MEETING RECORD

MEETING: WDR/DNSP Workshop

DATE: Monday, 26 October 2020

TIME: 10:30am – 12:30pm

LOCATION: WebEx only

ATTENDEES:

Ruth Guest (Chair)	AEMO
Chris Espinoza	AEMO
Darren Spoor	AEMO
Emily Brodie	AEMO
Greg Ruthven	AEMO
Jennifer Sai	AEMO
Paul Johnson	AEMO
Sam Martin	AEMC
Alida Jansen van Vuuren	Ausgrid
Chris Migocki	Ausgrid
Craig Tupper	Ausgrid
Jessica Hui	Ausgrid
Justin Betlehem	Ausnet Services
Andrew Dinning	Citpower/Powercor
Dino Ou	Endeavour
Albert Pors	Endeavour
Dor Son Tan	Energy Networks Australia
Christina Green	Energy Queensland
Chui-Lin Pan	Energy Queensland
Nikki Barbi	Energy Queensland
Edward Sellwood	Essential Energy
Wahid Ibrahim	Evoenergy
Peter Wong	Jemena
Stephen McLennan	Jemena
Ali Walsh	SAPN
Andrew Lim	SAPN
Elisia Reed	SAPN
Matthew Napolitano	SAPN
Adeel Rana	TasNetworks
Chong Ong	TasNetworks
George Ivkovic	TasNetworks
Nishan Rathanlall	TasNetworks
Tim Astley	TasNetworks

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 above.

Disclaimer – This document provides an overview of the main points of discussion at an industry forum convened by AEMO on 26 October 2020 to provide information and invite perspectives and feedback on matters relating to Wholesale Demand Response implementation. 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 WDR CG meeting. AEMO noted that the meeting was being recorded for the purposes of preparing meeting notes.

2. Purpose and objectives (R. Guest, 6-7)

AEMO noted that the workshop was for exploring the WDR impacts on DNSPs. It set out the objectives for the session, namely:

- Develop a full list of WDR issues affecting DNSPs
- Identify potential mitigations and opportunities
- Agree next steps

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

3. Overview of WDR mechanism rule (E. Brodie, slides 8-14)

AEMO provided an overview of the AEMC's WDR Mechanism rule, noting the information provision concerns raised by DNSPs during the rule change process and the AEMC's views on these concerns.

Ausgrid enquired about the reason for historical information on the specific location of where WDR was provided not being made available to market participants (see slide 14). AEMC took an action to respond to this question.

TasNetworks asked whether WDR allows for load increases. AEMO responded that the WDR settlement mechanism (where the retailer at a connection point pays for the demand response) does not allow for a load increase.

Ausgrid queried whether the wholesale spot price would be negative during minimum load conditions. AEMO responded that it was theoretically possible but that the market design

meant an increase in demand above the baseline could only be achieved through non-compliant dispatch.

Endeavour Energy enquired whether a DRSP could bid to export only. AEMO responded that under the WDR rule, demand response is considered either a reduction in load or an increase in generation. Endeavour Energy had a follow-up question regarding a theoretical site that had both generation and load. AEMO explained that WDR rule requires demand response to be netted off at a single connection point. In the case where a site has two connection points, the WDR rule explicitly prevents their participation in the mechanism because of the potential to load shift between the NMIs.

ACTION 01: AEMC to provide reasoning for historical information on the specific location of where WDR was provided not being made available to market participants.

4. AEMO's WDR implementation program (R. Guest, slides 15 – 19)

AEMO ran through an overview of its WDR program, particularly heat maps of affected market systems and the indicative program timeline.

In an earlier email enquiry, Endeavour Energy asked about how DNSPs can determine if a NMI with a DRSP populated in MSATS is related to a WDR unit (WDRU) or an ancillary service load (ASL). This is because the WDR Rule requires "Market Ancillary Service Providers" to be renamed "DRSP". In response, AEMO noted that ASL won't be assigned to a connection point. If a DRSP is populated at a connection point it can only be as a WDR provider. There will need to be a new solution in future if ASLs needed to be assigned to a connection point.

Endeavour Energy explained that in the case of embedded networks, the Embedded Network Manager is assigned to the connection point, not the DNSP. This means the DNSP may not have visibility of some NMIs associated to DRSPs. AEMO took an action to respond to this scenario.

ACTION 02: AEMO to investigate how DNSPs will have visibility of WDR at a connection point where that CP is assigned in CATS to an Embedded Network Manager instead of the DNSP.

5. WDR impacts on DSNPs (R. Guest, slides 20 – 23)

AEMO provided a summary of its early one-to-one conversations with DNSPs, noting that the key WDR issues were technical impacts to the distribution network from large loads quickly dropping off or resuming. It also noted that currently DNSPs had no visibility of demand response that is activated through retailer contracts i.e. WDR will provide an incremental level of visibility compared to the status quo.

TasNetworks asked whether there will be any interaction between WDR and the 4.3.5 (a) requirement of a 60 % automatic interruptible load requirement given the large amounts of reduction envisaged. AEMO responded that this relates to under-frequency load shedding relays – a service being offered as pseudo-demand response around a normative demand. DNSPs managing this process would need to assume that no WDR response is occurring at the connection point. AEMO took an action to follow-up on this query.

Endeavour Energy asked whether the DNSP will know if a NMI is part of an aggregated WDRU, and if yes, then how? AEMO answered that AEMO will know this information and is proposing a process and format to notify DNSPs.

TasNetworks enquired about the TNSPs' customers participation in WDR. AEMO responded that it was focussing on distribution networks because transmission connected customers were usually more visible to network operators, particularly if they are already a scheduled NEM participant.

TasNetworks also asked for clarification on the separation of WDR from "pain sharing" (sometimes called reserve sharing).

AEMO noted that each individual load/WDRU will have a Maximum Responsive Component (MRC). There will also be a MRC quantity for the aggregation, that will be <= the aggregate MRC of the constituent WDRUs.

ACTION 03: AEMO to investigate the issues around whether there will be any interaction between WDR and the 4.3.5 (a) requirement of a 60 % automatic interruptible load requirement.

ACTION 04: AEMO to clarify any interactions between WDR and "pain sharing".

6. Workshop: Further WDR issues and opportunities (R. Guest, see accompanying spreadsheet)

6.1. Provision of real-time WDR information to DNSPs is out of scope

Jemena explained an operational scenario (network fault event) that could carry additional risk without real-time WDR event information being available to the DNSP. It stated that notification of when WDR event is occurring would be useful. AEMO asked whether this was essentially a request for a copy of the dispatch instructions in real-time. Jemena said yes, with the observation that the amount of demand response was not necessarily as important as knowing which site was participating. AEMO noted that providing real-time information was out of scope because:

- The AEMC determination was clear that providing real-time information was not envisaged.
- AEMO is implementing WDR in streamlined and low cost way (as required by the AEMC determination and rule) so it won't have any "real-time lines" of communication to DRSPs.

AEMO further noted that with respect to aggregations of load, even AEMO won't know which loads within aggregation are being dispatched for demand response in real time. Even if AEMO required a telemetry data feed, the data feed would be aggregated, and an aggregation could span multiple TNIs.

Jemena responded that it was less concerned with aggregation because this implied that individual sites were small and distributed. It was more considering the impact of individual, large customers participating in WDR on high voltage feeders. AEMO acknowledged that this hadn't been contemplated to date, particularly with respect to differentiating between aggregated vs non-aggregated WDR. Jemena provided an example where a 1MW load that dropped 10% of capacity would be noticeable on a 12MW high-voltage feeder. Without knowing that WDR was occurring, the DNSP's load estimations would be erroneous, meaning decisions about shifting to back-up supply would be compromised. Jemena also

suggested investigating a low cost way of conveying real-time WDR information to DNSPs, such as email, but acknowledged AEMO's limited program scope.

TasNetworks, Essential Energy, Energy Queensland, and SAPN noted their desire for real-time WDR information to be provided for operations and planning. TasNetworks also stated that dispatch instructions may not be sufficient for WDR aggregations because a key function of DNSPs is to manage the network down to the feeder level.

AEMO acknowledged it understood their position however it noted:

- Providing real-time dispatch instructions is out of scope (AEMC determination) from "day one". Providing real-time information could be considered in future, if DNSPs can provide evidence of increasing impacts and it can be funded.[1]
- If real-time information is required, DNSPs could consider providing their own monitoring
- Loads are already participating in demand response. WDR will provide incrementally more information than the status quo.

In response, Ausnet Services put forward the view that just because networks do not currently have information doesn't mean that they don't need it. This is because:

- Other market reforms are driving towards integrating distributed energy resources into distribution networks, amplifying the need for more real-time information to support operations and planning.
- A lack of real-time information was another factor in making networks less efficient to control.

AEMO agreed with this assessment (particularly when the need escalates) and suggested that perhaps there were confidentiality issues behind the AEMC's decision not to provide for DNSP access to real-time information. It noted that wholesale market data is released the next day. Ausnet considered that there could be a confidentiality issue but expected that it could be managed because DNSPs are ringfenced monopolies that are explicitly prevented from exploiting market positions.

ACTION 05: AEMO to investigate whether there are any confidentiality barriers to providing DNSPs with real-time information on WDR events.

6.2. Information provision for aggregations that are distributed across different distribution and transmission networks

SAPN asked whether a DNSP would be provided with the information about locations and impact of aggregation for all the customers within the aggregation in the case where a WDR aggregation comprised of distribution- and transmission- connected customers. AEMO responded that it was uncertain if this was allowed based on confidentiality but would take an action to find out.

ACTION 06: AEMO to establish whether a DNSP would be provided with the information about locations and impact of aggregation for all the customers within the aggregation in the case where a WDR aggregation comprised of multiple distribution and/or transmission-connected customers.

[1] The policy development for a potential two-sided market would also need consideration.

6.3. Ramp rates

SAPN stated that ramp rates are important to network operation and asked if DNSPs would have a chance to review ramp rates. AEMO noted that ramp rates are set in connection agreements and asked how ramp rate issues are usually dealt with.

SAPN responded that if loads are not aggregated then ramp rate issues can be managed through the usual processes. However, the process may not work for aggregated WDR.

Energy Queensland noted that newer connection agreements would generally enable negotiation around changes, however older agreements would need to be assessed case by case.

6.4. Disaggregation

SAPN asked if DNSPs can suggest a disaggregation. AEMO responded that DNSPs can request disaggregation where an aggregation creates material system security issues. AEMO will need to set up a process to enable disaggregation requests

ACTION 07: AEMO to establish a process to enable WDR disaggregation requests.

6.5. DNSP information sharing with AEMO

Ausgrid enquired whether DNSPs can be part of the approvals process for aggregated WDRUs, i.e. input into AEMO's technical analysis during registration. AEMO noted that this is out of scope and it is not intending to include DNSPs in the registration process. This is because it considers there wouldn't be enough turnaround time within the statutory timeframes that apply to that process. AEMO further noted that it would like DNSPs to provide information on the weaker/stronger areas of their networks so that this can be considered during the registration process. AEMO said that it hadn't yet established the concepts for 'acceptable' aggregation, but this work will begin after summer.

Essential Energy noted its practical difficulties in providing this kind of information, namely hundreds of substations: some of which were highly connected with the TNSP and others which have intersections with other DNSPs.

AEMO explained that a DUID for WDR and ASL will always be different. However, where a WDRU and an ASL is associated with the same NMI, there can only be one participant for both the WDRU and ASL. This is because AEMO's dispatch engine will not be co-optimising for energy and FCAS – DRSPs must make sure they can comply with both bids if dispatched for energy and FCAS.

AEMO asked attendees if they ever follow up with a customer if the load is creating significant challenges. Ausgrid responded that it can do so. It expects this ability will be diminished in the case of aggregations where it would have to identify and manage smaller customers.

ACTION 08: For the purposes of registering WDR aggregations, AEMO to articulate:

- the distribution network information it would like to hold
- how that information could be accessed by various participant types e.g. potential DRSPs

ACTION 09: Attendees to provide indicative views on furnishing AEMO with information on the weaker/stronger areas of their networks for the purposes of assessing proposed WDRU aggregations during the registration process.

6.6. Expected volume of WDR

TasNetworks asked about AEMO's expectations of WDR volumes. AEMO noted that it did not have an overall feel for volumes, particularly as the WDR mechanism competes with retailers' offers i.e. retailers may start to provide more attractive demand response offers to their large customers. AEMO also noted that it is preparing for many possibilities and in terms of visibility the default position on SCADA is requiring >5MW loads and aggregations to have telemetry, with an exemption process for WDR in strong parts of the network, and for non-visible WDR to be capped by regional thresholds.

ACTION 10: AEMO to provide explanation of when DNSPs will/will not have access to telemetry data.

7. General questions and close (R. Guest, slides 44 - 45)

Attendees were thanked for their attendance and indicated that they saw value in a follow up session this year. AEMO also requested feedback on the format of the session so that it can improve the flow of discussion where possible and appropriate.

ACTION 11: Attendees to provide feedback on the format of the workshop and suggestions for future improvements.

ACTION ITEMS RAISED

ITEM	TOPIC	ACTION REQUIRED	RESPONSIBLE	DUE BY
1	Overview of WDR mechanism rule	AEMC to provide reasoning for historical information on the specific location of where WDR was provided not being made available to market participants.	AEMC	Next meeting
2	AEMO's WDR implementation program	AEMO to investigate how DNSPs will have visibility of WDR at a connection point where that CP is assigned in CATS to an Embedded Network Manager instead of the DNSP.	AEMO	Next meeting
3	WDR impacts on DSNPs	AEMO to investigate the issues around whether there will be any interaction between WDR and the 4.3.5 (a) requirement of a 60 % automatic interruptible load requirement.	AEMO	Next meeting
4		AEMO to clarify any interactions between WDR and "pain sharing".	AEMO	Next meeting
5	Workshop: Further WDR issues and opportunities	AEMO to investigate whether there are any confidentiality barriers to providing DNSPs with real-time information on WDR events.	AEMO	Next meeting
6		AEMO to establish whether a DNSP would be provided with the information about locations and impact of aggregation for all the customers within the aggregation in the case where a WDR aggregation comprised of multiple distribution and/or transmission- connected customers.	AEMO	Next meeting
7		AEMO to establish a process to enable WDR disaggregation requests.	AEMO	Q2, 2021

ITEM	TOPIC	ACTION REQUIRED	RESPONSIBLE	DUE BY
8		For the purposes of registering WDR aggregations, AEMO to articulate: • the distribution network information it would like to hold • how that information could be accessed by various participant types e.g. potential DRSPs	AEMO	Next meeting
9		Attendees to provide indicative views on furnishing AEMO with information on the weaker/stronger areas of their networks for the purposes of assessing proposed WDRU aggregations during the registration process.	DNSPs	Mon 23 Nov
10		AEMO to provide explanation of when DNSPs will/will not have access to telemetry data.	AEMO	Next meeting
11	General questions	Attendees to provide feedback on the format of the workshop and suggestions for future improvements.	DNSPs	Mon 23 Nov