



Market Design and Operations Working Group (MDOWG): Meeting 1

DATE/LOCATION: 12 March 2019, Lev 45, 152 St Georges Terrace, Perth

PRESENT:

Attendees	Organisation	Attendees	Organisation
Adam McHugh	EY	Mark de Laeter	EMCA
Aden Barker	PUO	Martin Maticka	AEMO
Aditi Varma	PUO (Chair)	Matthew Bowen	Jackson MacDonald
Andrew Stevens	Energy made clean	Melinda Anderson	AEMO
Anlee Khuu	Jackson MacDonald	Noel Schubert	Individual
Brad Huppatz	Synergy	Paul Arias	Blue Waters
Chayan Thananchayan	Kleenheat	Peter Huxtable	Water Corporation
Chris Wilson	AEMO	Rebecca White	PUO
Daniel Kurz	Blue Waters	Sabina Roshan	Western Power
Dermot Costello	CES	Sam Lei	Alinta Energy
Erin Stone	Point global	Sara O'connor	ERA
Geoff Glazier	Merz consulting	Scott Davis	Energy Council
Glen Carruthers	Western Power	Simon Middleton	AEMO
Ignatius Chin	Energy Market Consultant	Sonia Kolar	Alinta Energy
Iulian Sirbu	Kleenheat	Stephen Elliot	Rule Change Panel Support
Jacinda Papps	Alinta Energy	Stephen Gould	Community Electricity
Jayesh Halai	Perth Energy	Stuart Featham	AEMO
Jenny Laidlaw	Rule Change Panel Support	Tim Robinson	RBP consulting
Kei Sukmadjaja	Western Power	Wendy Ng	ERM Power
Marie Fung	PUO		

TIME: 9.40 am

MEETING ENDED: 12:55 pm

Item no.	Agenda Item	Minute	Action	By Whom
1.	Introduction	<p>The Chair opened the meeting, provided a recap of the items presented at the first MDWOG meeting, outlined the agenda for this meeting, and highlighted that questions or comments that cannot be addressed during the meeting due to time constraints should be forwarded to the MDWOG mailbox at marketdesign.wg@treasury.wa.gov.au</p>		
2.	Tranche 1 Consideration for the participation of Energy Storage Systems in the WEM	<p>Simon Middleton (SM) from the Australian Energy Market Operator (AEMO) provided an overview of the work undertaken on the participation of Energy Storage Systems (ESS) in the Wholesale Electricity Market (WEM). He highlighted that the project is being developed in two stages – Tranche 1 and Tranche 2.</p> <p>Tranche 1 aims to enable the participation of battery storage as early as possible with minimum system and rule changes. Tranche 2 looks at facilitating the participation of storage and other new technologies in as many aspects of WEM as possible.</p> <p>SM stated that a factsheet will be published by the AEMO to provide clarity to the industry on the requirements for storage participation in Tranche 1. It was clarified that the feedback received at the meeting would be incorporated as required in the factsheet, and any other related documents that are published.</p> <p>Glen Carruthers (GC) from Western Power talked to the Technical Rules requirements for Tranche 1. He highlighted that the Technical Rules were created at a different time period when storage and other new technologies did not exist. As such the Technical Rules do not cater for ESS at the moment. Connecting ESS as part of Tranche 1 would provide a useful learning experience which can be used to inform changes required to the technical rules.</p>	<p>AEMO to publish a factsheet on ESS participation in the current WEM Rules framework</p>	AEMO

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		<p>Questions were raised around the arrangements for battery connection, the risks and uncertainty of connecting as part of Tranche 1 (before full amendments of the Technical Rules), and lessons learnt from other battery connections in WA.</p> <p>GC clarified that:</p> <ul style="list-style-type: none"> • Despite the Technical Rules not explicitly allowing for the connection of batteries, options such as granting a temporary exemption while the Technical Rules are developed to accommodate ESS exist; • The connection arrangements would depend on the type and size of the battery. There is experience worldwide that can be leveraged; • While it is acknowledged that there may be risks to connecting batteries as part of Tranche 1, these are considered fairly minimal; • Batteries connected at the distribution level have provided some insights for connection that can be leveraged for transmission connected batteries. <p>Concern was raised around connection time and the likelihood of it creeping into Tranche 2 timeframes, making Tranche 1 not attractive.</p> <p>Aden Barker (AB) from the Public Utilities Office (PUO) responded that it would be up to each proponent to assess the costs and merits of Tranche 1 and make the decision on whether to connect as part of Tranche 1, noting that the option to do so is available. SM also stressed that Tranche 1 is an interim solution which is being undertaken in conjunction with Tranche 2.</p> <p>In response to a question on the availability and transparency of data from battery trials underway in Alkimos, AB mentioned that this would be considered as part of the DER Roadmap.</p> <p>GC also addressed questions around behind the meter connections and potential opposition from current generators on the connection of new batteries. He confirmed that there is a potential for connecting batteries behind the meter but further work is required in this space. With regards to potential opposition from existing generators, this is dependent on where on the network a battery is connected, its use and functionality.</p>		

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		<p>A question was raised on whether batteries could provide new types of system security services such as fast frequency response. The Chair responded that the PUO's review of the Ancillary Services framework, undertaken by GHD, had demonstrated that the system needs fast responding services in the near future and that technologies such as storage could provide this service. To maintain technology neutrality, new Ancillary Services would be specified on the basis of control action, speed and duration of response needed to ensure all capable technologies are able to participate to provide that service.</p>		
3.	New Spot Market (SCED): Energy scheduling and dispatch	<p>Tim Robinson's (TR) presentation on Energy Scheduling and Dispatch covered the core design features of the new spot market. These are security constrained dispatch; facility bidding; and co-optimisation of energy and ancillary services (AS); and additional features of: reduced gate closure, 5 min dispatch interval, ex ante pricing and self-commitment.</p> <p>He highlighted that feedback received from the MDOWG meeting will be included in a consultation paper.</p> <p><u>Key principles for real time scheduling and dispatch</u></p> <p>An observation was made that both the WEM and Technical rules should be aligned and flexible to fit different types of technologies.</p> <p><u>Gate closure</u></p> <p>TR went through different gate closure time scenarios, outlining their benefits and disadvantages. A 15 min "soft" gate closure was proposed. This offers the opportunity for participants to amend their offers within the 15 minutes, provided sufficient justification is given.</p> <p>A concern was raised that zero gate closure could lead to undesirable outcomes for generators with longer start up times.</p> <p>One attendee raised that it would be worth getting the market's views on implementing a zero gate closure as this had not been previously discussed. TR highlighted that while zero gate closure is present in the NEM, this is uncommon internationally.</p>	<p>The PUO has decided to streamline the consultation process by releasing fewer consultation papers. Design and rules for Energy Scheduling and Dispatch design will now be consulted on alongside a more complete reform package, rather than stand-alone.</p> <p>Consult with JL on interactions with on RC_2013_15, and previous work done on DSP consumption bids</p>	PUO and consultants

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		<p>In response to a question regarding publishing bid information prior to gate closure, it was clarified that there would be no visibility of price and quantity pairs by participants, until subsequently published.</p> <p>AEMO confirmed that there would be no system issues with allowing participants to revise their offers, as was the case in the past.</p> <p><u>Facility Aggregation</u></p> <p>TR highlighted the need to move to facility dispatch for Synergy due to security constrained dispatch and the co-optimisation of energy and ancillary services.</p> <p>Following a question from one attendee on whether a multiple unit facility with one network connection could offer as one facility and a single dispatch, there was general agreement that it would be beneficial to include different scenarios and worked examples in the consultation paper to demonstrate how different facilities would be affected.</p> <p>One attendee raised that the full picture of the entire chain is required before a decision can be made on disaggregation of facilities (which entails a cost).</p> <p><u>Mandatory offers</u></p> <p>TR talked about mandatory offers and the proposal for capacity credits to no longer be linked to sent out capacity.</p> <p>Questions and issues that were raised relate to:</p> <ul style="list-style-type: none"> • the potential for allowing central commitment over short timeframes for fast start units as per the NEM FSIP (fast start inflexibility profiles) approach; • Situations where a late change (eg facility trip) would cause a participant to be committed who cannot turn on in the next 5 minutes; • How to assess compliance with must-offer rule when a facility is available but not dispatchable; • The need for alignment with current rule change RC_2013_15; 		

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		<ul style="list-style-type: none"> • Whether actual dispatch outcomes impact the Reserve Capacity refund process (or whether it just uses offers only); • Alignment on mandatory offers proposal with previous work done on capacity priority rights. <p><u>Network clearing models</u></p> <p>TR went through three network models and the proposed single-region hub-and-spoke model. He highlighted that:</p> <ul style="list-style-type: none"> • outcomes between a multi-region or single region models could be different but only marginally; • the proposed model adopted now will not lock us into a future inflexible solution; • locational price signals will not be lost as this will be achieved from the Ancillary Services mechanism. <p><u>Ramping profiles</u></p> <p>Discussion ensued on ramping profiles. Currently ramp rates are required to match rates in dispatch instructions. This tends to more ramping in the first part of the trading interval to meet the dispatch target at the end of the trading interval; and that generator ramping profiles do not always match the load profile.</p> <p>Question was raised on whether existing systems would allow for a linear ramping obligation. It was suggested that PUO send a data collection sheet for participants to provide facility capabilities to confirm whether or not they would be able to implement linear ramping.</p> <p><u>Energy storage dispatch</u></p> <p>TR went through considerations around inclusion of energy storage facilities in SCED clearing.</p> <p><u>Market schedules</u></p> <p>The market schedules proposals were discussed. It was stressed that additional burdens to comply with certain time periods should be kept to a minimum. It was agreed that the intent would be to publish the best possible estimates in the given timeframes to inform STEM decisions.</p>		

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		<p>There was discussions on the potential to undertake some form of analysis to determine the accuracy of offers at various times.</p> <p><u>STEM</u> Industry views and feedback on the potential to move STEM later in the day was requested.</p> <p>It was clarified that no changes would occur to bilateral schedules and timings.</p> <p>Questions were related to how Capacity priority rights would interact with offer positions and about the inclusion of intermittent generation in STEM.</p> <p><u>Demand side response</u> Jenny Laidlaw (JL) from the Rule Change Panel Support offered to discuss some previous work on DSP consumption bids.</p>		