Department of **Energy, Mines, Industry Regulation and Safety**
Energy Policy WA

GOVERNMENT OF WESTERN AUSTRALIA

Meeting Agenda

Meeting Title:	Demand Side Response Review Working Group (**DSRRWG**)
Date:	Wednesday 7 February 2024
Time:	9:00 AM – 11:00 AM
Location:	Online, via TEAMS.

Item	Item	Responsibility	Type	Duration
1	Welcome and Agenda	Chair	Noting	2 min
2	Meeting Apologies/Attendance	Chair	Noting	2 min
3	Competition Law Statement	Chair	Noting	2 min
4	Minutes			
	(a) Minutes of Meeting 2023_11_29	Chair	Noting – Already approved	2 min
5	Action Items	Chair	Noting	2 min
6	Demand Side Response Review WEM Initial Amending Rules Exposure Draft	EPWA	Discussion	60 min
7	Hybrid Facility Submetering	EPWA	Discussion	30 min
8	General Business	Chair	Discussion	10 min
	Next meeting: TBA			

Please note, this meeting will be recorded.

Competition and Consumer Law Obligations

Members of the Demand Side Response Review Working Group (**Members**) note their obligations under the *Competition and Consumer Act 2010* (**CCA**).

If a Member has a concern regarding the competition law implications of any issue being discussed at any meeting, please bring the matter to the immediate attention of the Chairperson.

Part IV of the CCA (titled "Restrictive Trade Practices") contains several prohibitions (rules) targeting anti-competitive conduct. These include:

(a) **cartel conduct**: cartel conduct is an arrangement or understanding between competitors to fix prices; restrict the supply or acquisition of goods or services by parties to the arrangement; allocate customers or territories; and or rig bids.

(b) **concerted practices**: a concerted practice can be conceived of as involving cooperation between competitors which has the purpose, effect or likely effect of substantially lessening competition, in particular, sharing Competitively Sensitive Information with competitors such as future pricing intentions and this end:

- a concerted practice, according to the ACCC, involves a lower threshold between parties than a contract arrangement or understanding; and accordingly; and
- a forum like the Demand Side Response Review Working Group is capable of being a place where such cooperation could occur.

(c) **anti-competitive contracts, arrangements understandings**: any contract, arrangement or understanding which has the purpose, effect or likely effect of substantially lessening competition.

(d) **anti-competitive conduct (market power)**: any conduct by a company with market power which has the purpose, effect or likely effect of substantially lessening competition.

(e) **collective boycotts**: where a group of competitors agree not to acquire goods or services from, or not to supply goods or services to, a business with whom the group is negotiating, unless the business accepts the terms and conditions offered by the group.

A contravention of the CCA could result in a significant fine (up to $500,000 for individuals and more than $10 million for companies). Cartel conduct may also result in criminal sanctions, including gaol terms for individuals.

Sensitive Information means and includes:

(a) commercially sensitive information belonging to a Member's organisation or business (in this document such bodies are referred to as an Industry Stakeholder); and

(b) information which, if disclosed, would breach an Industry Stakeholder's obligations of confidence to third parties, be against laws or regulations (including competition laws), would waive legal professional privilege, or cause unreasonable prejudice to the Coordinator of Energy or the State of Western Australia).

Guiding Principle – what not to discuss

In any circumstance in which Industry Stakeholders are or are likely to be in competition with one another a Member must not discuss or exchange with any of the other Members information that is not otherwise in the public domain about commercially sensitive matters, including without limitation the following:

(a) the rates or prices (including any discounts or rebates) for the goods produced or the services produced by the Industry Stakeholders that are paid by or offered to third parties;

(b) the confidential details regarding a customer or supplier of an Industry Stakeholder;

(c) any strategies employed by an Industry Stakeholder to further any business that is or is likely to be in competition with a business of another Industry Stakeholder, (including, without limitation, any strategy related to an Industry Stakeholder's approach to bilateral contracting or bidding in the energy or ancillary/essential system services markets);

(d) the prices paid or offered to be paid (including any aspects of a transaction) by an Industry Stakeholder to acquire goods or services from third parties; and

(e) the confidential particulars of a third party supplier of goods or services to an Industry Stakeholder, including any circumstances in which an Industry Stakeholder has refused to or would refuse to acquire goods or services from a third party supplier or class of third party supplier.

Compliance Procedures for Meetings

If any of the matters listed above is raised for discussion, or information is sought to be exchanged in relation to the matter, the relevant Member must object to the matter being discussed. If, despite the objection, discussion of the relevant matter continues, then the relevant Member should advise the Chairperson and cease participation in the meeting/discussion and the relevant events must be recorded in the minutes for the meeting, including the time at which the relevant Member ceased to participate.

Minutes

Meeting Title:	Demand Side Response Review Working Group (DSRRWG)
Date:	29 November 2023
Time:	9:30 AM to 11:30 AM
Location:	Microsoft TEAMS

Attendees	Company	Comment
Dora Guzeleva	(Chair) EPWA	
Tom Butler	AEMO	
Toby Price	AEMO	
Devika Bhatia	Economic Regulation Authority	
Scott Cornish	Enel X	
Bronwyn Gunn	EPWA	
Thomas Marcinkowski	EPWA	
Bobby Ditric	Lantau Group, Consultant	
Dave Carlson	Lantau Group, Consultant	
Mike Thomas	Lantau Group, Consultant	
Tessa Liddelow	Shell Energy	
Graeme Ross	Simcoa Operations	
George Martin	Starling Energy	
Chris Alexander	Small-Use Consumer Representative	Left at 11:06am
Noel Schubert	Small-Use Consumer Representative	
Peter Huxtable	Water Corporation	
Valentina Kogon	Western Power	
Rhiannon Bedola	Synergy	
Apologies	**From**	**Comment**
Mitch O'Neill	Grids	
Wayne Trumble	Newmont Mining	
Dimitri Lorenzo	Bluewaters Power	Not in attendance
Jake Flynn	Collgar Wind Farm	Not in attendance
Oscar Carlberg	Alinta Energy	Not in attendance
Michael Zammit	Integrated Management Services	Not in attendance

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The Chair opened the meeting at 9:30 AM</td></tr>
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<tr><td>6a</td><td>Consultation Paper submissions summary
The Chair noted that:

there would be one further working group meeting to discuss the draft Exposure Draft of the WEM Amending Rules implementing the outcomes of this review; and
an information paper on the outcomes of the review will be published in early 2024.

<u>Proposal 1 – Transparency regarding constrained access connections should be provided for and, to the extent practicable, constrained access loads should be integrated into processes in the WEM Rules:</u>

The Chair noted the responses, questions and clarifications as per Slide 4. She noted that there is one constrained access loads scheme operating in the Goldfields but with networks being increasingly constrained more loads may opt into these arrangements as they allow for cheaper and quicker network connection.

The Chair invited discussion on a minimum load size for this proposal.

Mr Butler noted that a load with constrained access would not be small.

The Chair agreed and noted that it may not be necessary to set a minimum size.

Mr Price noted that there is an obligation for Western Power to connect new loads below a certain size, and that above that threshold there could be an obligation to pay for network augmentation to connect. This level could be used as the threshold for this proposal.

The Chair asked whether that threshold would also capture some domestic PV installations.

Mr Price responded that his recollection was the threshold is 6MVA/6MW.
Mr Schubert and Mr Butler agreed that there was a threshold where network connection goes from guaranteed to negotiated.

The Chair asked if someone from Western Power could confirm the threshold.

Ms Kogon stated she would follow up within Western Power’s team <s>and queried </s>whether <u>such a threshold exists</u><s>this relates to loads on the distribution network or just the transmission network</s>.

The Chair noted that the proposal is concerned with both but asked Ms Kogon to advise whether the threshold distinguishes between transmission and distribution.

Action: Western Power to confirm whether there is a size threshold above which new loads are required to contribute to network augmentation, what the threshold is and whether that threshold distinguishes between transmission and distribution.

Mr Butler noted that in the future dynamic operating envelopes would be part of the framework for constrained access for smaller loads.

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Item	Subject

The Chair agreed but noted that the discussion is about larger loads which may have commercial arrangements and negotiated network access terms.

- Mr Schubert noted that a threshold may not be needed as only larger loads would agree to constrained access arrangements.

The Chair noted that AEMO suggested the WEM Rules should empower them to obtain relevant data from Western Power about constrained loads. The Chair invited comments from members about whether there should be explicit provisions to allow for this, noting similar arrangements exist in other parts of the Rules.

- Ms Kogon stated Western Power does have an obligation to provide information related to system security and reliability as part of operational processes, and queried whether that needs to be explicitly codified in the Rules.

The Chair clarified that the question is about how much is prescribed in the WEM Rules about data sharing with regard to constrained loads, and whether AEMO should be able to request more than what is prescribed.

- Mr Schubert noted that in real time AEMO may want to know if material loads (or aggregations of small loads) are being constrained.

The Chair noted that this would be visible through constraint equations.

- Mr Price responded that there were two timeframes to consider:
  - Ex ante provision of information about constrained access loads that would flow into AEMO's planning (particularly the Electricity Statement of Opportunities (ESOO)).
  - Visibility to AEMO and the broader market of loads being constrained during dispatch.

The Chair asked if there would be constraint equations for larger loads that are curtailed.

- Mr Price said there are already loads included in constraint equations. The question is how, in WEMDE, a runback scheme would be implemented to allow visibility and management of loads through the market rather than a contract by Western Power.
- Ms Kogon stated that:
  - All Western Power's runback schemes apart from ELPS ~~Emergency Solar Management~~ are post-contingent.
  - When the contingency occurs, Western Power informs AEMO about the forced outage. That is covered by ~~under~~ the Control Room ~~Operating Protocol~~documentation.
  - For the Eastern Goldfields Load Permissive Scheme Western Power provides SCADA data.

The Chair noted that future schemes may be pre-contingent and there will need to be a constraint equation or similar to facilitate this. Transparency must be provided to market participants as the operation of this could influence market outcomes.

The Chair stated that EPWA will draft rules for future discussion.

- Mr Butler noted that better information sharing will enable Western Power to take action when it needs to.
- Ms Kogon noted that information is already provided to AEMO, that providing this to other participants would be additional~~ but new processes would not be required~~.

The Chair noted that information is provided ex-post. The outstanding questions are:

- Whether AEMO needs to have ex-ante information about runback schemes or similar arrangements.
- Whether AEMO needs to know closer to real-time that a load will be curtailed, and whether this can be done through constraint equations.

Item	Subject

- How transparency for the rest of the market is provided when a load is curtailed.

Proposal 2 – Clarifying circumstances in which a hybrid facility comprising a load and electric storage resource (ESR) component must register as a Scheduled Facility:

The Chair noted the responses, questions and clarifications as per Slide 5 and noted that the WEM Rules have guidance on how ESR is treated in other circumstances, with AEMO having discretion about registration facility type.

The Chair asked whether the rules should provide flexibility if the load is larger than the ESR component.

- Mr Butler clarified AEMO's submission related only to facilities over 10MW that are categorised as scheduled, not to smaller hybrid facilities.
- Mr Butler stated that AEMO is unsure why hybrid facilities should be treated differently to other facilities.

The Chair stated that the proposal is to allow a participant the choice whether to register as a DSP or Scheduled Facility for the purpose of receiving capacity credits. If a facility is a scheduled facility, the component that can have capacity credits is the ESR component, not the load.

- Mr Price responded that a facility can manage its IRCR exposure in addition to receiving capacity credits for the amount it can inject net of its load.

The Chair noted there is a specific prohibition against doing that using ESR which has capacity credits.

The Chair noted that a load can have a diesel generator to reduce its withdrawal and get capacity credits for that as a DSP, and that the same should apply for a load and ESR.

- Mr Price responded that a facility cannot currently have over 10MW with a diesel generator without being registered as an intermittent load.
- Ms Bedola said there are two issues that need to be understood:
  - If a load can reduce on its own, with the ESR providing a separate response, why can't both components get capacity credits (with appropriate submetering)?
  - Regarding the obligations of a scheduled facility that is comprised of a load and ESR – does the ESR need to smooth the load to meet the requirements of a scheduled facility?

The Chair said that those questions are answered by the fact that a facility currently cannot be registered as both a DSP and a Scheduled Facility (or any other facility type).

- Mr Schubert suggested going back to first principles and deciding which arrangements will provide the best value for customers and for the system.

The Chair stated that allowing a Scheduled Facility and DSP to co-exist could require significant changes to the rules, but allowing a choice to participants may be simpler.

- Mr Schubert suggested a negotiated outcome with AEMO would achieve a better outcome for both AEMO and the participant.
- Mr Price stated that:
  - If a participant is installing a large ESR component that there is a benefit for both AEMO and the participant in unlocking as many services and as much visibility as possible.
  - If a 100MW battery was installed but does not interact with the market, there may be a risk due to the potential swing in demand with no recognition of that in SCED.

Item	Subject

The Chair noted that an ESR might be installed in a part of the network where export is limited but it could provide demand side response by reducing the load. This facility should be allowed to register as a DSP. EPWA proposes to draft a rule to allow for that flexibility.

- Mr Price stated AEMO are happy to consider the rule drafting.

Proposal 3 – Use of Western Power sub-metering in the STEM and RTM by hybrid facilities:

The Chair noted the responses, questions and clarifications as per Slide 6. She added that this would be optional, and that other low-cost options won't be compliant with national legislation if the meters are used for settlement purposes.

The Chair asked for feedback on the complexities that may arise from this proposal.

- Ms Kogon noted the following complexities:
  - physical access to the customer side of a meter and the condition of customer owned equipment were both issues to consider.
  - Western Power will likely need to define a minimum safety standard for customer equipment, which would need to be upgraded at the customer's expense if it is not up to standard.
  - Western Power needs to raise awareness about minimum safety standards and enforce those requirements, increasing liability and risks which could add to Western Power's costs.
  - Western Power's existing processes and systems will need to be refreshed to accommodate these changes.

The Chair cited independent connection providers in the United Kingdom to demonstrate similar arrangements had been implemented elsewhere in the world.

The Chair asked Ms Kogon whether the complexities could be solved by contractual arrangements.

- Ms Kogon said that was a legal question regarding Western Power's compliance with state and national legislation.
- Mr Schubert said that a cooperative approach between Western Power and a network customer could address most of Ms Kogon's concerns and would be simpler than a WEM Rules based approach.
- Mr Price noted the need for some limitations – if this was offered to any hybrid facility, there would be some consequent management of matters such as loss factors, definition of a connection point, limitations on multiple market participants owning facilities behind a single connection point, management of outages and constraint equations. AEMO is supportive of enabling the most flexibility for each component, and there is an appetite for this, but that analysis is required to support this.
- Ms Kogon agreed a cooperative approach was appropriate but noted that, to address the risk, the redefined role and responsibilities of Western Power and market participants/customers needed to be reflected somewhere, whether that is in a contract, agreement, rules or regulations.

The Chair noted that there will need to be calculations in the rules to manage the submetering arrangements, as those that exist for the City of Kambalda, and that this is expected to only be applicable for hybrid facilities with a load.

- Mr Price noted there is an appetite for non-load hybrids wanting to split their facility behind an existing connection point to participate in multiple markets.

The Chair stated that the cost and time of implementing the proposal needs to be understood, as well as the actual demand for this type of arrangement.

Item	Subject

The Chair asked for other views.

- Mr Huxtable noted that the complexity will just be part of the cost of doing business to enter into these arrangements and could be sorted out contractually.
- Mr Alexander asked for an example of the risk in laypersons terms.
- Ms Kogon stated that if roles and responsibilities are not clearly defined then Western Power will carry more risk ~~if something goes wrong~~in the case of an adverse event. If t~~T~~hese can be resolved~~ but~~ they will come at a cost, which needs to be weighed up against the benefit.
- Ms Bedola noted that she will provide Synergy feedback following the meeting.

Action: Synergy to provide feedback on Proposal 3 of the DSR Review Consultation Paper.

The Chair noted that members generally support the Proposal but there is a need to clarify complexities, liabilities, roles and responsibilities so the customer can make a conscious choice on the basis of cost and risk against the forecast benefit they would have in the market.

- Ms Kogon noted that the method of delivery should be ~~streamlined~~considered; a case-by-case basis ~~or standalone contract~~ for each customer~~person~~ is not an efficient~~the best~~ approach.

The Chair stated the rules should require Western Power to publish a standard contract for providing the service, along with the cost of submetering.

Proposal 4 – Dynamic Baseline:

The Chair noted the responses, questions and clarifications as per Slide 7, and deferred discussion on this to Item 6b.

Proposal 5 – No change to the SRC mechanism:

The Chair noted the responses, questions and clarifications as per Slide 8.

The Chair noted that the Rules require the Coordinator of Energy to review~~ of~~ the SRC framework every time AEMO calls for tenders. The review will not occur until March 2024~~3~~ and should also consider if the Hot Season should be shifted given the events in November 2023.

Proposal 6 – Metering Code changes:

The Chair outlined the following developments regarding this Proposal:

- EPWA has drafted amendments to the Code which are undergoing legal review.
- EPWA has consulted with both AEMO and Western Power on those changes.
- AEMO proposed the meters the subject of the proposal should be taken out of Notional Wholesale Meter. This is premature and there will be a separate project about the gradual reduction of the Notional Wholesale Meter once EPWA has understood how AEMO will implement 5-Minute Settlement.

Proposal 7 – Remove impediments in WEM Rules to allow direct participation by DSR in the STEM:

The Chair noted the responses, questions and clarifications as per Slide 10.

The Chair invited members views.

- Ms Bedola suggested this is probably a low priority.
- Mr Schubert noted that use of the STEM may increase as DSR participation matures.
- Mr Butler agreed with Mr Schubert.

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	Mr Ditric noted that under a strict reading of the Rules someone uncontracted may not be able to participate. However, at this time the complexity of implementation would mean costs exceed benefits.

- Ms Bedola noted that loads could participate through their retailers.

The Chair concluded that there are no barriers that need to be removed at this time.

Proposal 8 – No changes to DSP participation in the RTM:

The Chair noted stakeholders' general support for this Proposal and invited members views.

- Mr Schubert noted that demand-side resources are able to participate in the NEM real time market, and asked why this can't happen in the WEM.
- The Chair clarified that this proposal is about DSPs, which do not submit bids with price/quantity pairs and need to maintain a minimum available level when dispatched.

Proposal 9 – No changes to DSR participation in the RTM as participation of flexible loads is already provided for:

The Chair noted the responses, questions and clarifications as per Slide 10. She noted that it was costly and complex for loads to participate in the real time market.

- Mr Schubert said signals in the RTM need to reach consumers. He stated many large loads will not be aware of the prices in the real time market.

The Chair asked what changes could be made to the Rules to address that.

- Mr Schubert stated that the retail contracts should reflect the real time price to allow loads to respond and save during periods of high prices and the information barrier must be addressed by AEMO or EPWA.

The Chair noted that retail contracts are outside the scope of this review and changes to the WEM Rules cannot address this issue, and that real time prices are already published.

- Ms Bedola noted that participation in the wholesale market is low in the NEM where the price caps are much higher. Participation in the electricity market is a small consideration for participants in their overall business operations and that reducing their load has other costs.
- Mr Schubert agreed but noted that if customers are receiving market signals they may take actions such as installing storage on-site to use during periods of high prices without affecting their own load. This can also be used for IRCR reduction purposes.
- Ms Bedola noted that the benefits of participating come more from reducing IRCR as that benefit lasts for the whole year.
- Mr Schubert responded that the RCM does not have a minimum demand product, and that the $738/MWh clearing price would provide some motivation to reduce demand.

The Chair noted that end-use customers are receiving this signal through their retailer.

- Mr Butler asked whether any large users responded to the consultation and what needs to be done to further gauge interest in this.

The Chair noted that there is interest but that benefits mostly come through the RCM, whether that is capacity credits or IRCR reduction.

- Mr Butler noted that there are risks associated with both high and low prices in the WEM. So there are probably better opportunities in the RCM and SRC.
- Mr Carlson noted that this review is concerned with impediments in the WEM Rules. To the extent that an awareness campaign is required, this is a separate matter.

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- Mr Ross stated that large loads are aware of prices in the RTMand agreed that there are price risks on both sides and these users have operational considerations. There are no impediments if loads want to participate.

<u>Proposal 10 – No proposal for specific service addressing minimum demand issues in the SWIS:</u>

The Chair noted the responses, questions and clarifications as per Slide 13.

The Chair asked for views on whether a review of the need for a minimum demand service should be embedded in the WEM Rules.

The Chair noted that two NCESS procurement processes had been carried out to procure minimum demand services. However, the 600-800MW of storage entering the system, as well as the new flexible capacity product, may change the dynamics and negate the need for a minimum demand product.

- Mr Schubert agreed and suggested ongoing monitoring.
- Mr Butler supported Mr Schubert's view.

The Chair summarised that a specific review would not be required but this would be monitored.

<u>Proposal 11 – Review of size and technical limitations (eg telemetry requirements) for providing ESS:</u>

The Chair noted the responses, questions and clarifications as per Slide 14.

The Chair invited feedback from the working group.

- Ms Bedola stated that the FCESS response time requirements should be consistent for all facilities, with no specific allowance for DSR, and the impact of this on power system security and reliability needs to be considered.
- Mr Schubert stated that if there is equipment on-site that allows for an automatic under-frequency load shedding (UFLS) response without AEMO control, then telemetry shouldn't be required.
- Mr Butler stated that telemetry is specified in the WEM Procedures. That should remain the case as it is a technical matter. If there is a slower response for the service, the extent to which AEMO would be able to use this capability is unclear. He noted that UFLS capability is a separate requirement to the telemetry requirements for ESS.

The Chair confirmed that this is specifically about contingency raise provided by loads. She noted that telemetry is not required in the NEM and that matters such as telemetry and minimum size can present barriers to entry and are more appropriate to deal with in the WEM Rules not procedures.

- Mr Price clarified that the NEM does require high speed data recorders for the provision of FCAS raise and lower services. It is critical to measure performance ex-post.

The Chair asked whether this was the case even if there was equipment installed by the load that would ensure it responded.

- Mr Price clarified that real time telemetry/SCADA is not required in the NEM, but high-speed data recorders (400 milliseconds) capturing response during a contingency event are still required. The meters trigger when frequency hits a threshold, capturing the 10 seconds before and 20 seconds afterwards. Equipment designed to provide a response may not be set up properly, so ex-post confirmation of a response is required.
- Mr Butler stated that telemetry is required to confirm a service has delivered (ex-post).

The Chair noted that EPWA would review the NEM procedures and discuss with stakeholders who have raised this issue previously.

Item	Subject

	The Chair that said her understanding was that the requirements in the WEM Procedure are more stringent than what Mr Price is describing.
	• Mr Price noted that there are two procedures that Enel X have raised concerns about:
	  ○ The Accreditation WEM procedure that includes the 400ms response time for interruptible loads. AEMO is amending that procedure to treat loads the same as other facilities, to give them a speed factor and they will be able to accredit like any other facility. But if their response is very slow and not of value, they will not.
	  ○ The Communications and Control systems WEM procedure that contains the SCADA and telemetry requirements. AEMO has had positive informal discussions about what an appropriate arrangement for non-SCADA derived telemetry would be. However, that is not reflected in the procedure yet.
	The Chair summarised AEMO's view that procedures are the right place for telemetry requirements and that issues that have been raised are already being addressed.
	<u>Proposal 12 – No changes to DSR ability to register as Interruptible Load and DSP and receive capacity credits at same time as providing Contingency Reserve Raise (but rotation methodology to be developed):</u>
	The Chair summarised the responses and questions as per Slide 14 and noted:
	• There has previously been discussion about the rotation of DSPs and why Interruptible Loads are not being dispatched to the same extent;
	• Interruptible Loads should still be able to provide ESS services;
	• in the past there was a methodology for the rotation of DSPs;
	• she disagrees with AEMO's view that the rotation method should be in procedures as it could have financial impact on participants.
	The Chair invited views from the rest of the group.
	• Mr Ross queried whether flexibility in choosing the 'best' load to dispatch each time would be lost by implementing a rotation method.
	The Chair responded that without a rotation method there are issues with one party having to make a decision about who to dispatch each time and on what basis. She noted that some DSPs that are not Interruptible Loads have expressed views that they are repeatedly dispatched as they are large and have proven their capability. Interruptible Loads shouldn't be dispatched if they are in merit to provide contingency reserve raise, but as more DSPs enter the market there needs to be assurance that dispatch will be equitable.
	• Mr Schubert suggested a lack of activation payment might ultimately be responsible for the lack of participation.
	The Chair stated that a loss of production is the primary concern for participants.

6b	**Dynamic Baseline proposal** Mr Carlson presented Slide 17, noting that: • the design elements presented are drawn from the United States National Action Plan on Demand Response; and • not all exclusion rules presented would be used in the WEM. Mr Carlson presented slide 18. He noted that the calculation should be simple and understandable – there are more complex and expensive methods but the accuracy benefits are marginal. He noted that:

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- Demand response events happen when demand is the highest, and as such adjustments are usually needed to the observed consumption in the previous days to establish an accurate baseline;
- The extent to which an adjustment is needed will depend on the methodology that is used to establish the baseline – one that already excludes low demand days (e.g. a 5 in 10 methodology using the highest demand days) would require less adjustment; and
- The adjustment window cannot go back a lot further than the call to respond otherwise the risk of gaming arises.

Mr Carlson presented Slide 20. He noted that:

- many demand response providers would be operating across the NEM and WEM; and
- predicting the underlying load depends on a baseline methodology that is accurate, lacks bias and is predictable.

Mr Carlson presented Slide 21. He noted that the proposed approach is based on the CAISO 10 of 10 and that is the scheme used in the NEM. Weekends will use a 4 of 4 methodology.

- Mr Cornish asked whether aligning with the NEM 20% upwards adjustment cap was in reference to the Wholesale Demand Response Mechanism (WDRM) baseline or Reliability and Emergency Reserve Trader (RERT) baseline, as those baselines are based on different things in each mechanism.

Mr Carlson answered that this refers to the WDRM, but that the PERT had also been considered, and asked whether there was any reason to favour one baseline over the other.

- Mr Cornish noted that:
  - The WDRM uses a 20% cap up and down whereas the suggested model is 20% up and uncapped down. The latter is what RERT uses and is the more sensible methodology.
  - The reason the WDRM caps down is because of accuracy testing. In the RERT, the cap is based on the service quantity contracted (equivalent to WEM capacity credits).
  - In most markets, however, the 20% cap is based on the unadjusted baseline value and this is what should be used in the WEM.

Mr Carlson agreed with not having cap downwards.

The Chair suggested more analysis is needed to address the points raised by Mr Cornish.

- Mr Schubert suggested excluding public holidays and asked how the design would recognise that some businesses ramp up on Monday and ramp down on Friday and don't operate on weekends, and as such would have a different profile on those days.

Mr Carlson said that the issue would be examined in more detail.

Mr Carlson noted that the participants in the NEM have a choice of four baselines but in practice, almost all use one approach. The approach in the WEM will need to strike the right balance between detail/accuracy and simplicity.

The Chair noted that, of the NEM components, the RERT is closest in design to the RCM and should be used as a model rather than the WDRM.

- Mr Butler noted that AEMO supports the proposal but giving options to participants about how their baseline is structured would be complex to implement.

The Chair stated that there will be no options for participants.

- Mr Butler stated that the rules should set out high level principles about the exclusions and allow the detail of this to be put in procedures.

Mr Carlson noted that in the NEM, the baseline was not adjusted to take account of loads that were highly temperature or weather dependent. However, the rules allowed participants

Item	Subject
	to propose an additional baseline for a certain set of customers proving it was statistically accurate and relevant. To date, no participant has made such a suggestion. The Chair noted that the framework will be in the Rules not procedures. • Mr Butler noted that there needs to be the ability of a particular category of participant to request it is treated differently. The Chair agreed that Rules may need to provide for some specific cases to be assessed on the basis of evidence and the process for that may need to be in the Procedure. She stated that procedures must be procedural, and not setting constraints on participation or providing allowances. Mr Ditric presented slide 22 and noted that the more exclusions there are, the further back the methodology needs to go to find the 10 qualifying days. The Chair asked whether an 8 of 10 baseline should be used, excluding the lowest and highest days. • Mr Schubert asked how the baseline calculation would allow for temperature dependent loads with different measurements on different days. Mr Ditric responded that day-of adjustments and scalar would be used to capture that. Mr Ditric presented slide 23. He noted that • consumption two hours prior to the dispatch instruction is used to adjust the baseline up or down as required; and • an adjusted baseline is only calculated if a dispatch instruction is given. The Chair invited views on the proposed approach but there were none. Mr Ditric presented slide 24. He noted that this proposal is the same as reserve capacity testing for DSPs, but that it is from the adjusted baseline level. The Chair invited final comments on the proposed baseline methodology. • Mr Cornish asked (with regard to slide 28) how the bias/accuracy threshold would be calculated for RCM purposes and whether a DSP's portfolio would be found not available if outside of that. Mr Ditric noted that a bias threshold is not proposed in the WEM, as when a DSP is accredited they may not have all their loads associated at that point in time. • Mr Butler asked why there would be an ex-post review if there were changes to associated meters. Mr Ditric said if a meter had moved away and that was not reflected in the initial settlement run, it might be necessary to re-calculate the baseline against which the DSP was dispatched. The Chair noted that while the baseline has been constructed to avoid gaming, there is still a need for a regulator to have ex-post compliance monitoring role. Mr Carlson noted that the regulator will have broader powers to do an ex-post review, in particular the ability to scrutinise how a participant behaved in the hours prior to dispatch. Mr Carlson said that the regulator should have discretion to do an ex-post review, but it is more important to monitor how the participant behaved a few hours prior to dispatch taking place.
7	General Business
8	Next Steps The Chair summarised the next steps as follows: • An Information Paper will be drafted by the end of January 2024.

Item	Subject
	• The Information Paper will be supported by draft amending rules. • MAC will review the Information paper but not the draft amending Rules. • This working group will meet in early to mid-February to discuss the draft amending rules. • There are still outstanding Action Items that need to be completed.

The meeting closed at 11:34 AM

Department of **Energy, Mines, Industry Regulation and Safety**
Energy Policy WA
GOVERNMENT OF WESTERN AUSTRALIA

Agenda Item 5: DSRRWG Action Items

Demand Side Response Review Working Group (**DSRRWG**) Meeting 2024_02_07

Shaded	Shaded action items are actions that have been completed since the last DSRRWG meeting. Updates from last DSRRWG meeting provided for information in RED.
Unshaded	Unshaded action items are still being progressed.
Missing	Action items missing in sequence have been completed from previous meetings and subsequently removed from log.

Item	Action	Responsibility	Meeting Arising	Status
1	Propose changes to the Metering Code to allow confidential information to be shared between Western Power and AEMO for market purposes and for these to be consulted on in the DSR Review consultation paper	EPWA	Meeting 2023_07_05	Complete The Metering Code changes were gazetted on 30 January 2024 and the new unofficial consolidated version of the Metering Code was published on the WA Government website on 31 January 2024.
2	Provide an overview of the extent to which the Eastern Goldfields Load Permissive Scheme (ELPS) has been successful	Western Power	Meeting 2023_08_02	Open
3	Western Power to confirm whether there is a size threshold above which new loads are required to contribute to network augmentation, what the threshold is and whether that threshold distinguishes between transmission and distribution.	Western Power	Meeting 2023_11_29	Open

Item	Action	Responsibility	Meeting Arising	Status
4	Synergy to provide feedback on Proposal 3 of the DSR Review Consultation Paper.	Synergy	Meeting 2023_11_29	Open

DSR REVIEW: EXPOSURE DRAFT
PROPOSED WHOLESALE ELECTRICITY MARKET (WEM) AMENDING RULES

Text in black	**Rules that are in force**
Text in green	Amending Rules that have been made and will commence on a specified date
Text in black	13 December version of the WEM Rules (current version as at 1 Feb 2024)
Text in red – underlined and ~~strikethrough~~	New amendments proposed.

Drafting note:
These Amending Rules are a first draft for the purposes of an initial discussion with the Demand Side Response Review Working Group (DSRRWG).

Consequential amendments, such as amendments to the Glossary, will need to be considered following consideration by the DSRRWG.

Amendments to implement Review Outcome 3 will also be developed following discussion by the DSRRWG.

Consideration will also need to be given to how the dynamic baseline would apply for a DSP dispatch event on a weekend or public holiday.

…

2.16. Monitoring the Effectiveness of the Market

…

2.16.9. The Economic Regulation Authority must investigate any market behaviour if it considers that the behaviour has resulted in the market not functioning effectively. The Economic Regulation Authority, with the assistance of AEMO, must monitor:

(a) the criteria and processes used by AEMO for the procurement of Essential System Services through the Real-Time Market, the SESSM, and under any contracts entered into by AEMO; and

(b) inappropriate and anomalous market behaviour, including behaviour related to market power and the exploitation of shortcomings in the WEM Rules or WEM Procedures by Rule Participants.

(c) anomalous variations in consumption by a Demand Side Programme's Associated Loads in an effort to affect the Relevant Demand for the Demand Side Programme.

…

2.16A. General Trading Obligations

…

2.16A.3A A Market Participant must not vary its Demand Side Programme consumption or withdrawal on the day of a DSP Dispatch Event with the intent of increasing its Relevant Demand as defined in Appendix 10.

…

2.27B. Congestion Information Resource

…

2.27B.9 Each Network Operator must provide information to AEMO relating to the arrangements at each connection point at which the Network Operator may constrain the connections' ability to withdraw.

…

2.29. Facility Registration Classes

…

2.29.4. Subject to clauses 2.29.4N(f), 2.29.4M and 2.30B.8D, a person who owns, controls or operates a Facility containing an Energy Producing System with a System Size that equals or exceeds 10 MW and is electrically connected to a transmission system or distribution system which forms part of the South West

Interconnected System, or is electrically connected to that system, must register the Facility as a Semi-Scheduled Facility or a Scheduled Facility.

…

2.29.4N. AEMO must document in a WEM Procedure:

(a) the process AEMO will follow to assess a Facility's controllability where that assessment must take into account:

i. the controllability requirements specified for a Scheduled Facility and a Semi-Scheduled Facility in clause 2.29.4K;

ii. how reliably a Facility can follow Dispatch Instructions within its Tolerance Range; and

iii. any other information provided by a Market Participant, in response to a request by AEMO or otherwise, that supports the assessment of the Facility's controllability;

(b) the criteria AEMO will use to determine whether or not to exempt a Facility from Facility registration requirements in this section 2.29, which must include assessment criteria for AEMO to ensure that granting an exemption from the requirement to register does not adversely affect Power System Security or Power System Reliability;

(c) the processes to be followed by a Market Participant in applying for an exemption from the requirement to register a Facility under this section 2.29; and

(d) the processes to be followed and criteria to be applied by AEMO in assessing, determining or revoking an exemption in respect of Facility registration under this section 2.29 and section 2.30B; and

(e) the processes to be followed in relation to applications for Intermittent Loads and the provision of data to AEMO under section 2.30B.

(f) the criteria AEMO will use to determine whether a Facility comprising of a Load and another Facility Technology Type is required to register as a Scheduled Facility.

…

2.33. The Registration Application Forms

2.33.9 Each Network Operator must prescribe a standard contract for the installation and operation of an Interval Meter for each technology component of a Facility, and is required to include the following information:

(a) the costs associated with installing an Interval Meter to a component of a Facility;

(b) the Network Operators liabilities associated with the operation of an Interval Meter to a component of a Facility;

(c) the Market Participants liabilities associated with the operation of an Interval Meter to a component of a Facility;

(d) the Network Operators role and responsibilities associated with the operation of an Interval Meter to a component of a Facility; and

(e) the Market Participants role and responsibilities associated with the operation of an Interval Meter to a component of a Facility.

3.5. Emergency Operating State

…

3.5.11 While operating under an Emergency Operating State, AEMO may direct the dispatch of any Demand Side Programme as required irrespective of clause 7.6.5B(c).

…

4.4B. RCM Limit Advice and RCM Constraint Equations

…

4.4B.5. By 5:00 PM on the last Business Day falling on or before 12 June in Year 1 of a Reserve Capacity Cycle, each Network Operator must provide the following information in respect of its Network to AEMO:

(a) the estimated proportion of the peak demand of its Network as at 1 October of Year 3 of the Reserve Capacity Cycle determined under clause 4.4B.3 at each Electrical Location on its Network;

(b) its preliminary estimate of the Thermal Network Limits of its Network taking into account all new Network augmentations that will be in-service by the relevant Capacity Year specified in applications for Early Certified Reserve Capacity under section 4.28C, including separate Thermal Network Limits for Facilities nominated to be classified as Network Augmentation Funding Facilities;

(c) the Electrical Location and identity of any new load, or increase of an existing load, or information required under clause 2.27B.9, equal to or greater than 10 MW that the relevant Network Operator expects to be connected to its Network and in-service by 1 October of Year 3 of the Reserve Capacity Cycle;

(d) in the form of RCM Limit Advice, its preliminary estimate of the configuration and associated Thermal Network Limits of its Network as at 1 October of Year 3 of the current Reserve Capacity Cycle determined under clause 4.4B.3; and

(e) an explanation for any changes to the RCM Limit Advice provided to AEMO for the Reserve Capacity Cycle under clause 4.4B.5(d) from the

RCM Limit Advice provided to AEMO for a previous Reserve Capacity Cycle.

…

4.5. Long Term Projected Assessment of System Adequacy

…

4.5.2. The Long Term PASA must take into account:

(a) demand growth scenarios, including peak and annual energy requirements;

(b) expected Demand Side Programme capabilities;

(c) generation capacity expected to be available, including details of any Early Certified Reserve Capacity, seasonal capacities, Essential System Service capabilities, long duration outages, and production profiles for Intermittent Generating Systems;

(d) expected transmission network capabilities allowing for expansion plans, losses and constraints;

(e) the capacity described in clause 4.5.2A; ~~and~~

(f) expected Electric Storage Resource capabilities~~.~~; and

(g) expected constraints on loads in accordance with information received under clause 2.27B.9.

…

4.5.10. AEMO must use the information assembled under clauses 2.27B.9, 4.5.2, 4.5.2A, 4.5.4, 4.5.5, 4.5.6 and 4.5.8 to:

(a) forecast the peak demand, annual energy, and demand in each Trading Interval in each Relevant Year in the Long Term PASA Study Horizon, for each of the following scenarios:

i. median peak demand assuming low demand growth;

ii. one in ten year peak demand assuming low demand growth;

iii. median peak demand assuming expected demand growth;

iv. one in ten year peak demand assuming expected demand growth;

v. median peak demand assuming high demand growth;

vi. one in ten year peak demand assuming high demand growth,

where the low, expected, and high demand growth cases reflect demand changes stemming from different levels of economic growth, with these being temperature adjusted to produce the one in ten year peak demand cases.

(aA) assess the extent to which the anticipated installed capacity of the Energy Producing Systems and Demand Side Programmes is capable of satisfying the Planning Criterion (taking into account network congestion), identifying any shortfalls in Peak Capacity in each Relevant Year in the Long Term PASA Study Horizon, for the scenario described in clause 4.5.10(a)(iv);

(b) forecast the expected peak demand and the corresponding Peak Reserve Capacity Target for each Capacity Year during the Long Term PASA Study Horizon, where:

i. the Peak Reserve Capacity Target for a Capacity Year is the Peak Capacity required to meet the requirements specified in clauses 4.5.9(a) and 4.5.9(b) assuming no network congestion in that year under the scenario described in clause 4.5.10(a)(iv); and

ii. the expected peak demand in that year is the peak demand under the scenario described in clause 4.5.10(a)(iv);

(c) identify and assess any potential capacity shortfalls isolated to a sub-region of the SWIS resulting from expected restrictions on transmission capability or other factors and which cannot be addressed by additional Peak Capacity outside that sub-region;

(d) identify any potential transmission, generation, storage or demand side capacity augmentation options to alleviate capacity shortfalls identified in clauses 4.5.10(aA) and 4.5.10(c); and

(e) develop a two dimensional duration curve of the forecast minimum Peak Capacity requirements over the Capacity Year ("Availability Curve") for each of the second and third Capacity Years of the Long Term PASA Study Horizon. The forecast minimum Peak Capacity requirement for each Trading Interval in the Capacity Year must be determined as the sum of:

i. the forecast demand (including transmission losses and allowing for Intermittent Loads) for that Trading Interval under the scenario described in clause 4.5.10(a)(iv); and

ii. the difference between the Peak Reserve Capacity Target for the Capacity Year and the maximum of the quantities determined under clause 4.5.10(e)(i) for the Trading Intervals in the Capacity Year.

…

4.5.13. The Statement of Opportunities Report must include:

(a) the input information assembled by AEMO in performing the Long Term PASA study including, for each Capacity Year of the Long Term PASA Study Horizon:

i. the demand growth scenarios used;

ii. the capacities of each energy producing Registered Facility;

iii. the generation capacities of each committed energy producing project;

iv. the generation capacities of each probable energy producing project;

v. the Demand Side Programme capability and availability;

vA. the amount of Peak Capacity forecast to be required to serve the aggregate Intermittent Load;

vi. the assumptions about transmission network capacity, losses and network and security constraints that impact on study results; ~~and~~

viA the assumptions about expected constraints on connection points in accordance with information received under clause 2.27B.9; and

vii. a summary of the method used in determining the values and assumptions specified in (i) to (vi), including methodological changes relative to previous Statement of Opportunities Reports;

(b) the Reserve Capacity Target for each Capacity Year of the Long Term PASA Study Horizon;

(c) the amount by which the installed Energy Producing System capacity plus the Demand Side Programme capability available exceeds or falls short of the Reserve Capacity Target for each Capacity Year and each demand growth scenario considered in the study;

(d) the sub-regions of the SWIS in which AEMO has identified capacity shortfalls under clause 4.5.10(c), the size of those shortfalls, and the expected energy not served in each sub-region for each Capacity Year and each demand growth scenario considered in the study;

(e) a statement of potential Energy Producing System, Demand Side Programme and transmission options that would alleviate capacity shortfalls relative to the Reserve Capacity Target and to capacity requirements in Electrical Locations of the SWIS;

(eA) information used by AEMO to apportion peak demand under clause 4.5.10(a)(iv) across Electrical Locations reflecting information provided under clause 4.4B.5;

(eB) for each Capacity Year of the Long Term PASA Horizon:

i. any planned changes (other than augmentations covered by clause 4.5.13(eB)(ii)) that are expected to impact Network limits or constraints;

ii. any planned augmentations to the SWIS, including augmentations to be paid for by an applicant seeking access, or increase to an Arrangement for Access, to the transmission system that is publicly available information and of which AEMO is aware;

iii. any Network limitations identified in the Network Access Quantity Model outputs in the immediately preceding Reserve Capacity Cycle; and

iv. details of each Facility for which AEMO has received a notice under clause 4.4A.1 where the intention is for the Facility to cease operation permanently;

(f) the Availability Curve for the second and third Capacity Years of the Long Term PASA Study Horizon; and

(g) the quantities determined under clause 4.5.12 for the third Capacity Year of the Long Term PASA Study Horizon.

(h) details of the information received under clause 2.27B.9 including the arrangements under which the Network Operator may constrain the connections' ability to withdraw..

…

4.26. Financial Implications of Failure to Satisfy Reserve Capacity Obligations

…

~~4.26.2CA. The Relevant Demand of a Demand Side Programme for a Trading Interval in a Capacity Year:~~

~~(a) if the Demand Side Programme has at least two Associated Loads, the number of Peak Capacity Credits assigned to the Demand Side Programme plus the sum of the Minimum Consumption of the Demand Side Programme's Associated Loads; or~~

~~(b) if the Demand Side Programme has a single Associated Load, the Peak Individual Reserve Capacity Requirement Contribution of the Associated Load for Trading Day d.~~

4.26.2CA. The Relevant Demand of a Demand Side Programme for a Trading Day d in a Capacity Year is the value determined for the Demand Side Programme using the methodology set out in Appendix 10.

…

7.3. Forecast Unscheduled Operational Demand

…

7.3.5 When AEMO is advised by a Network Operator of a curtailment of a load by the Network Operator, AEMO must notify Market Participants as soon as practicable.

…

7.6. Dispatch

…

7.6.5B. AEMO must issue Dispatch Instructions to Demand Side Programmes in accordance with the following principles:

(a) AEMO must not issue Dispatch Instructions to a Demand Side Programme that restrict the absolute value of Withdrawal below the Facility's Relevant Level by more than the Facility's Reserve Capacity Obligation Quantity in a Dispatch Interval, except with the prior agreement of the Market Participant; and

(b) when selecting Demand Side Programmes for dispatch to meet a potential energy shortfall, AEMO must:

i. take into account Market Schedules and any information provided by Market Participants in response to a Market Advisory issued under clause 7.11.5(gA) for the relevant period;

ii. avoid the dispatch of Demand Side Programmes beyond the extent that AEMO considers may reasonably be necessary to restore or maintain Power System Security and Power System Reliability;

iii. where a Demand Side Programme has an Associated Load which is also an Associated Load of an Interruptible Load, and that Interruptible Load is expected to provide an Essential System Service during the relevant period, prefer dispatch of other Demand Side Programmes; and

iv. only discriminate between Demand Side Programmes based on response time and availability, except where required under clause 7.6.5B(b)(iii); and

v. subject to 7.6.5B(b)(iii) and (iv), dispatch Demand Side Programmes in accordance with the list maintained under clause 7.6.5B(c)

(c) AEMO must randomly list all registered Demand Side Programmes at the commencement of each Capacity Year. When a Demand Side Programme is dispatched, the Demand Side Programme must be moved to the bottom of the list.

Appendix 10: Relevant Demand Determination

Dynamic Baseline Methodology

This section of the Appendix sets out the 10 of 10 dynamic baseline methodology for determining the Relevant Demand for each Demand Side Programme, for use in clause 4.26.2CA(a).

A DSP Dispatch Event commences when AEMO issues a Dispatch Instruction to a Demand Side Programme in accordance with clause 7.6.5A.

This methodology is shown in the table below:

Component	**Business Days Baseline Settings**
Event Day(s)	An Event Day is a day in which a DSP Dispatch Event took place.
Qualifying Days	Qualifying Days for this methodology are Business Days. In addition, Event Days will not be Qualifying Days for a baseline calculation.
Baseline Window	The Baseline Window is the period of days preceding a baseline calculation Trading Interval, from which Qualifying Days are selected for the purpose of calculating Baseline Energy for that Trading Interval. Baseline Window = 50 Qualifying Days.
Selected Days	The Selected Days are the most recent 10 Qualifying Days within the Baseline Window. If there are less than 10, but 5 or more Qualifying Days available within the Baseline Window, then the available 5 to 10 days are used in the baseline calculation. If there are less than 5 Qualifying Days available in the Baseline Window, previous Event Days are reincluded as selected days, starting with the most recent Event Day, until 5 days is reached.
Adjustment Window	The Adjustment Window is a period of time prior to a DSP Dispatch Event, from which meter data is used to adjust the baseline to reflect conditions on the day of the DSP Dispatch Event. The Adjustment Window will be the hour preceding the DSP Dispatch Event
Unadjusted Baseline Energy	The Unadjusted Baseline Energy for a Trading Interval is the average of the metered values for the corresponding Trading Interval on each of the Selected Days. If a Load's metered consumption is not available or is considered by AEMO to be inappropriate, an alternative quantity may be determined by AEMO based on: i) available Meter Data Submissions; or ii) Load information provided by the Market Participant; or iii) other relevant information.

Average Actual Consumption	Average Actual Consumption is the average metered energy measured throughout the Adjustment Window.
Average Baseline Adjustment Energy	The Average Baseline Adjustment Energy is the average Unadjusted Baseline Energy over the Adjustment Window.
Baseline Adjustment	An adjustment will be made to the baseline using the percentage difference between actual consumption and the unadjusted baseline over the adjustment window period. This will be determined as: *Baseline Adjustment (%) =* *Average Actual Adjustment Energy – Average Baseline Adjustment Energy Average Baseline Adjustment Energy* The Baseline Adjustment may be positive or negative and is capped at 20% for upward (positive) adjustment and uncapped for downward (negative) adjustment. The same Baseline Adjustment is applied to any contiguous trading intervals of a DSP Dispatch Event. If more than one DSP Dispatch Event occurs in the same day, the first calculated Baseline Adjustment is applied to those further DSP Dispatch Events, unless there is a 4 hour period between DSP Dispatch Events (i.e. a clear period of consumption without a DSP Dispatch Event occurrence). If there is a 4 hour period between DSP Dispatch Event a new Baseline Adjustment is calculated.
Baseline Energy	*Baseline Energy = Unadjusted Baseline Energy x (1 + Baseline Adjustment)*

Relevant Demand Determination

The Relevant Demand value is to be calculated for each Demand Side Programme for each Trading Interval.

For the purposes of clause 4.26.2CA(a) the Relevant Demand value will be the sum for each of the Demand Side Programme’s Associated Loads of:

- Its Baseline Energy for trading intervals if a DSP Dispatch Event occurred; otherwise
- Its Unadjusted Baseline Energy if a DSP Dispatch Event did not take place.

Hybrid facility sub-metering settlement options

Settlement occurs on a facility basis; two possible options for settlement each with its own level of complexity