



Mr. Benn Barr
CEO, Australian Energy Market Commission
Lodged on AEMC website

21 January 2021

Dear Mr. Barr,

Response to draft rule determination on *Connection to dedicated connection assets (ERC0294)*

On 26 November 2020, the Australian Energy Market Commission (AEMC) published a draft rule determination on *Connection to dedicated connection asset* (Draft Determination) in response to a rule change request from the Australian Energy Market Operator (AEMO). The Clean Energy Investor Group (CEIG) welcomes the opportunity to provide feedback on the AEMC's draft rule determination.

CEIG represents domestic and global renewable energy developers and investors, with around 5GW of installed renewable energy capacity across 49 power stations and a combined portfolio value of over \$9 billion. CEIG strongly advocates for an efficient transition to a clean energy system from the perspective of the stakeholders who will provide the low-cost capital needed to achieve it.

KEY POINTS

- CEIG overall supports the proposed Designated Network Asset (DNA) Framework as outlined in the Draft Determination.
- CEIG supports the extension of the National Electricity Rules (NER) to include DNAs and allow for individual metering, settlement and performance standards.
- CEIG supports the proposed removal of two restrictions on investment (contestability threshold and ownership restriction) but also encourages the AEMC to consider making further amendments to contestability frameworks to boost private sector investment in transmission infrastructure.
- CEIG encourages the AEMC to pursue the possibility of broader, longer term reform that could deliver a far greater degree of flexibility and system support by leveraging the advantages of the new digital renewable energy technologies (wind, solar, energy storage) that will form an increasingly greater proportion of the power system.

- CEIG supports the costs of investments in the transmission network being shared between generators, consumers and other Renewable Energy Zone (REZ) proponents (with oversight from the Australian Energy Regulator as required) and the application of consistent frameworks across the grid.
- CEIG welcomes the continued application of a special access regime for DNAs but notes that, without commensurate investment in the transmission infrastructure ‘backbone’ between REZs and network loads, the special access regime will not provide sufficient certainty that a REZ output will not be unreasonably congested due to other generators establishing their plants between a REZ and a load. A broad review of Chapter 5 and part of Chapter 4 of the NER could more holistically capture consideration of changes to the access regime both inside and outside of REZs.
- CEIG understands that issuing a single Marginal Loss Factor (MLF) for each connection point is a logical solution in the context of the existing MLF methodology. CEIG however believes that MLF reform remains a key issue to enable an efficient energy transition and remains concerned about the risks to investment in clean energy.

SUPPORT FOR PROPOSED DESIGNATED NETWORK ASSET FRAMEWORK

CEIG acknowledges the limitations of the current Dedicated Connection Asset (DCA) framework when there is more than a single connecting party, as raised by AEMO in its rule change request. The suggested framework to replace large DCAs with the newly defined DNAs would allow material additions of assets (that is, those including transmission lines with a total route length of 30km or longer) as part of the transmission network, rather than as connection assets.

CEIG overall supports the AEMC’s proposed solution outlined in the Draft Determination. Although it is only focused on radial additions to the transmission network, CEIG believes that this framework can help support the energy transition and the delivery of AEMO’S 2020 Integrated System Plan (2020 ISP) in several areas, particularly around the REZ frameworks being developed by the Energy Security Board (ESB) and various State governments. CEIG also supports the AEMC’s proposal to retain the DCA Framework for single proponent assets.

The AEMC’s Draft Determination - by allowing the application of existing NER requirements to single connection points – also provides a solution that can be implemented quickly to address the issues identified by AEMO.

Although CEIG generally welcomes the proposed application of the DNA Framework to radial REZ developments, CEIG notes the potential for divergence in how REZ policies are developed and implemented at jurisdictional and national level. This has been most recently highlighted through the release of the *NSW Electricity Infrastructure Roadmap* and *NSW Energy Infrastructure Investment Act 2020*. CEIG welcomes the approach taken by the NSW Government to accelerate the development and implementation of a REZ framework but notes that it also represents a ‘planned displacement’ of parts of the NER and replacement with NSW-specific regulatory and market requirements which could go against a more integrated NEM. Although investors accept that REZ development will be driven by State-specific policies (which will implicitly create some level of divergence across the NEM), CEIG

encourages the energy market bodies and all jurisdictions' governments to coordinate and communicate on an ongoing basis to ensure that sufficient clarity and certainty can be provided to investors across the NEM.

INDIVIDUAL TRANSMISSION NETWORK CONNECTIONS POINTS (TNCPs)

CEIG supports the extension of the NER to include DNAs and allow for individual metering, settlement and performance standards at a dedicated TNCP for each facility connected to the DNA, as well as provisions for system strength arrangements. Remaining within the NEM rules, and therefore retaining the transmission relationship with the Transmission Network Service Provider (TNSP), ensures continuity and stability for ongoing operations.

CEIG welcomes the application of special third-party arrangements as they provide certainty to connecting facilities that their assumed connection standards will be maintained within the DNA. There remains a concern with how connections outside the DNA in the shared network can still impact a facility's expected performance throughout its life. CEIG requests consideration of this area of considerable risk for investors. Reducing the uncertainty here could have a direct impact on the cost of capital to deliver projects as outlined in the 2020 ISP.

CONTESTABILITY OF TRANSMISSION INFRASTRUCTURE INVESTMENT

Support for removing two restrictions (contestability threshold and ownership restriction)

CEIG supports the opportunities provided by the proposed DNA Framework for aspects of the network to be contested and for investors to participate in the transmission infrastructure build out.

CEIG supports the removal of two restrictions (contestability threshold and ownership restriction) as it will provide opportunities for further private investment in transmission infrastructure.

CEIG notes that in order for contestability to be effective, where asset ownership is to be transferred to a TNSP, a strong system specification and acceptance process should also be put in place to ensure an efficient handover of ownership is possible and to prevent unnecessary delays in connection and commissioning. This has been poorly executed in other markets in recent years, for example in the All-Ireland Energy Market where specifications were not clear enough and the changes in interpretation during the construction phase by the TNSP led to severe delays to project delivery.

Preference for greater contestability of transmission infrastructure investment

CEIG's overall preference however remains for greater contestability of transmission infrastructure investment, as highlighted in our [submission](#) to the AEMC's Consultation Paper on *Participant derogation – financeability of ISP projects* (ERC0320 and ERC0322). Considering the scale of future transmission infrastructure investment contemplated in the 2020 ISP, CEIG also supports the AEMC exploring mechanisms that could lead to a lower cost of capital and could deliver additional benefits to consumers, including further exploring the expansion of contestability frameworks for transmission infrastructure.

CEIG notes the AEMC's response¹ to stakeholders who earlier discussed the contestability of ISP projects, including the AEMC's recommendation for the need for clarity as to who:

¹ AEMC, Coordination of generation and transmission investment, Final report, December 2018, p.34.

- *“is ultimately responsible for the safety, reliability and security of the shared transmission network, including who is responsible for resolving any issues;*
- *to contact in the event that there is an issue identified with certain assets, including who AEMO should direct if it needs to do so to support power system security;*
- *is responsible for mitigating particular risks, for example, performance risks and any incentives or penalties that are applied through regulation or contracts.”*

CEIG believes that there would be merit in considering amendments to contestability frameworks that would be cognisant of those concerns.

Opportunity to apply new digital technologies to optimise grid performance

The optimal application of new digital renewable energy technologies (wind, solar, energy storage) could be beneficial to both generation and transmission networks and there is an opportunity to view a DNA (or a REZ built using the DNA Framework) as a managed system that could support optimal grid performance.

Rather than being viewed as a new transmission system to be gifted across to the incumbent NSP and a cluster of freestanding generator/storage assets, a ‘DNA (or ‘DNA REZ’) has the potential for being viewed as a managed system within which every piece of the technical architecture is placed to optimise broader NEM performance.

For example, a ‘DNA REZ’ could incorporate additional technical attributes that could reduce capital expenditure in the broader transmission system and enable better overall performance of the ‘DNA REZ’ itself in terms of network support and response.

In CEIG’s view, the AEMC’s preference for the NSPs to undertake operation and control of network assets remains a constraint to enabling that optimal application of digital technologies.

In the Draft Determination, the AEMC proposes that

The same technical requirements that apply across the Primary TNSP’s transmission network will also apply across a designated network asset, given that this will form part of the transmission network and therefore be operated by the Primary TNSP.

and that

In line with the current arrangements, a connecting party at a TNCP should be able to reasonably expect that the TNSP would operate a designated network asset consistent with the system standards.

A DNA proponent can therefore expect that the standards applied across the rest of the network will also apply to the DNA, potentially at a higher capital cost than might be necessary.

CEIG encourages the AEMC to pursue the possibility of broader, longer term reform that could deliver a far greater degree of flexibility and system support by leveraging the advantages of the digital technologies that will form an increasingly greater proportion of the power system.

COST RECOVERY OF TRANSMISSION INFRASTRUCTURE INVESTMENT

The AEMC proposes that a DNA does not form part of the shared transmission network and that

“the assets forming a DNA are not provided by the Primary Transmission Network Service Provider as a prescribed transmission service, as they are not subject to revenue regulation or funded by consumers through prescribed Transmission Use of System (TUoS) charges.”

CEIG is concerned that this principle appears to exclude any form of cost recovery from parties other than generators (such as governments, consumers or other commercial parties) who may benefit from a DNA. This is despite the fact that those other parties could derive net market benefits from a REZ developed using the DNA Framework, which would in turn justify some element of cost recovery for part of the transmission infrastructure investment in the DNA.

Through this rule change, DNAs have the potential not just for clarifying the principles behind large DCAs (the subject of AEMO's rule change request), but also for supporting the development of REZs whose scale could be well beyond that of current large DCAs. The AEMC also notes that the DNA Framework could be used to support

“radial ‘spokes’ to collect generation and feed this into larger REZs”.

In this scenario, a large REZ could include some areas subject to the DNA Framework while other areas would be subject to the ESB REZ Framework. This could create discrepancies around who ultimately pays for the costs of investment in transmission infrastructure to facilitate that REZ – with those discrepancies in cost recovery treatment seemingly due to part of a REZ being developed in a radial formation rather than being meshed as part of the shared network and occurring despite the benefits generated by the overall REZ.

It is therefore not sufficient to assume that the cost recovery principles that were applicable to large DCAs should also apply to DNAs. Because of the potential application of the DNA Framework to REZs, CEIG believes that cost recovery from other parties should not be ruled out where there are demonstrable benefits.

CEIG supports the costs of investments in the transmission network being shared between generators, consumers and other REZ proponents (e.g. governments or commercial REZ proponents, as required), with oversight from the Australian Energy Regulator to ensure that each party only pays for the costs that are demonstrated to deliver net market benefits to them. CEIG understands that, in practice, applying a regulatory framework to recover costs in a DNA could be made more complicated because of the potential funding and ownership of the DNA's transmission infrastructure by the private sector (rather than the TNSP). Nevertheless, CEIG believes that cost sharing principles should be consistent across the network.

SPECIAL ACCESS REGIME

Support for the proposed special access regime within DNAs

CEIG welcomes the continued application of a special access regime for DNAs as it encourages the clustering of projects to deliver maximum benefits from the development of a DNA and it provides a useful framework that can be applied to future radial REZs.

Principles similar to those currently enforced on DCA service providers under the current DCA access regime – whereby any subsequent connection to a large DCA is not to the detriment of the existing user – should be enforced to ensure that access within the DNA remains firm over time to provide investors with certainty.

The special regime within a DNA will provide generators with the ability to receive (or opt for) firm access to the transmission network within that DNA; CEIG agrees with the AEMC that this will

(somewhat) protect connecting parties' investments in DNAs. However, since the open access regime continues to apply to the wider network beyond the DNA, the protection provided by the DNA special access regime is very limited. This problem was also recently discussed by the ESB².

This is particularly relevant in the context of REZ build out where access policies are being considered to provide some form of firm access within a REZ. CEIG acknowledges the positive intent behind those policies. CEIG agrees that the optimal grid would at times be subject to some level of congestion. However, without commensurate investment in the transmission infrastructure 'backbone' between REZs and network loads, those policies will not provide sufficient certainty that a REZ output will not be unreasonably congested due to other generators establishing their plants between a REZ and a load.

Consideration of investment in the transmission infrastructure 'backbone' will also be required to ensure that the application of the proposed DNA Framework to REZs does not promote developments that deliver poorer outcomes for existing generation outside of DNAs/ REZs.

Opportunity to reconsider the open access regime

The increasing penetration of variable renewable energy in weak and/or congested areas of the grid is testing the limits of the open access regime. Rather than continuing to lay most of the associated uncertainty and risks onto generators and investors - at the risk of continuing to deter investment and working against the delivery of AEMO's 2020 ISP at lowest cost to consumers - a holistic review of the open access regime could give investors renewed confidence.

A broad review of Chapter 5 and part of Chapter 4 of the NER could more holistically capture consideration of changes to the access regime both inside and outside of REZs. Although CEIG acknowledges that this would be a significant undertaking, it could generate material benefits considering the scale of investment required over the next two decades to ensure the security and reliability of the power system as envisaged in AEMO's 2020 ISP.

For example, a wholesale review of the open access regime could consider whether either AEMO and the NSPs need to be able to stop new connections going ahead when the network is materially exceeding its thermal limits or approaching its stability limits or whether there needs to be stronger financial disincentives for late-coming generators in crowded parts of the grid.

MARGINAL LOSS FACTORS

In the Draft Determination, the AEMC proposes to issue a single Marginal Loss Factor (MLF) for each TNCP. CEIG understands that this is a logical solution in the context of the existing MLF methodology.

CEIG however remains concerned about the risks to investment in clean energy brought on by the current MLF methodology, the volatility of MLFs and the increasing difficulty of forecasting revenue for generators. Despite the limited protection received from a special access regime within a DNA, many generators will continue to suffer from volatile revenue streams due to volatile and uncertain MLFs. This is particularly true in regional areas that are further from regional reference nodes.

² ESB, *Renewable Energy Zones – Stage 2 REZ implementation*, Consultation Paper, January 2021.

CEIG believes that MLF reform remains a key issue to enable an efficient energy transition and that there is still a need to address it through a change in the NER.

CEIG thanks the AEMC for the opportunity to provide feedback on AEMO's proposed rule change request and looks forward to continued engagement with the AEMC on this issue. Please contact us at secretariat@ceig.org.au if you would like to discuss any elements of this submission.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'S/Corbell'.

Simon Corbell

Chairperson

Clean Energy Investor Group