15 January 2018

Mr Chris Pattas
General Manager, Networks
Australian Energy Regulator
GPO Box 520
Melbourne VIC 3001

AER Issues Paper – Draft Amendments to the Electricity Network Service Provider Registration Exemption Guideline (17 November)

Dear Chris,

Energy Networks Australia welcomes the opportunity to make a submission to the Australian Energy Regulator's (AER) Issues Paper on *Draft Amendments to the Electricity Network Service Provider Registration Exemption Guideline* ("the guideline") released on 17 November 2017.

Energy Networks Australia is the national industry body representing businesses operating Australia's electricity transmission and distribution and gas distribution networks. Member businesses provide energy to virtually every household and business in Australia.

This high-level submission provides commentary on a number of areas. These involve:

1. **Proposed changed arrangements**

a. Energy Networks Australia notes that the primary changes in relation to the 2017 Transmission Connection and Planning Arrangements (TCAPA) Final Rule change addressed in the Issues Paper involves three core amendments to be progressed:

» to implement amended registration requirements for large dedicated connection assets (LDCAs), with a new class for registrable exemptions (NRO6) for parties that own, operate or control LDCAs[1];

» to implement amended registration requirements for small dedicated connection assets (SDCAs), with a new deemed registrable exemption class (NDO8) for parties that own, operate or control SDCAs; and

» to outline the AER's approach in administering the access policy condition for LDCAs.

Energy Networks Australia notes that at the AER's public forum of 14 December 2017, the AER reported that the Australian Energy Market Commission (AEMC) is potentially shifting from its May 2017 TCAPA Final Determination position, such that it may want to make registerable both SDCAs and LDCAs. This is a move away from only applying this registering process to LDCA's and such a move will influence the extent of this consultation. Energy Networks Australia will be happy to provide further input to the AER on this issue when more clarity is provided by the AEMC and AER.

[1] Inserting Clause 2.5.1(d3) of the National Electricity Rules (NER), as per page 4 of Issues Paper.

b. Energy Networks Australia supports the AER strengthening generator performance standards where there is a current gap in oversight.

We support the AER's proposed amendments to address the lack of clarity for some generator and 'battery'[2] connections, which are "*not bound by adequate technical standards, impinging on system security, reliability and safety"* (page 9), when they connect to exempt and/or embedded networks.

Energy Networks Australia would also support what has been termed "*AEMO's new threshold of significance*" i.e. the 5MW threshold for exempt/embedded networks, but this would require some clarification on, and better explanation of, how it might actually and practically work (individually, incrementally or in aggregate).

Energy Networks Australia concurs with the AER's view that exempt networks are not bound to National Electricity Rules (NER) Chapter 5 obligations, and in particular the prevailing gap, where exempted networks do not come under the auspices of clause 5.3.4A. This clause requires registered Network Service Providers (NSPs) "*to refer proposed negotiated generator performance standards to AEMO in order to review the impact on power system security"* (p.22).

This initiative will require changes to the scope and criteria for the NRO1[3] and NRO2[4] exemption classes and to potentially relevant text in sub-section 4.2.2 of the next version of the AER's *DRAFT Electricity Network Service Provider Registration Guideline – Version 6 – November 2017* for distribution networks.

Energy Networks Australia also endorses the AER's proposal to include the need for an exempt or embedded NSP *"to consult with AEMO if they operate at a normal voltage of 11kV or more, and have commissioned, or plan to commission the installation of a generation asset that, in aggregate, will supply greater than or equal to 5MW into the NEM".*

This appears a key step, prior to the AER accepting a proposed deeming or registerable exemption. However, this would appear to be only one phase of a more thorough AER assessment process. From an AER compliance perspective, it should consider broadening its current approach to this Guideline, from that suggested during the recent 14 December 2017 public forum, with a key focus on 'financial/commercial' analysis.

Any potential changes will need to be cognisant of other rule changes and reviews, in particular the AEMC's current deliberations on AEMO's 2017 Generator Technical Performance Standards rule change proposal.

Energy Networks Australia also proposes that the NEM institutions adopt terms commonly used by industry. In particular, the oft-utilised term 'battery', needs to be fully

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[2] Energy Networks Australia notes that there is no definition in the NER Glossary for 'battery' and it appears there is no definition for inverter or inverter installation either.
[3] Refer to Table 4 from AER's *DRAFT Electricity Network Service Provider Registration Guideline – Version 6 – November 2017*– Registrable classes of exemption – other situations. Off–market energy generation by equipment owned, operated or controlled by a third party and connected to the NEM via a private network connection.
[4] *Ibid.* On–market energy generation by equipment owned, operated or controlled by a third party and connected to the NEM via a private network connection.

considered, and be consistently applied in future related Rule change assessments, relevant reviews, and to future connection application processes. Energy Networks Australia is aware that the AEMC discusses a related issue in its Reliability Frameworks Review - Interim Report (19 December 2017). At page 75, it states that:

> *"Under AEMO's interim arrangements for utility scale battery technology, AEMO has indicated that generators with a battery storage facility with a nameplate rating of more than 5MW but less than 30MW should consider applying to have their generating units classified as a scheduled generating unit. AEMO has noted that the situation becomes complicated if you are proposing to install battery storage within an existing semi-scheduled generating system. This would require a reconsideration of the classification of the whole site. AEMO notes it may consider that the combined installation could be reclassified as scheduled, but that it will make this determination on a case by case basis".*

Energy Networks Australia would also see such clarification as being a useful means in progressing our 2018 Distributed Energy Resources Connection Guidelines project.

The AER's Issues paper at page 22, expresses concern if the widespread use of embedded networks to connect generators resulted in a threat to system security. Generators within embedded networks are still electrically connected to the local DNSP and the revised Guideline should clarify that the generators should be registered via a connections process at the parent connection point using the relevant Chapter 5A or 5 processes. Please refer to our detailed comments in the Attachment 2 under Question 4, Embedded Generation.

2. Acknowledging the Issues Paper's identification of the key practical implementation and NER compliance requirements of the TCAPA rule change

Energy Networks Australia appreciates the AER highlighting the key compliance requirements and obligations resulting from the AEMC's TCAPA Final Determination and Rule. These fall upon the AER and other registered participants. These include, but are not limited to:

- The AER having to amend this guideline by 1 March 2018 (clause 11.98.3(a))
- From 1 July 2018, for all jurisdictions excluding Victoria, Transmission Network Service Providers (TNSPs) and Distribution Network Service Providers (DNSPs) must amend their registration with AEMO to clarify which network assets are Dedicated Connection Assets (DCAs) or Identified User Shared Assets (IUSAs), and to further classify their DCAs as either 'large' or 'small'.
- Again for all non-Victorian jurisdictions, LDCA service providers must prepare, maintain and publish an access policy for its LDCA on its website to provide a framework for applicants to obtain access to LDCA services, and this access policy must be approved, and administered by the AER[5]. Large DCA service providers must submit their access policy for approval by the AER within 30 days of an asset being

[5] Refer NER, clause 5.2A.8(c) (1) and (2).

classified as a large dedicated connection asset[6], and may seek a variation to the access policy at any time with the AER[7].

3. **To improve readability and to be a more self-contained user-friendly document**

» Energy Networks Australia suggests the AER consider transposing extracts of relevant explanatory tables (e.g. current Table 4 of the AER's *DRAFT Electricity Network Service Provider Registration Guideline – Version 6 – November 2017)* into an Attachment to the finalised Explanatory Statement or report that could be similar to what is provided at Attachment # 1. This would greatly assist new readers to, and of, such documentation.

» There are a number of instances where acronyms are used without explanation or a ready reference, for example, activity classes NDO1, NR01, and NR02 (p.5)

4. **Suggesting more specific references be included (e.g. transposing other relevant tables and footnotes from related documents), and some general housekeeping.**

» The current contents of pages 1 and 2 of the Issues Paper's Glossary do not explicitly refer to an actual reference document (it is assumed to be from the National Electricity Rules (NER) in most cases), whilst the two definitions of 'Transmission network' and 'Transmission system' on page 3 does refer to the NER. From a consistency perspective, the material on pages 1 and 2 should have clear references, where the Glossary next appears.

» The changes to condition 10 in section 4.1 of Version 6 of the Guideline (November 2017) appropriately obligate the exempt NSP to notify other parties of life support equipment requirements. However, this condition does not include reciprocal arrangements to notify the retailers of the parent and child connection points. Without these obligations, it would be very difficult for customers at child connection points to remove their life support registration without needing to contact their Financially Responsible Market Participant (FRMP) and the FRMP for the parent connection point. We recommend including this reciprocal arrangement.

» Section 3.5 of the Issues Paper – Arrangements for Distribution Network Service Providers (p. 19) – the discussion on DNSP connection to a TNSP network being a prescribed transmission service, not a negotiated transmission service, would benefit from an actual NER reference to this effect.

» There are a number of inadvertent references to 15 January 2017 instead of the intended 15 January 2018 in the Issue Paper, and

» There is a misspelt TSNP in section 4.2 on page 20, and a missing s in generator towards the top of page 22.

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[6] Refer NER, clause 5.2A.8(d))

[7] Refer NER, clause 5.2A.8 (e). For variations, [the] AER must approve the variation if it is reasonably satisfied that it complies with the requirements in (b) (i.e. description of routes/assets, regulatory limitations for its development/operation, pricing principles/terms underpinning DCA service provision, process for applicant to seek access and availability of commercial arbitration). If AER does not approve, the AER must notify of changes required for approval, and if six months elapse since the AER's notification, the AER itself may propose an access policy (clause 5.2A.8 (f)).

Energy Networks Australia's brief responses to some of the Issues Paper's specific questions are provided in Attachment # 2.

Should you have any additional queries, please contact Norman Jip, Energy Network Australia's Senior Program Manager – Transmission on (02) 6272 1521 or njip@energynetworks.com.au.

Yours sincerely

Andrew Dillon
Chief Executive Officer

Attachment # 1 - Extracted Table 4 from AER's DRAFT Electricity Network Service Provider Registration Guideline – Version 6 – November 2017– Registrable classes of exemption – other situations

Class	Activity	Registrable exemption
NRO1[8]	Off–market energy generation by equipment owned, operated or controlled by a third–party and connected to the NEM via a private network connection	Energy generation (including inverter) installations intended to supply network support or demand management services to the NEM
NRO2[9]	On–market energy generation by equipment owned, operated or controlled by a third–party and connected to the NEM via a private network connection	Energy generation (including inverter) installations required to be registered with the AEMO under clause 2.5.2 of the NER
NRO3	Ongoing supply to a mining or primary production facility and associated residential, commercial, industrial, processing and ancillary support facilities[10] in areas with restricted access to NEM supply	All bona fide installations, subject to demonstrable circumstances of remoteness from existing NEM supply infrastructure
NRO4	Industrial, commercial and 'mixed–use' facilities but not including residential or energy generation activity. Includes the metered or unmetered supply of energy under an agreed commercial scheme negotiated with large customers	All installations
NRO5	Metered energy selling to customers in networks with metering infrastructure enabling access to full retail competition in a jurisdiction[11]	**Closed to new applications. Replace with activity class from table 1 or table 3.**
NRO6	Large (30 km or greater) Dedicated Connection Assets (see definition in Glossary)	**All installations**

8 This class applies only to the network to which the generator is connected … Note also, the size limit set out in condition 4.2.3 has changed. If the total generation measured at your connection point to the NEM is 5MW or more, you must confirm with AEMO that registration of generator performance standards is not required to be eligible to register in this Activity Class.

9 As above in footnote # 8.

10 The term 'ancillary support facilities' is intended to be interpreted broadly to encompass a wide range of sundry activities including, but not limited to, incidental supply to local residents, local tourism, communication, health, public safety and emergency services. Supply to such loads is permitted where the cost of supply by a local distribution network service provider would be uneconomic.

11 Activity class NRO5 formerly applied only to embedded networks where customers had access to full retail competition via 'child' metering registered with applicable AEMO requirements. It did not apply where a customer arranged direct connection to a NEM registered NSP or where customers within a network did not have access to full retail competition. It is now closed.

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Attachment # 2 – Responses to AER consultation questions

Q.1 *Are there any other conditions the AER should consider applying, on a case-by-case basis, to NRO6 (i.e. Large (30 km or greater) Dedicated Connection Assets and /or NDO8[12] (i.e. Small (under 30 km) Dedicated Connection Assets) exemption holders for parties who own, operate or control dedicated connection assets?*

At a high-level, it may be appropriate in providing legal and regulatory clarification when changes in contractual arrangements may eventuate.

Q.2 *Should activity class NRO2 (i.e. On-market energy generation by equipment owned, operated or controlled by a third party and connected to the NEM via a private network connection) be closed to new applications or should the generator performance standards issue be dealt with by a rule change proposal?*

In responding to the second limb of this question, Energy Networks Australia notes that the AEMC is currently conducting a consultation on an AEMO August 2017 rule change proposal on generator technical performance standards (ERC0222). As outlined on page 2 of our covering submission, any envisaged rule change proposal will need to be fully cognisant of developments or otherwise, on AEMO's far-reaching and complex rule change that is now under AEMC consideration.

Q.3 *Should the restriction to meter reads of no more than once per month be relaxed to allow more flexible, weekly payments for selected customer groups?*

Energy Networks Australia would welcome any AER examination of cost effective meter reading alternatives that can assist selected customer groups to have more flexible payment options. These options will need to be simple and understandable from a customer perspective and not create new fee charges to do so.

Q.4 *Do stakeholders have comments to make on any of the other proposed amendments?*

Energy Networks Australia has provided some comments and recommendations in the main body of the submission on a number of key issues of interest for network businesses; however, we have a number of more detailed drafting comments below.

Microgrids and local energy sales

The Guideline (page 16) states that the exemption arrangements do not allow private networks across site boundaries or public lands, nor trading of excess electricity across neighbouring properties. Normally electricity networks crossing public land or site boundaries require a licenced electricity network. The AER may require the private electricity network of this kind to be registered with AEMO and may not allow registration or may revoke the registration of the exempt network. The Guideline should make it clear that if the AER revoke the exemption of an existing private

[12] As described in the AER's *DRAFT Electricity Network Service Provider Registration Guideline – Version 6 – November 2017), Table 2, page 30.*

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electricity network then the network should be obliged to register with AEMO and to seek appropriate electricity distribution licencing in the jurisdiction. Footnote 21, page 27 should also be clear that the registration is with AEMO and licencing in the relevant jurisdiction.

Embedded Generation (EG) Issues

The AER's Issues paper page 22, expresses concern if the widespread use of embedded networks to connect generators resulted in a threat to system security. The ENA shares this concern regarding increasing penetration of EG and the impacts on the local networks in relation to security and reliability of supply, including when the EG is connected at child connection points. The revised Guideline provides a mechanism for AEMO to review all new generator connections with a capacity above 5MW, which are connected within an embedded network to ensure that there is no adverse impact to power system security before the deemed or registrable exemption is allowed. The ENA is supportive of this approach and suggests further clarification to deal with the increasing levels of small generation, e.g. solar / battery that could be deployed after an exempt network is connected to the local DNSP. The ENA considers this issue is not limited to the time at which the embedded network is created or commences operation.

Just as occurs with life support registration, these child EGs need to be registered with the parent connection point and the parent retailer and local DNSP should also be informed. We suggest that the same must occur for any child EG, regardless of EG size, type or whether the generator is exported to the grid. Small changes in current that occur within milliseconds has the potential to impact the local DNSP and their obligations in relation to safety and reliable supply. Each of the child generators or child generator modifications needs to be registered at the parent connection point and in the cases above the local DNSP micro EG connection offers, needs to be approved by the local DNSP as a parent connection modification. This is not clear in the current Guideline. ENA request the AER confirm support of this approach in the final decision and provide the clarity outlined below in the revised Guideline conditions 4.1, 4.2.3, 4.8.3 and 4.8.1, effective from March 2018.

This principle needs to apply to NDO1 (deemed network exemption with off market generation), NRO1 (registered exempt network with off market generation), NRO2 (registered exempt network with on market generation). Exempt networks are exempt from the NER, and it is not clear that they need to request a grid side connection modification for any changes to the nature of the connection, which includes internal generation and storage, which may be connected at any child connection point. The ENA recommends a new section be added in condition 4.2.3 of the Guideline to require an embedded network parent to provide connection applications to the local DNSP for all EG installed at child connections and all modifications at child connections to enable an aggregated view of different generation or storage to be maintained at the parent connection point. It should be clear in the revised Guideline that the exempt network must follow the chapter 5 or 5A processes regarding connection of any embedded generation, regardless of whether the generation will export to grid.

A new condition should be added to the general requirements conditions in section 4.1: a new sub clause 14 should be inserted to require the following:

"An exempt person, must, where any generation or storage is installed or modified within the exempt network follow the relevant connection processes under the NER Chapter 5A or 5 with the local DNSP so that any child embedded generation installation, modifications, removals are advised at the parent connection point and follow the local DNSP's connection process, regardless of size or whether there may be any export to the grid."

A new condition 4.8.3 (h) also needs to be added to clarify that the embedded network service provider must maintain records for each exempt customer that include the inverter type, make, model, type of generation, and size for each child connection point. Without these records, there will be no ability to properly reflect generation levels at the parent for network reliability or for planning purposes. The local DNSP must be able to request these records at any time to confirm the individual and aggregated generation details.

The AER may also like to consider enhancing information provision obligations to customers by adding a new clause 4.8.1 (4) to require the exempt network service provider to meet jurisdictional requirements to advise customers in writing once every three years of the need to maintain their generating systems in accordance with safety standards etc.

Whilst condition 1 applies to NDO1, NRO1 and NRO2 and any amendments would apply to those exemption classes as specified, ENA query why condition 8 does not apply to NDO1. ENA considers that maintaining records, providing information to customers and providing contact details for customer enquiries are all relevant obligations for an exempt network service provider. Network class NDO1 could apply to shopping centres or retirement villages where some child connection points install their own embedded generation or lease generation via a SPPA (solar power purchase agreement).

On market energy generation definition

The definition of on market energy generation in the glossary covers a non-exhaustive list of a range of generating technologies but not does not include batteries. Given the lack of clarity across the industry it would be useful, for the avoidance of doubt, to include battery technology (regardless of whether the battery is curbing consumption at a child/parent connection point or could export from that connection point into the private network or from the parent connection into the grid.

Electricity metering

The Guideline (page 18) states that where a jurisdiction has adopted Power of Choice (POC) reforms that the minimum metering requirement is the minimum specification for advanced metering. Victoria has adopted several of the POC reforms but has delayed metering competition for metering directly connected to the licenced network. It would be useful to clarify with a footnote that any new metering in

embedded networks, including in Victoria, needs to meet the minimum national specification for advanced metering.

Clarity on significant generation of 5MW

The Guideline is confusing in relation to its use of term, generation:

For example,

- Page 8 on market generation systems of 5MW capacity or greater in aggregate
- Page 33, footnote 31/32 total generation measured at your connection point to the NEM is 5MW or more, for on market and off market generation
- Page 52 any changes in generation capacity..... which result in total aggregate generation exceeding 5MW.

The deemed, registerable or individual exemptions apply at a parent connection point and allow a private network. In some of the terminology used it is not clear whether the aggregate 5MW is at a child connection point based on the number of generating units and the generating capacity at the child connection point. In this case, the generation could be used wholly or partially within the exempt network or some of the generation could be exported into the grid.

In other cases the aggregate generation at the connection point appears to be measured at the parent based not on the generating unit size at the child connection but based on the total generation export of 5MW or more that may go to grid. This could arise due to multiple child connection points each with generating units of 1 or 2 MW.

There are two principles, which need to be addressed:

- AEMO's need to consider registration of the child connection point generating systems and application of the generator performance standards at the child connection point from a system security and reliability view point: and
- The need for licenced distributors to understand all generating units connected within their network areas (including within private networks) that may influence network planning and operation of the network. It is also expected that AEMO would be interested in this information.

Clarity of the locational aspect for measurement of the 5MW could be improved in the final Guideline (parent or child) and whether the total is based on export to the grid or on the generating unit size.

Life support registration

The Guideline (page 38) states that where a customer notifies the exempt network service provider of a life support need, the exempt network service provider must notify both the parent retailer and the child retailer.

The ENA has in response to the AER proposed life support rule proposal made the AEMC aware that life support registers are growing at a rapid rate and there are issues with the lack of de-registration of life support customers when advised. The general requirements, obligation 10 should include an obligation that where notified

by a customer there is no longer a need for life support, the exempt embedded network service provider must notify the customers retailer of the de-registration and, must notify the parent retailer of the changed life status if that customer was the only customer requiring life support in the exempt network.

Access Policy

New section 5.2.1 (page 79) refers to the need for an AER approved access policy for NR06 and NR07. The heading in this section should refer to all categories which require an approved access policy so it is consistent with the text. There is no NR07 category in the Guideline. This should be amended to NR05 to be consistent with the implied access policy requirements stated at the end of section 3.2.