



CMM TECHNICAL WORKING GROUP – OPERATIONAL SUBGROUP

MEETING NOTES

Wednesday 21 September 2022 (2-4pm AEST)

Chair: Neil Gibbs (OnLine Power)

Attendees: Amanda Sinden (ESB), Anthony Rossiter (Powerlink), Ben Davis (ESB), Bill Jackson (ElectraNet), Con Van K (UPC), Dave Smith (Creative Energy), David Heard (Finnicorn), David Swift (ESB), Dev Tayal (Tesla), Jess Hunt (ESB), Jonathan Myrtle (Hydro Tasmania), Manas Choudhury (Edify Energy), Martin Hemphill (Renewable Energy Systems), Nick Barr (Online Power), Paul Austin (ESB), Robert Pane (Intergen), Sarah-Jane Derby (Origin Energy), Shevy Moss Feiglin (AGL), Stephen Wallace (SW Advisory), Tom Livingstone (ESB)

Time	Topic	Key points/action items
2:00	Welcome, objectives & agenda	<ul style="list-style-type: none">• Neil Gibbs opened the session and offered an acknowledgement of Country.• ESB provided an overview of the meeting agenda and objectives.
2:05	<p>Incorporating storage and other energy limited plant into the CMM / CRM</p> <ul style="list-style-type: none">• Recap• Spot trading including impact of CMM / CRM• Contract trading including impact of CMM / CRM• Access allocation	<ul style="list-style-type: none">• Stephen Wallace (SW Advisory) provided a presentation to outline the scope to the storage and other energy limited plant discussion, including:<ul style="list-style-type: none">○ Marginal costs of operation○ Opportunity costs○ Marginal value of storage○ Spot market (physical) operations of storage plant with CMM/CRM○ Storage contracting.• The principles in the presentation were supported based on the experience of participants.• Stephen presented a charge/discharge model for how to efficiently fit storage plant into CMM / CRM arrangements for use during Mural sessions.• Inputs on key questions posed by the ESB were captured in a working MURAL page.• The TWG in attendance also noted the following insights and questions:<ul style="list-style-type: none">○ The group discussed whether batteries and load would want access to the RRP, and the different contractual arrangements that might affect their requirements. It was noted that the



		<p>removal of RRP for storage could cause a problem for contract liquidity.</p> <ul style="list-style-type: none"> ○ The group discussed whether other contracts need to be considered in the discussion, e.g. NSW LTESAs. ○ The group considered whether perverse bidding incentives might arise in the situation where a battery is doing nothing but still able to gain access. One group member questioned whether an energy storage asset should be able to charge in the scenario where it makes congestion worse. ○ Action: The ESB took actions to (a) develop worked examples with numbers and (b) prepare an alternative description of the options using the quadrant diagram provided previously (refer to Appendix A of the accompanying TWG presentation slides updated after the TWG meeting). ○ The group considered whether there can be ways to simplify the treatment of batteries to the principles level. Some group members considered that access rights for batteries should be the same as for any other generator. ○ The group discussed the challenges that arise when attributing an access entitlement to energy limited plant. A 24/7 share of access could overcompensate storage given that may not be capable of physically operating for that long. Any additional access would come at the expense of other assets – there is a zero-sum game of distributing revenue. ○ It was noted that market systems already include a field where storage providers can enter the daily energy constraint, to tell AEMO what total energy limitations are. However, this function is not well used by pre-dispatch. ○ It was suggested that it might be worth considering a wind dominated REZ in state where the RRP is dominated by solar. Storage and wind find themselves competing for access to the RRP. E.g. Central West REZ NSW.
<p>3:15</p>	<p>Interconnector access and settlement:</p> <ul style="list-style-type: none"> ● Interconnector access in today's market ● Interconnector access in the future market with congestion reform 	<ul style="list-style-type: none"> ● Dave Smith (Creative Energy) presented on interconnector access and settlement. Including worked examples of: <ul style="list-style-type: none"> ○ Pure inter-regional constraint ○ Hybrid inter-regional constraint with cost-reflective bids ○ Hybrid inter-regional constraint with MPF bidding ○ Counter-price flow ○ Clamped counter-price flow ● Under the status quo, interconnectors do not receive priority access. This approach could also be applied under CMM and CRM. ● Dave presented access and settlement models for interconnector access under CMM and CRM. No comments were received in response to these from the TWG. ● The TWG noted the following insights and questions:



	<ul style="list-style-type: none">• Design issues for CMM and CRM	<ul style="list-style-type: none">○ It was noted that to the extent we have generators located nearby NEM regional boundaries (which we do), counter price flows are likely to happen from time to time because of network impedances. However, we can definitely reduce the likelihood of counter-price flows through more efficient pricing, and actively resolving physical constraints.○ It was noted that AEMO is preparing a consultation paper that considers what changes are required to market systems to accommodate looped regions (as will occur when Project EnergyConnect completes the loop between NSW, SA and Vic).○ It was noted that there are lots of REZs located along interconnector corridors and we should try to avoid curtailing zero SRMC generators if not efficient to do so.○ A question was raised with respect to the treatment of MNSPs. The ESB noted that this matter required further consideration.
3:55	Next steps	<ul style="list-style-type: none">• ESB advised the TWG of upcoming meetings on NERA modelling and investment models.
4:00	Meeting close	