



EnergyAustralia
LIGHT THE WAY

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Dear Commissioners,

AEMC 2020, Connection to Dedicated Connection Assets, Consultation Paper

We welcome the opportunity to comment on the AEMC's consultation paper on improvements to the Dedicated Connection Assets (DCA) framework.

EnergyAustralia is one of Australia's largest energy companies with around 2.5 million electricity and gas accounts in NSW, Victoria, Queensland, South Australia, and the Australian Capital Territory. We also own, operate and contract an energy generation portfolio across Australia, including coal, gas, battery storage, demand response, solar and wind assets with control of over 4,500MW of generation capacity in the National Electricity Market (NEM).

EnergyAustralia supports AEMO's request for improvements to the DCA rules.

We agree with AEMO's assertions that the current DCA rules are 'unintentionally unworkable' and create significant barriers to entry. This is primarily due to a reliance on negotiations to address complex technical challenges. These barriers to entry undermine the policy intent for excess capacity of Large Dedicated Connection Assets (LDCAs) to offer some degree of open access to third parties for any spare capacity.¹

We agree that further modifications to the rules are required to manage ambiguity related to facilitating third party connections to DCAs. Changes are required to address the issues outlined by AEMO such as performance standards and calculation of Marginal Loss Factors (MLFs), but also to address issues associated with obligations of Financially Responsible Market Participants (FRMPs) and operational dispatch arrangements.

While the current rules were introduced less than three years ago² and there is limited information available on the application of these reforms, EnergyAustralia has been heavily involved in a potential project connecting to the shared transmission network via an LDCA, and based on this experience we have drawn similar conclusions to AEMO regarding critical issues with the current framework for LDCAs.

¹ Provided this does not adversely impact on LDCA services provided to the incumbent.

² AEMC, Transmission Connection and Planning Arrangements (TCAPA), ERC0192, 2017, <https://www.aemc.gov.au/rule-changes/transmission-connection-and-planning-arrangements>

As DCAs could be used to facilitate Renewable Energy Zones (REZs) by state Governments, and pursued independently by generation or storage investors, we also believe that a resolution to the issues outlined by AEMO is important to the transition of the NEM.

"Confidential information has been omitted for the purposes of section 24 of the Australian Energy Market Commission Establishment Act 2004 (SA) and sections 31 and 48 of the National Electricity Law."

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The proposed changes are needed to facilitate a more genuine Open Access regime

The 2017 DCA regulations were intended to make excess DCA capacity available on a quasi-open access basis, with the objective of ensuring cost efficiencies for connecting new entrants. However, we believe the implementation of these rules has unintentionally created significant barriers to investment by necessitating the use of negotiation to

address technical complexities, such as the application of MLFs and performance standards.

We support AEMO's rule change proposal as we believe the changes will resolve ambiguity in the interpretation of the current rules by providing better direction on negotiation principles, thereby increasing the likelihood of excess capacity being utilised by 3rd parties.

In theory, commercial negotiations should lead to economically efficient outcomes, however, in practice in the case of DCAs, this theory may not apply. This is despite Schedule 5.12 of the NER, which outlines negotiation principles for LDCA services, the publication of an LDCA access policy, and the existence of a dispute resolution process.

In practice the number of parties involved (AEMO, TNSP, DCA NSP, inaugural developers, off-takers, FRMP, future new connection applicants etc) creates challenges to commercial negotiations, and many of the potential DCA barriers are not easily negotiated away. This is particularly the case with complicated and overlapping tensions between the regulatory, commercial and technical aspects of the connections to, and use of, LDCAs.

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Discussions and interpretations around Principle 3 in Schedule 5.12 are particularly difficult. These rules state that

"the connection of an applicant to an existing [LDCA] and access to [LDCA] services *must not adversely affect* (emphasis added) the access standards, including performance standards and power transfer capability, of an existing connected party at the time of the access application by the applicant".

It is in this principle that access to an LDCA fundamentally differs from traditional open access to a fully funded shared network extension, whereby, for the later, new connecting assets do not have specific obligations in relation to their impact on incumbent assets, or a requirement to negotiate with other generating parties.

By clarifying a baseline arrangement for multiple parties connected to a DCA, negotiations are likely to be more efficient in terms of both negotiation process and the outcome.

One possibility for the rule change could be to create a regulatory backstop for arrangements but not mandate these are applied to all DCAs in all circumstances. If all counterparties to a DCA asset are able to agree alternative arrangements, this should be permissible under the regulations, and facilitated by AEMO.

Finally, under the current framework, the first generator connected to the DCA is likely to be the Financially Responsible Market Participant (FRMP) for the connection point to the shared network. Subsequent connecting assets will need to gain consent from this FRMP. This implies that there would need to be credit support and settlements arrangements between the market participants. The initial FRMP also bears the exposure for connection issues and network performance. While these issues could be commercially negotiated successfully, it could also lead to stalemates if parties are deemed uncreditworthy. This undermines the intent for spare capacity on an LDCA to be effectively open access. By creating a default framework for access whereby each asset is responsible for its own performance and settlements, access is easier.

Loss Factors should be unique for each asset not singularly assigned to all assets within a DCA

Assigning MLFs

EnergyAustralia believes loss factors should be assigned to individual assets, and calculated as close as possible to their terminal stations, to maximise dispatch efficiency.

As AEMO has raised in its rule change request, it is unable to determine MLFs for individual assets where these assets are one of multiple assets connected to a single DCA. Instead, AEMO has indicated that the MLF calculation would be based on the combined energy profile of the identified user group. This may be a particular issue where the assets involved are different generation technologies and use different fuel sources.

An LDCA with excess capacity is likely to attract generation and storage projects with different dispatch profiles due to different technologies and different business models. By assigning a singular loss factor to all assets within a DCA, dispatch signals may become distorted.

For example, consider the co-location of a storage facility and multiple solar assets. In this case, assigning a singular loss factor for dispatch would penalise the storage facility that only dispatches at times when solar output is low but demand is high. This is due to the inclusion of solar congestion during the day in the calculation of the MLF that is assigned to all assets connected to the DCA. Illustratively, Kareeya Hydro plant has a current MLF of 0.9465, but the nearby Clare Solar Farm, has an MLF of 0.8647. The blending of these MLFs to apply a singular value will diminish price signals and dispatch efficiency. The allocation of a single MLF to such combinations of assets would also complicate the assignment of dual loss factors for the storage asset.

Differences in loss factors and changes over time are particularly difficult to resolve by contractual agreement and, assuming contractual agreement could be reached, would potentially require participants to commission their own annual loss factor studies to replicate AEMO's annual assignment of MLFs.

Calculating Loss Factors

We suggest that the largest obstacle to allocating individual loss factors is the appropriate allocation of residues on the LDCA. We suggest AEMO explore calculating two-part loss factors, similar to the gas market; calculating an MLF to the point where

DCA connects to the shared network, and another loss factor from this point to the respective asset.

Performance Standards should be negotiated at the terminal station for each asset, involving all relevant NSPs and AEMO

Negotiating Performance Standards

Connection standards with NSPs and AEMO should be negotiated at the generator terminal station. If standards are instead negotiated at the connection to the shared network, this will create a risk for incumbent generators being required to re-open negotiation on their Generator Performance Standards. This creates both costs and risks for generators.

To address all network system requirements, we think it is appropriate for the rules to clarify that generators should negotiate connection standards with both the DCA operator and the relevant TNSP. Both NSPs will have requirements for their network that need to be managed. As the TNSP has responsibility for the quality of the power entering its shared network it should be engaged during the connection process. Further, TNSPs should remain the responsible party for ensuring minimum system strength requirements are met.

Enforcing performance standards

In the event that a generator within a DCA is non-conforming, under the NER, the remedy is for AEMO to disconnect the entire DCA from dispatch, creating a contamination risk for other generators. Evidently this would detrimentally impact all generators on the DCA, creating risk for incumbents and an additional risk (barrier to entry) for new entrants.

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Clarity on dispatch instructions and assessing conformance required

Current rules suggest that AEMO issue dispatch instructions to a generator at its connection to the shared network rather than the generator terminal. This becomes a practical issue for lengthy DCA networks where it is not possible to determine the flows from a generator accurately if its supply is measured at a remote connection to the shared network which may be several hundred kilometres away, making it difficult to meet, and assess compliance with, dispatch targets.

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Transitional rules

We believe that the proposed rule changes should be applicable to all LDCAs, both existing and future, where a new applicant seeks to connect utilise spare capacity on the LDCA. The date of the LDCAs construction relative to the commencement of the rule should be irrelevant.

Conclusion

In our view, the current rules framework around Dedicated Connected Assets is practically unworkable for AEMO and participants and we welcome the AEMC's consideration of these issues. Contract negotiation of technical details, as required under the current framework, is complex with many parties with varying degrees of negotiating power and will create barriers to entry for investment.

In summary the following changes should be made to the framework to improve the workability of the LDCA rules and ensure efficient open access:

- Loss factors should be assigned to individual assets
- Contamination and performance risks to incumbents should be minimised
- Dispatch instructions and assessment should be clear
- The incumbent's performance standards should not need to be renegotiated

We don't believe the proposed changes would create substantial increase in market costs for customers, and are likely to improve the speed of connections, and efficiency of dispatch, delivering benefits to customers.

If you would like to discuss this submission, please contact me on 03 9976 8482, Georgina.Snelling@energyaustralia.com.au.

Regards

Georgina Snelling

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