules to give participants a choice but make sure there was actually a benefit to the system and no double dipping.</p>	
	<ul style="list-style-type: none"> • Mr Schubert expressed the view that double dipping occurs when a hybrid facility receives credit for something and is using the same facility to obtain credit for something else at the same time, and those things are not complimentary or aligned. • Mr Ross agreed, stating the measure may then need to be the same so one counters the other rather than having both a DSP and IRCR benefit. 	
	<p>The Chair clarified there are two separate concepts:</p>	
	<ul style="list-style-type: none"> ○ During IRCR intervals –double dipping should not be allowed for taking an action to reduce IRCR and receiving DSP capacity credit payments for the same action. ○ During obligation intervals for a DSP and ESR –on a normal day where there are no IRCR intervals, there should be no refunds unless a participant is not responding to dispatch instruction/notification. • Mr Price took a question on notice about whether the forward planning and visibility that applies to a hybrid facility is hampered with the inclusion of a load which is part of a scheduled or semi-scheduled facility. 	
	<p>The Chair recommended that the working group considers various scenarios in which a facility was predominantly injecting versus predominantly withdrawing during intervals, and how responses would be measured.</p>	
	<ul style="list-style-type: none"> • Mr Martin offered to help develop these scenarios for working group consideration. 	
	<p>The Chair summarised the working group principles:</p>	
	<ul style="list-style-type: none"> • Loads should have a choice as to how they participate in the market, and whether they choose to invest in a storage component on a load site. • Those hybrids or loads should not benefit from the same action (double-dip), for example simultaneously getting certified as a DSP and having IRCR reduction benefited. • If loads are remunerated for an action, the system should also benefit. 	

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	<p>Mr Thomas stated that the precision with which distinction can be drawn between double dipping versus stacking versus coincident value opportunities will depend on how stakeholders perceive their exposure to penalties:</p> <ul style="list-style-type: none"> • Participants might take risks if they perceive a penalty or a capacity value that is very low. • Whether participants should take such risks is a grey area but it can be made black and white (despite uncapped penalties being unpopular). • There will always be some prospective gaming or opportunism that might need to be factored into discussion on double dipping. <p>Mr Ditric added that IRCR consumption intervals are not necessarily known until they have occurred, so there is no clear view of what the penalty periods may be until the hot season is over.</p> <ul style="list-style-type: none"> • Mr Alexander clarified whether facilities, which have loads and storage, could only participate as a hybrid, except where they pay for separate connections. <p>The Chair confirmed that this was the case, noting that this would also require two separate Western Power meters and is dependent on whether this can be accommodated by the network.</p> <ul style="list-style-type: none"> • Mr Schubert asked whether there could be separate metering at the connection point. <p>The Chair said separate metering could be achieved if a Western Power meter is installed and the components are treated separately, but changes to the rules would be required.</p> <ul style="list-style-type: none"> • Mr Alexander said that lots of industrial sites could see value in this option, but noted that it might be worth placing a cap on the storage size. <p>The Chair noted the discussion on hybrids would continue in the next meeting, with the group working through the various scenarios for hybrid facility operations across each of the aspects of the WEM.</p>	

5 Curtailable access for loads discussion

Mr Ditric provided an overview of the issue at hand, highlighting:

- The two purposes of the NAQ are determining network capacity access for the purposes of capacity credits; and providing investment certainty for capacity providers by providing a priority order for capacity credits.
 - Loads are considered as part of the NAQ calculation but only in that they alleviate or contribute to network congestion.
 - Western Power has difficulty connecting new generation unless applicants are willing to wait in the competing applications group (CAG) process, or fund network augmentation to increase capacity to handle more generation. The NAQ allows facilities to connect on a constrained basis and make most of existing network capacity.
 - Loads may be facing similar connection issues. It may, therefore, be necessary to consider a framework for loads to connect on a constrained basis, similar to how NAQ works for generation.
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	<ul style="list-style-type: none"> ○ The introduction of constrained access for loads should speed up connection for loads and reduce the cost of connection. ○ Loads would be constrained largely in times of peak demand, network outages or some other limitation to the network. ○ The NAQ recognises a participant who funds a network augmentation and gives them priority rights. There is a question about whether this is required for loads. ● Mr Price clarified that the NAQ only applies to the capacity mechanism, not in real-time operations. Therefore, the NAQ does not automatically give a participant any rights to the network in real-time. 	
	<p>The Chair added that a participant might be able to export at a level higher than their NAQ.</p>	
	<p>Mr Ditric invited discussion on ways to connect loads more quickly and cheaply than under the current arrangement.</p>	
	<ul style="list-style-type: none"> ● Mr Schubert stated Western Power is already offering constrained access schemes to Eastern Goldfields' loads with their own diesel generation. 	
	<p>The Chair queried whether AEMO has any visibility of that arrangement or takes it into account in planning activities including the long term (LT) PASA if those curtailments are expected during the peak in the SWIS/WEM.</p>	
	<ul style="list-style-type: none"> ● Mr Price clarified the objective of the LT PASA is to quantify demand that has to be served at peak and then seeks to procure the capacity to serve it. He added that the NAQ and network limits that might impact the ability to serve a customer would, therefore, not be reflected in the system-normal state. 	
	<p>The Chair stated that this does not mean network peak events do not coincide with system peak events.</p>	
	<ul style="list-style-type: none"> ● Mr Huxtable indicated that there were definitely localised network issues with runback schemes and they could be coincidental but typically were not. ● Mr Price clarified that there are non-reference services, under which loads can be curtailed at peak, which are reflected in the NAQ. 	
	<p>The Chair queried whether those loads should also be taken into account in planning studies given that, if they are taken into account in the NAQ calculations, there is presumably some certainty that they will not be available at peak.</p>	
	<ul style="list-style-type: none"> ● Mr Price said that by virtue of having such a runback scheme it is certain they will not be available at peak. Mr Price added that those loads are also taken into account in determining available capacity for a particular year. ● Mr Butler took an action to investigate the technical operation of the constraint algorithm in the NAQ and to discuss this with the working group in future meetings. 	

The Chair recommended that the working group should consider:

- how network constraints and curtailment schemes could/should be used in future given the network is now constrained by thermal and other limits;
- whether a coordination role is useful to ensure loads connected under a curtailable regime in the future are taken into account; and
- impact of curtailable loads on the market and options to improve transparency/visibility.

Working group members broadly agreed that a centralized, market based approach would be more efficient than a bespoke scheme, particularly if it is run at a system wide level.

The Chair sought to understand how many curtailable loads there were and how large they were, and asked Western Power to provide some information without revealing details of particular loads. She added that the SWISDA also suggested loads may not be able to connect to the network unless either network reinforcement is undertaken, or they agree to some kind of interruptible arrangement.

Mr Ditric asked if a participant can be curtailed at peak under a contract, whether they should be dispatched as part of a dispatch order so that they are visible.

- Ms Kogon stated that she did not see barriers preventing a more centralised market based approach given that loads can register as scheduled or semi-scheduled facilities.
- Mr Price questioned whether a framework allowing bidirectional participation in injection and withdrawal offers is appropriate for loads, and whether such a framework would capture partially controllable loads.

The Chair suggested that the working group needs to map out the process for a participant agreeing to an arrangement in which its load can be curtailed at peak, including the role of Western Power and of AEMO in the planning and NAQ process.

- Mr Butler said that AEMO was addressing the same challenge in respect of DER.

In the Teams chat, Mr Schubert recommended discussion on the pros and cons of different network locations for storage, given storage can only even out demand upstream relative to normal electricity flow during peak demand:

- Mr Schubert asked if Western Power could provide the working group with a table of typical network circuits' average utilisation to indicate how much spare capacity was available.

Ms Kogon replied that she will seek advice from Western Power's SMEs on this request.

Mr Ditric asked whether the working group should consider constrained load access beyond just the capacity mechanism.

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Mr Ditric queried whether constrained loads will be limited as part of constraint equations or will they be considered firm capacity.

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The Chair expressed the view that there may need to be constraint equations for loads as well as generation.

- Mr Butler highlighted the problem around coordination between RTM dispatch and what is effectively a network service, which is really the avoidance of a cost in the case of constraint.

The group noted that some work is required to consider coordination versus dispatching loads, and what constitutes participation in the market.

The Chair asked why RTM dispatch would be treated any differently to generators by simply applying constraint equations and making sure they are run back in the market, which they would be even if they were not on a constrained regime.

- Mr Price suggested that loads appear on the right side of constraint equations and so would not be modifiable in dispatch. The question was whether they should appear on the left side and get co-optimised on the basis of offers for price they are willing to withdraw for.

The Chair made the following additional points:

- The working group needs to determine what appetite there is for the participation of loads in the energy market.
- If a participant has a curtailable load, they need to know whether they can provide DSP services and benefit from DSP services as well as IRCR.
- It is not clear whether currently a load that wants the benefit of curtailment in a DSP can in fact participate in the RTM and/or ESS.

6 Prioritisation of topics for future meetings

Mr Ditric and the Chair outlined the following questions arising from the RCM Review, seeking input from the working group on which issues should take priority:

- Questions concerning additional services to provide minimum demand, which can include load increasing and load shifting as well as RCM services.
- Questions concerning DSP obligations, particularly with reference to dynamic baseline design and the 2-hour activation notice.

The working group agreed that:

- Minimum demand services were the higher priority because there was presently an NCESS call for them – these should be scheduled for July; and
- the role of DSR in STEM was a lower priority and should be discussed in August.

Other topics agreed to be discussed in future meetings include:

- whether DSPs can participate in the RTM and if not, what must be done to allow them to do so – EnelX agreed to provide examples of DRS participation in other markets;

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	<ul style="list-style-type: none"> • whether adequate price signals can/should incentivise participation of DER, flexible loads and distributed storage, rather than being used in emergency situations; • participation of DSR, VPPs, hybrids and hydrogen production facilities in RTM and ESS markets, including how in the future flexible load can have a prominent role in the market. <p>The Chair suggested that the starting point for inquiry by the working group should be:</p> <ul style="list-style-type: none"> • Under the current rules, can a DSP with capacity credits participate in the RTM, STEM, and the rest of the energy market services; • If DSPs can't currently participate in these markets, how can these barriers be removed. <p>The Chair scheduled the next two meetings for 5 July 2023 and 2 August 2023</p>	
12	<p>Next Steps</p> <p>Actions:</p> <ul style="list-style-type: none"> • Schedule 5 July 2023 and 2 August 2023 meetings • Prepare slides for 5 July 2023 meeting and issue a week prior • Prepare and distribute draft minutes for working group review <ul style="list-style-type: none"> • Provide the working group with a table of average utilisation values for typical network circuits 	<p>DSRRWG Secretariat</p> <p>Western Power</p>

The meeting closed at 11:31am