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Mr John Pierce
Chairman
Australian Energy Market Commission
PO Box A2449
Sydney South NSW 1235

Level 22
530 Collins Street
Melbourne VIC 3000

Postal Address:
GPO Box 2008
Melbourne VIC 3001

T 1300 858724
F 03 9609 8080

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By electronic submission

Dear Mr Pierce

Wholesale Demand Response Mechanism – Second Draft Determination

AEMO welcomes the opportunity to provide input to the Commission's second Draft Determination on the wholesale demand response (WDR) mechanism for the National Electricity Market (NEM), which has been made in response to three rule change requests in relation to WDR.

As stated in previous submissions, AEMO supports the introduction of a WDR mechanism in time for the 2021-22 summer, and agrees with the Commission that this will improve market efficiency and support the management of an increasingly variable power system. AEMO also supports the Commission's consideration of WDR in the context of the current design process for a customer-centric two-sided NEM.

AEMO supports the changes made between the first and second Draft Determinations, and acknowledges the considerable work of the AEMC and the collaboration to refine the design of the WDR mechanism since the first Draft Determination, with the goal of implementing the mechanism earlier and at lower cost.

In reviewing the second Draft Determination and draft Rule, AEMO has identified further opportunities to minimise the cost of implementing the WDR mechanism, streamline processes, and clarify and simplify the Rules. These are explained in the sections below and the attached table.

Negative settlement and prudentials

Under the draft rule, the calculation of the wholesale demand response settlement quantity (WDRSQ) can result in a negative quantity of demand response being exposed to the pool price, if the metered energy of a wholesale demand response unit (WDRU) is greater than the baseline during a period of dispatch. This creates the risk that the Demand Response Service Provider (DRSP) may be a pool price payer rather than a pool price recipient.

AEMO SUBMISSION – WHOLESale DEMAND RESPONSE – SECOND DRAFT DETERMINATION

AEMO considers that this could lead to a 'high risk, low probability' settlement event, which may require AEMO to develop bespoke prudential requirements for registering DRSPs. The dispatch of WDRUs is most likely to occur when pool prices are very high, so there is the potential for DRSP settlement exposure to quickly become large. AEMO considers that a dispatch failure of this kind would be unlikely to occur, given the rigour required for a DRSP and end customer to reach contractual agreement, achieve classification of the WDRU and participate in central dispatch.

However, AEMO acknowledges that baselining is imperfect and that exact baseline quantities, which will be calculated from meter data, will not be known at the time of bidding and dispatch. If a DRSP is unable to manage the dispatched reduction in consumption from its WDRU's baseline, this could cause negative settlement quantities for which the DRSP would be financially liable.

Recommendation: AEMO recommends the following approach in response to negative settlement quantities:

- If the aggregate WDRSQ for a dispatched WDRU (including where this comprises two or more WDRUs aggregated under clause 3.8.3) is negative in a Trading Interval, AEMO performs no WDR settlement for the individual WDRU(s).
- AEMO settles the energy at each NMI to the retailer(s), as if no WDR dispatch occurred.

It would be the responsibility of the DRSP to manage the performance and payment of individual WDRUs in accordance with its contracts. For example, if an aggregated WDRU contained some loads that curtailed in accordance with their contracts and others that were consuming above their baseline, it would be the responsibility of the DRSP to manage payments to and from its contracted loads.

AEMO considers that this approach would maintain the strong incentive for the DRSP to comply with dispatch instructions, avoid the expense of developing bespoke prudential calculations and arrangements for DRSPs, and reduce barriers to entry for DRSPs.

Applicability of compensation mechanisms

The draft rule requires for the payment of compensation to a DRSP with respect to administered and market suspension pricing.

AEMO notes that this market suspension compensation is funded from all market customers, whereas the funding of WDR is more targeted, being compensated by the retailer at the WDRU's connection point. AEMO considers that it may be economically inefficient to fund WDR through the smeared cost recovery of the market suspension compensation mechanism. A DRSP has mechanisms available to it to avoid dispatch during a market suspension event to avoid detrimental economic outcomes should it need to do so.

AEMO has similar views with respect to compensation during administered pricing events. It notes that these are matters for the AEMC as it administers this mechanism.

Recommendation: AEMO recommends that DRSPs not be considered eligible for compensation for market suspension and administered pricing events in order to avoid economically inefficient outcomes for the market.

Loss factors for aggregated WDRUs in central dispatch

The draft rule allows for WDRUs with different loss factors to be aggregated within a region. Draft rule clause 3.8.7B(e) indicates that the prices specified in WDR dispatch bids are to apply at the connection point for the WDRU. However, the draft rule does not specify how AEMO would translate these bid prices from the connection point to the regional reference node for the central dispatch process¹.

Recommendation: AEMO recommends the rules specify that a loss factor of 1 is to be used for dispatch and pricing where multiple WDRUs are aggregated.

Unnecessary prescription of technical solution

The draft rule is prescriptive about the use of the Market Settlement and Transfer Solution (MSATS) for various functions related to DRSPs. AEMO's high-level design² indicates that a new DRSP role will be created in MSATS. However, AEMO considers that other functions, particularly those related to the maximum responsive component and baseline methodology and settings, could be implemented more efficiently and cheaply in separate systems.

AEMO's consultation with industry on guidelines and procedures will be important for driving the most efficient implementation. AEMO suggests that the rules should avoid unnecessary prescription, so that consultation between AEMO and market participants can guide the most efficient design of systems and processes.

Recommendation: AEMO recommends that paragraph (b) of the definition of Market Settlement and Transfer Solution Procedures be amended to reflect that MSATS will only be used for recording of the DRSP role.

Design of dispatch model

The draft determination and AEMO's high level design both reflect a consumption dispatch model, as opposed to a reduction dispatch model³. However, AEMO notes that some clauses in the draft rule reflect a reduction model and has noted these instances in the attached table.

AEMO understands that the consumption model is not as intuitive as a reduction model. AEMO is willing to explore the potential of the two dispatch models with the AEMC, including their perceived value in terms of participant understanding and operation. AEMO advises that a

¹ As each connection point will be settled individually, settlement processes will use the same marginal and distribution loss factors as currently used for energy settlement.

² Wholesale Demand Response: High-Level Design, March 2020, available at <https://www.aemo.com.au/-/media/files/submissions/2020/wdrm-high-level-design-march-2020.pdf>.

³ Under a reduction model, a dispatch of 5 MW is an instruction to reduce consumption by 5 MW. Under a consumption model, a dispatch of 5MW is an instruction to reduce the consumption of the responsive component of the load to 5 MW.

decision to switch to a reduction model should consider the added cost and timing that may be associated with an alternative dispatch design, although it should have minimal impact on the rules as most of the detail of the dispatch model would reside in procedures.

Recommendation: AEMO recommends further collaboration between AEMO and the AEMC to determine if a reduction model is feasible

Implications of COVID-19

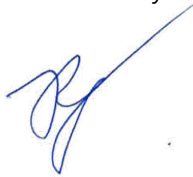
At the time of publication of the second Draft Determination, the Five Minute Settlement (5MS) rule change was scheduled to commence before the proposed WDR commencement date of 24 October 2021. However, the commencement of the 5MS rule changes is proposed to be delayed by a year, to 1 July 2022, under the COVID-19 power plan⁴ and the Delayed implementation of five minute and global settlement rule change request⁵.

AEMO supports the introduction of the WDR mechanism prior to 5MS, though acknowledges this may add some complexity to rule drafting and implementation, specifically in the areas of settlement and baselines. AEMO is keen to support the AEMC and industry stakeholders to design the necessary transitional rules and processes.

AEMO is also developing its plans for the developing procedures and guidelines. AEMO will share these plans with the AEMC and industry and will consider whether any changes to transitional provisions may be needed in light of the COVID-19 power plan and other re-prioritisation activities.

If you would like to discuss the contents of this submission further, please do not hesitate to contact Kevin Ly, Group Manager - Regulation on Kevin.Ly@aemo.com.au.

Yours sincerely



Peter Geers
Chief Strategy & Markets Officer

Attachments: Additional Suggested Changes to Second Draft Rule

⁴ <https://www.aemc.gov.au/news-centre/media-releases/covid-19-power-plan-launched-support-energy-sector-through-pandemic>

⁵ See <https://www.aemc.gov.au/rule-changes/delayed-implementation-five-minute-and-global-settlement>.

ATTACHMENT 1: ADDITIONAL SUGGESTED CHANGES TO SECOND DRAFT RULE

Draft rule(s)	Issue in draft rule	Recommendation
2.3.6(e)	<p>The submission of bid and offer validation data in accordance with schedule 3.1 is a requirement for approval of the classification of scheduled generating units (2.2.2(b)(1)), semi-scheduled generating unit (2.2.7(c)(1)), and scheduled load (2.3.4(e)(1)). However, it has not been included in the requirements for classification of a WDRU.</p>	<p>Include a requirement that the DRSP “has submitted data in accordance with schedule 3.1” in clause 2.3.6(e).</p>
3.8.1(b)	<p>AEMO’s high-level design solution for WDR leverages the existing functionality of a ‘normally on’ scheduled load in dispatch processes. However, the drafting for this paragraph, which describes the objective function within NEMDE, is misaligned with this solution.</p> <p>WDR bids are included in the definition of dispatch bids, so it is unnecessary to include WDR bids in this paragraph.</p>	<p>Delete the words “<i>dispatched wholesale demand response based on wholesale demand response dispatch bids</i>” in clause 3.8.1(b).</p>
3.8.2A(d)	<p>This clause presumes that a WDRU can be spot-price exposed at some times but not at others, requiring a DRSP to submit an available capacity of 0 MW at these times. While it is possible that a WDRU will be spot price exposed for some of the time, AEMO considers this is unlikely and may be based on spot price outcomes that are not known at the time of bidding. AEMO considers that spot price exposure is better managed by excluding any WDRU that has spot price exposure.</p>	<p>Delete clause 3.8.2A(d) and include spot price exposure among the conditions for qualifying loads in clause 2.3.6(m).</p>

Draft rule(s)	Issue in draft rule	Recommendation
3.8.21(j)	If applicable, an inflexibility profile for a WDRU would apply when it is dispatched from its maximum availability. However, this clause requires the inflexibility profile to be used when dispatching from 0 MW.	Amend drafting to reflect applicability of inflexibility profiles for WDRUs.
3.8.21(n)	<p>This clause requires AEMO to notify the financially responsible market participant when one of its connection points is dispatched as WDR.</p> <p>The second draft determination notes that a DRSP will still receive a dispatch instruction from AEMO to consume at its maximum available capacity when it is not cleared in the spot market. These will be non-zero dispatch instructions at all times, except when the WDRU is dispatched to curtail all available capacity, or when the available capacity is zero.</p> <p>It should only be necessary to notify the retailer when a WDRU receives a dispatch instruction that requires a response.</p>	Review drafting to ensure that the notification to the FRMP is only required where a WDRU is dispatched to provide WDR.
3.8.23(a)	The draft determination indicates the Commission's position that AEMO's assessment of WDRU dispatch conformance would occur post-event ⁶ . This accords with AEMO's high-level design solution, which does not include any real-time dispatch non-conformance monitoring.	Remove WDRUs from clause 3.8.23(a) and draft a new rule for ex-post dispatch conformance assessments for WDRUs.

⁶ This is noted in Table 5.1, p73.

Draft rule(s)	Issue in draft rule	Recommendation
	This clause would require AEMO to declare a WDRU as non-conforming in dispatch timeframes and exclude it from setting the spot price. These actions are not consistent with a post-event assessment.	
3.10.6	AEMO is obliged to publish an annual WDR report within six months of the end of each calendar year. This appears to include a requirement to publish a report in the first half of 2022 that covers the 69 days of operation of the WDR mechanism in 2021.	Include a transitional rule that requires the first annual WDR report to be published in 2023, covering the period from rule commencement to the end of 2022.
3.15.6B(a) and (b)	The equation for TA (Trading Amount), while mathematically correct, obscures the energy payment and the reimbursement quantity.	Amend the equation to distinguish the energy payment and reimbursement quantity. E.g. for paragraph (a): $TA = WDRSQ \times TLF \times RRP - WDRSQ \times TLF \times WDRRR$
7.15.5(f)	The inclusion of DRSPs accessing and receiving NMI Standing Data and metering data under this provision is unnecessary and creates confusion as to whether a DRSP is entitled to metering data or NMI Standing Data of a connection point at which it does not have a relationship with the customer. The provision has the effect that NMI Standing Data and metering data is not confidential information under the rules with respect to DRSPs. AEMO does not consider this to be appropriate, and in particular notes that it is not contemplated the DRSPs would be entitled to NMI Discovery in the way that is provided to retailers.	Delete clause 7.15.5(f)(5).

Draft rule(s)	Issue in draft rule	Recommendation
	<p>Paragraph 7.15.5(f) was originally intended to facilitate the provision of metering data to customers under the National Electricity Amendment (Customer access to information about their energy consumption) Rule 2014 and National Energy Retail Amendment (Customer access to information about their energy consumption) Rule 2014. These provisions are not relevant to DRSPs.</p> <p>A DRSP may obtain appropriate access to metering data by virtue of 7.15.5(c)(1).</p>	
11.[124].6	<p>Some changes to procedures and guidelines are expected to be relatively minor and non-controversial. The full Rules consultation procedure may be excessive for documents such as the spot market operations timetable and the procedures for issue of directions and clause 4.8.9 instructions.</p>	<p>Amend the transitional rules to allow for an expedited consultation process for minor amendments to specified procedures and guidelines.</p>