MEETING RECORD

MEETING:	WDR Guidelines Q&A session
DATE:	Monday, 8 February 2021
TIME:	11:00am – 1:00pm
LOCATION:	WebEx only
ATTENDEES:	See end of this document

NOTE: some attendees who joined through WebEx and phone may not have been identified. Please advise via email to WDR@aemo.com.au if you attended the meeting but have not been noted below.

Disclaimer - This document provides an overview of the main points of discussion at an industry forum convened by AEMO on **8 February 2021** to provide information and invite perspectives and feedback on matters relating to the development of the Wholesale Demand Response (WDR) Guidelines. Readers please note that:

- This document is a summary only and is not a complete record of discussion at the forum.
- For presentation purposes, some points have been grouped together by theme and do not necessarily appear in the order they were discussed.
- The views expressed at the forum and reflected here are not necessarily those of AEMO.

1. Welcome (R. Guest, slides 1-5)

Attendees were welcomed to the meeting. AEMO noted that the meeting was being recorded for the purposes of preparing meeting notes.

Agenda was presented.

2. Recap: WDR Guidelines scope and schedule (R. Guest, slides 6-8)

AEMO presented a summary of the WDR Guidelines scope and development timeline.

There were no questions or comments from attendees on this agenda item.

3. DNSP involvement in WDRM (G. Ruthven, slides 9-18)

AEMO set out its analysis of DNSP involvement in certain WDR processes specified in the *draft* WDR Guidelines:

- **WDRU classification**: No DNSP role to review load classifications.
- **WDRU aggregation**: Three options for a DNSP role in reviewing proposed WDRU aggregations.

- **Access to WDRU data**: Sharing of data on WDRU classification and aggregation with DNSPs.

Potential DNSP role in reviewing proposed WDRU aggregations

AEMO presented three options for DNSP endorsement of aggregations at different points in the aggregation application process:

1. DNSP endorsement before application
2. DNSP endorsement during AEMO assessment of application
3. DNSPs could raise objections after aggregations had been approved.

Ready Energy asked whether small customers had been considered. AEMO reiterated that the WDR rule explicitly excludes small customers and this program focusses on implementing the WDR rule. Small customer participation in the wholesale electricity market is being considered through Energy Security Board policy development processes.

AGL noted that option 3 "leaves the provider in doubt and complicates matters for the provider." AEMO agreed with that view, noting it would like to hear from stakeholders on this via submissions to the draft WDR Guidelines.

Ready Energy noted that the three options don't "appear to consider the application of DOE - dynamic operating envelopes, another area of work in the DER integration working groups (ESB & AEMC)." AEMO concurred but emphasised that DOEs are being considered as part of the future two-sided market policy development work. The approach to seeking DNSP endorsement for WDR implementation is that (while not dynamic) it assists in identifying distribution system constraints up front that may need to be incorporated into central dispatch.

Viotas suggested that "5MW per TNI seems arbitrary and possibly too low in many areas". AEMO explained that the 5MW threshold is not an outcome of detailed system modelling. However, it is a point at which materiality starts to emerge in the power system. The threshold is explained in the draft determination that accompanies the draft WDR Guidelines.

Energy Queensland put forward the view that "the assumption that if the load (in total) is connected then that load should not be an issue in terms of affecting system security and system quality is not true - there are two aspects to loads; turning off and turning on (load rejection and load pick up). And in very weak systems both can have an effect on other customers. Further for some of our largest customers that can extend to internal equipment that might be used to provide WDR." AEMO responded that a range of mechanisms exist to address concerns such as connection agreements. It noted that a DNSP endorsement could include a recommended ramping rate, to the extent ramp rates can be applied (as some loads are limited to a switched curtailment).

Ready Energy asked why DRSPs, given current technology, should not have a minimum data set? AEMO explained that it expects DRSPs to comply with the NER, which means DRSPs can make their own decisions about necessary data flows. AEMO views introducing minimum data requirements as a potential barrier to entry.

Viotas asked "what specifically DNSPs will look at and do when they determine whether to endorse an addition to a WDRU?" Ausgrid responded that it would "do some system modelling and look at the impact it has on our voltage (and possibly protection systems) to

just make sure the network is strong enough to deal with the fluctuations." AEMO noted that the draft WDR Guidelines suggest that where an aggregation could cause system security issues, a potential solution is to separate the aggregation into two or more dispatchable units to manage those system security effects.

AGL enquired about the transparency of the DNSP review process and whether there would be an opportunity to revise a proposal to mitigate their concerns.

AGL asked whether DNSPs need to document their processes for consistency, or if AEMO needed to provide a procedure? Viotas and Enel X supported this question noting that there is a need for greater prescription (either by AEMO or some agreed DNSP framework) to support consistency and predictability across DNSP areas. AEMO responded that if a DNSP endorsement is a precursor to the application, then the endorsement is a discussion between the DRSP and the DNSP and AEMO has very limited ability to provide input. If DNSP endorsement occurs within the application processing period, then AEMO may have more ability to input into the conversation. AEMO is seeking feedback on these issues via the WDR Guidelines consultation process.

Infigen asked when the retailer would be notified of WDRU classification. AEMO explained that this would be at point of classification via B2B processes.

AGL asked whether existing participation in other DR programs such as RERT and transmission support etc would factor into the DNSP approval process? AEMO noted this was something DNSPs could likely advise on.

Ausgrid noted that it was "very open to setting up a standard process (DNSP wide), having agreed days to deliver an assessment within and providing transparency."

DNSP access to WDRU data

AEMO stepped through its DNSP "WDR needs and gap analysis" and explained the data access for DNSPs proposed in the draft WDR Guidelines.

There were no questions or comments from attendees on this agenda item.

4. Telemetry requirements (G. Ruthven, slides 19-24)

AEMO noted that submissions to the Issues Paper viewed the telemetry requirements as burdensome. The draft WDR Guidelines have less onerous requirements, based on assessing the need for telemetry from first principles (slide 20). AEMO explained the approaches taken in the draft WDR Guidelines in respect of telemetry requirements for:

- Regional thresholds
- Individual WDRUs and localised aggregations greater than 5MW
- Dispersed aggregations greater than 5MW

AGL asked how constraints would be managed when load can be switched around in different feeders. AEMO responded that it recognised that localised aggregations may need to be considered at multiple neighbouring TNIs, rather than a single TNI, depending on local constraints and switching capability. It noted that the draft WDR Guidelines have allowed for this.

Ready Energy enquired as to whether the regional threshold will be grandfathered. AEMO responded that the threshold will only apply to telemetry requirements at the time of classification. It recognises that the initial regional thresholds are conservative and consequently there may be the ability to scale them up over time and with more experience of WDR.

World Kinect sought clarification around whether a DRSP that initially did not require telemetry (>5MW) would then need telemetry if it added additional load into an aggregation that brought the total capacity to >5MW. AEMO confirmed that the telemetry requirement was for each DUID, so telemetry would be required if the additional increment of load brought the total load over the 5MW at a TNI threshold.

Ready Energy observed that system security is affected by the aggregate impact of all DUIDs in an area, not each individual DUID. AEMO concurred, noting that it can only impose obligations on individual market participants. It also clarified that SCADA feeds will show demand response for a DUID, not individual NMIs within an aggregation. Ready Energy asked why AEMO couldn't consider the aggregate need as the determinant of telemetry requirements. AEMO explained that determining the causer of the telemetry need would be a significant challenge and may disadvantage later entrants relative to first movers. Ready Energy disagreed with this view and agreed to provide further information for consideration.

AGL asked what stops someone doing two distinct 3MW DUID's to avoid SCADA, or whether such an approach was encouraged to manage dispatch constraints. AEMO responded that the total load in the area would be assessed at the time of classification. For example, if 4.5MW of load was already classified and the DRSP was applying to classify another 1.5MW in the same area, then telemetry would apply to the DUID that tipped the DRSP over the threshold in the area. In this case, the 1.5MW DUID would require telemetry. Given that telemetry requirements are assessed during the classification and aggregation processes, AEMO would not be able to revisit the first DUID. AGL noted that it was unsure of how multiple separate loads would be represented in this scenario, suggesting that a couple of examples should be provided. AEMO agreed to provide examples to the WDR CG based on AGL's scenarios.

ACTION 1: AGL to provide 'multiple separate load' scenarios to wdr@aemo.com.au

ACTION 2: AEMO to develop AGL's scenarios into worked examples and present to the WDR CG.

In relation to whether separate, >5MW DUIDs would be encouraged, AEMO explained that this would depend on the nature and location of constraints.

5. Other changes since Issues Paper (G. Ruthven, slides 20-29)

AEMO presented key changes in approach to aspects of the WDR Guidelines resulting from stakeholder submissions and further analysis. These include:

- Principles for developing/amending Guidelines
- Spot price exposure
- Requirements for aggregation
- Detail of regional threshold methodology
- Baseline development process
- Dispatch data to FRMPs

There were no questions or comments from attendees on this agenda item.

6. General questions and close (R. Guest, slides 30-32)

World Kinect asked about the connection between regional thresholds and telemetry. Its view was that it shouldn't matter to AEMO who did or did not have telemetry within a region. Using the analogy of gas capacity markets, World Kinect suggested that there could be mechanism developed around "use it or lose it" non-telemetered 'capacity' i.e. participants with rights to non-telemetered capacity within a region would need to nominate to use it (e.g. one day ahead) and any 'spare' capacity could be opened up for others to use. AEMO agreed that this approach was sound, however it represented a level of sophistication that was beyond this implementation because the intent of the rule change was to implement a simple, low-cost mechanism that was fast to market.

Ready Energy asked why any participant would *not* want to have telemetry given its low cost. AEMO responded that intending DRSPs have indicated to AEMO that telemetry could be a barrier to entry.

AGL suggested that instead of an auction style mechanism, potentially a dispatch constraint could be established to limit non-telemetered WDRU dispatch within a region. This provides a regional cap *and* allows more non-visible WDRUs to be classified and eligible for WDR. This would be similar to the "protected events" framework where the amount of synchronous, non-scheduled or semi-scheduled generation can be constrained within a region under certain circumstances. Ready Energy and Viotas supported this approach. AEMO agreed to investigate this approach as it removed the first mover advantage.

ACTION 3: AEMO to consider whether a dispatch constraint could be a suitable and pragmatic approach to limiting non-telemetered WDR within a region.

Global-Roam asked whether sites with multiple NMIs (for example for load balancing) could 'combine' them and be represented as a single logical NMI. If this was the case, could that site then be eligible for WDR? AEMO agreed to take the question on notice.

ACTION 4: AEMO to consider whether representing multiple NMIs as a single logical NMI would enable a site to become eligible for WDR.

Global-Roam also enquired whether fast start inflexibility profiles (FSIPs) for loads had been considered. AEMO responded that it wasn't within the scope of the WDR Guidelines, but FSIPs will be made available to DRSPs so that they can structure their WDR bids to reflect their WDRU capabilities.

Energy Queensland asked how its operations team would understand whether a WDRU has shed load or restored load in real time. AEMO noted that information available to DNSPs would include:

- Region-level WDR information via publication of pre-dispatch forecasts and live dispatch data
- Registration data on loads in the distribution network that are classified as WDRUs and how they are aggregated
- Historic dispatch data (including availability, bids and dispatch quantities)
- DNSP monitoring within its network

AEMO observed that combining this information is not necessarily straightforward, but it is available.

Ready Energy asked about the consideration of negative pool pricing for WDR. AEMO explained that the WDR mechanism provides no incentive for DRSPs to bid to be dispatched during periods of negative pool prices. Bid quantities are a reduction in demand and must be positive (representing a load reduction or increased curtailment). If someone wants to bid a negative price, they would need to bid a negative quantity (representing an increase in load) which is not permitted. While it may be possible for a DRSP to bid a positive quantity at a very low price (which may allow it to be dispatched and activate WDR settlement), and could then increase load to take advantage of negative pricing, this would result in compliance action due to dispatch non-conformance. Given this, the WDR regional reimbursement rate (part of the WDR settlement mechanism) is anticipated to act as a bid floor.

AGL commented that negative pool pricing might be worth considering given the issues surrounding “behind the meter” distributed energy resources. AEMO responded that the WDR has not been established to address the issue of minimum demand and the ESB policy development process (particularly the “two-sided market” work) is the place to consider it. Further, participants need to consider the other demand response options available to them, for example a contractual demand response arrangement with a retailer could provide suitable exposure to negative pool prices.

AGL enquired how the spot price exposure rebids will be audited and regulated. AEMO advised that the AER will consider this while developing its “WDR Participation Guidelines”, including how ‘spot price exposure’ is defined.

Ready Energy queried the definition of telemetry and made the distinction between:

- SCADA control (where connection into AEMO systems)
- Data that can feed into systems so that DNSPs, AEMO and DRSPs via API interfaces

AEMO noted that it considered where the data would be used e.g. meter data is suitable for WDRU dispatch compliance and settlement, whereas system security concerns require direct feeds into real-time power system operations. AEMO is considering what suitable data transfer protocols (other than SCADA which is costly) will be and therefore is reviewing its data communication standards.

Via the Webex chat, AGL asked how spot price exposure rebids would be audited and regulated, and whether this would simply be via the “in good-faith” NER provisions. AEMO noted that at the time of WDRU classification it will require a declaration that the load will not be dispatched for WDR at any time that it is spot price exposed. While the AER is responsible for compliance matters, it is expected that FRMPs are likely to be in a good position to advise if they believe “double dipping” has occurred.

Attendees were thanked for their attendance and contributions.

ATTENDEES:

NAME	COMPANY
Alex Leemon	Flow Power
Alida Jansen van Vuuren	Ausgrid
Andres Sangkhul	Essential Energy
Andrew Ely	Viotas
Andrew Mair	Next Business Energy
Anna Livsey	PIAC
Chong Ong	TasNetworks
Christina Green	Energy Queensland
Claire Richards	Enel X
Craig Keenan	Origin Energy
Daniel Hoolihan	Energy Queensland
David Headberry	Major Energy Users
David Woods	SAPN
Dor Son Tan	Energy Networks Australia
Ed Sellwood	Essential Energy
Frank Ochel	Accenture Australia
Huzaifa Mohib	World Kinect
Istvan Zabo	World Kinect
Jessica Hui	Ausgrid
Joseph	Energy One
Kyle Auret	AGL
Laura Males	Energy Queensland
Linton Corbet	Global Roam
Leylan Hinch	Evo Energy
Mark Riley	AGL
Michael Zammit	Viotas
Natalie Junge	Infigen Energy
Paul Greenwood	Vector AMS
Peter Wall	Energy Queensland
Rafael Cobo	World Kinect
Rando Yam	Enel X
Elisia Reed	SAPN
Rhiannon Davies	AER
Robbie Manolache	AEMO
Russell Gordon	Energy Queensland
Sam Martin	AEMC
Shaun Cole	Origin Energy
Stephen McLennan	Jemena
Sue Richards	Agility CIS

Suleiman Ali	AEMO
Tim Ryan	Ready Energy
Tom-Kelly Spanner	AGL
Trenton Gilbert	DNV GL
Troy McKay - Lowndes	Energy Queensland
Wayne Turner	Ausgrid
William Salis	Viotas
Zoltan Zdimirovic	AEMO
Chetna Mishra	AEMO
Emily Brodie	AEMO
Ruth Guest	AEMO
Greg Ruthven	AEMO
Luke Barlow	AEMO
Katalin Foran	AEMO
Madhur Mehrotra	AEMO
Kevin Gupta	AEMO
Samudra Arachchige	AEMO
Germaine Landers	AEMO

CONSOLIDATED ACTIONS

ITEM	TOPIC	ACTION REQUIRED	RESPONSIBLE	DUE BY
1	Telemetry requirements	AGL to provide 'multiple separate load' scenarios to wdr@aemo.com.au	AGL	Fri 26 Feb 21
2		AEMO to develop AGL's scenarios into worked examples and present to the WDR CG.	AEMO	Tue 16 Mar 21
3	General questions	AEMO to consider whether a dispatch constraint could be a suitable and pragmatic approach to limiting non-telemetered WDR within a region.	AEMO	Tue 16 Mar 21
4		AEMO to consider whether representing multiple NMIs as a single logical NMI would enable a site to become eligible for WDR.	AEMO	Tue 16 Mar 21