Mr James Eastcott
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Australian Energy Market Commission
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Email: submissions@aemc.gov.au

Dear Mr Eastcott

ERC0147: CONNECTING EMBEDDED GENERATORS – DRAFT RULE DETERMINATION

CitiPower and Powercor Australia (**Businesses**) welcome the opportunity to respond to the Australian Energy Market Commission (**AEMC**) draft rule determination in relation to the proposed amendments regarding the connection of embedded generators.

The Businesses support the AEMC's draft decision to not provide embedded generators with the automatic right to export electricity to the distribution network.

The Businesses also support the introduction of an improved and more efficient process for connecting embedded generators. The new process, however, must not be so rushed that it does not allow time for the Businesses to assess the appropriateness of the proposed connection in terms of the risks to the safety, security and reliability of the network and the supply of services to other network users.

The Businesses consider that:

- the draft determination and draft rule appears to apply to embedded generators of all sizes, and this should be narrowed to the intended mid-scale embedded generators with nameplate ratings between 30kW and 5MW;
- the short timeframe proposed for the Distribution Network Service Provider (**DNSP**) to provide the "Preliminary Response" means that only a generic and high-level response could be provided;
- in practice, the connection application process requires significant collaboration and iterative discussions between the applicant and the DNSP to achieve the best outcomes for both parties and other network users;
- the Businesses' current internal process to connect embedded generators is working effectively. This clear and transparent process helps to streamline the effectiveness and flexibility of the process, and is ultimately in the best interests of all users of the

network. The Businesses would welcome the opportunity to present the process for embedded generation connection to the AEMC.

The Businesses have provided some general comments on the AEMC draft determination in the attached submission.

The Businesses would be pleased to discuss any aspect of this submission with the AEMC. Please contact Elizabeth Carlile on 03 9683 4886 or ecarlile@powercor.com.au.

Regards

Brent Cleeve
MANAGER REGULATION

1. Size of embedded generator

It is unclear from the AEMC draft determination as to what size of embedded generator the proposed rule change applies. The proponents sought the rule change to apply to embedded generators with a capacity between 10kW and 30MW,[1] however in terms of technical requirements the AEMC discusses "mid-scale embedded generators" with a nameplate rating between 30kW and 5MW.[2]

The draft rule changes appear to apply to all embedded generators without specifying any capacity or size limitations. The process to apply to small scale generators up to 10kW per phase, such as solar PVs on residential homes, is already contemplated by Australian Standard AS 4777 and should not be included within the scope of the proposed rule change. Similarly, the process for large or complex connections requires time to undertake meticulous technical analysis necessary given the higher potential to impact on other network users. Therefore, the Businesses consider that the AEMC should limit the application to the intended mid-scale embedded generators with a capacity between 30kW (i.e. above 3 phase 10kW inverter) and 5MW.

2. Information pack and technical information

Information pack

The Businesses support the requirement for DNSPs to publish information packs for connection applicants. Currently, the Businesses provide embedded generation connection guidelines for sub transmission, high-voltage and low-voltage connections on the website. These guidelines make it clear that connection enquiries can be vastly different in terms of cost and impacts on the network.

Key factors that drive differences in connections to the network include the location and size of the connection proposal. Each connection point in the network is unique. An enquiry to connect an embedded generator to a connection point that may already be operating close to the limits of the national and jurisdictional technical obligations may require extensive assessment to determine the works required to facilitate the connection and the likely connection charges involved.

Therefore, DNSP's would only be able to include worked examples of connection service charges and application fees in the information pack for very simple connections not involving any deep augmentation[3] and very basic shallow augmentation variations, which may be vastly different from the reality faced by the applicant.

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1 AEMC, *Connecting Embedded Generators*, Draft Rule Determination, 27 June 2013, page 1.
2 AEMC, *Connecting Embedded Generators*, Draft Rule Determination, 27 June 2013, page 54.
3 Augmentation of the distribution network beyond an embedded generators extension and connection assets.

Technical information

The AEMC proposes to require DNSPs to maintain a register of compliant equipment. The proposed rule appropriately does not oblige DNSPs to accept an application to connect compliant equipment if locational limitations or other requirements prevent its connection.

The Businesses consider that the register would provide limited benefits, as the interaction between generators and the network will necessarily be different at each connection point. The Businesses are also concerned that the register has the potential to mislead connection applicants and result in unnecessary costs.

3. Preliminary enquiry phase

This phase appears to seek to provide further relevant information to the connection applicant beyond that provided in the information pack.

The AEMC proposes that DNSPs have 15 business days to provide a detailed response to the applicant who lodged an enquiry form, where the contents of the preliminary enquiry response are those set out in draft Schedule 5.4A of the National Electricity Rules (**NER**). The 15 day timeframe necessitates that the contents of the preliminary response are "generic" and does not involve great detail or investigation into the network.

Some of the information set out in Schedule 5.4A can be generic and included in the information pack, such as the information set out in draft clauses (i) or (l).

That said, many of the clauses appear to require design work associated with the proposed connection, which will not be practically possible to provide within 15 days. For example, clause (a) outlines technical information relating to the particular connection point. The Businesses do not have any of this information readily available, and it would take several weeks to assess each element. In some cases, the applicant may be required to complete a study before the Businesses could assess one or more of the elements of Schedule 5.4A. As such, the Businesses recommend that clauses (a) to (d) be removed from the preliminary enquiry phase.

The Businesses also note that for the enquiry form to be accessible for an initial connection applicant, there is likely to be significant amount of further information that the DNSP will subsequently identify as being required to progress the inquiry, including in potentially answering some aspects of the preliminary enquiry response. This is anticipated by draft clause S5.4A(q) which requires the DNSP to set out the list of further information that it will require. A civil penalty is not appropriate for this subclause.

In terms of other aspects of draft Schedule 5.4A, the Businesses note:

- subclause (m) requires a description of the how the DNSP proposes to amend the model connection agreement for the proposed applicant. It is premature to require this information at the preliminary enquiry phase stage, as the Businesses will not have enough information to understand the specifics of the connection proposal to determine if any changes to the model connection agreement are appropriate.

- subclause (r) requires the DNSP to set out the enquiry fee that would be payable at the next stage of the process. However, the enquiry fee is defined in draft clause 5.3A.4(a)(2) to include costs that "meet the reasonable costs anticipated to be incurred by *AEMO* and other *Network Service Providers* who participation in the assessment of the application to connect will be required…".

  It is unrealistic to expect that the Businesses would have the ability to identify all parties that may need to be engaged in the process; engage with those parties to discuss the possible implications as well as enable those parties to identify the costs that they are likely to incur; and then respond to the applicant with estimated fees within 15 days.

  At a minimum, the AEMC should allow flexibility regarding the structure and timing of the enquiry fee, for example, allowing it to consist of an upfront fixed fee for the initial work (such as based on the proposed capacity of the proposed generator), with a provision for further costs if the complexity of the project involves consultants or other agencies – such costs would be passed on by the DNSP to the applicant at cost.

4. Detailed enquiry process

The detailed enquiry phase is, in practice, likely to be highly iterative and involve interactive discussion between the DNSP and the connection applicant.

For mid-scale embedded generators, the Businesses usually require applicants to engage technical consultants to undertake studies; establish design requirements; assess protection requirements; assess augmentation requirements and interact with the DNSP.

This phase also requires detailed design and planning of the proposed connection by the DNSP, as well as an assessment of the appropriate equipment and standards to meet. The export of power onto the network by the embedded generator will also need to be assessed to determine the network augmentation, network monitoring and control and network extension works required to facilitate access to the network to ensure that the connection will not adversely affect the operation of the network or the use of the network by existing customers, including existing generators.

The works required will need to comply with all relevant safety, regulatory and environmental considerations, and may require consent from third parties, including regulatory bodies. The connection charges must also be assessed in accordance with the regulatory framework and require an internal governance review.

This Detailed Response phase is proposed to take place over 30 business days i.e. 6 weeks, although longer timeframes can be agreed between the parties. Such agreement between the parties must not be able to be unreasonably withheld. The longer timeframes can be up to a maximum of 4 months if no shared augmentation is required, although this does not appear to be reflected in the draft rule changes.

While there are obvious benefits from having target timeframes for each phase, they need to be reasonable and achievable for both parties. Longer timeframes are likely to be required particularly for connections requiring significant augmentation or external consents. It is

imperative that the timeframes do not preclude the DNSPs from fully assessing the risks associated with the proposed connection and ensuring that it does not negatively impact the supply of services to other network users.

In terms of the draft Schedule 5.4B, the Businesses:

- recommend that the wording of subclause (d) be amended from the level and standard of service of power transfer capability that the DNSP "can ensure that the network provides" to that which the DNSP "can provide with reasonable endeavours", given that the Businesses are unable to guarantee supply; and
- strongly object to the proposed subclause (k) where the DNSP is required to provide "any additional information relevant to the application to connect" to the applicant. A civil penalty is proposed to be attached to that clause in the event that DNSP does not satisfy it. It is not appropriate for the Businesses to be liable to a penalty where the identification of other relevant matters is likely to depend on the information provided by the applicant, and where the definition of such information is vague at best.

The Businesses also request the AEMC to check the consistency of the validity period of the detailed response in draft clause 5.3A.8(g) and draft clause Schedule 5.4B(i)(4); and the accuracy of cross references within draft clauses 5.3.6(a)(2) and (3).

5. Impact of RIT-D on timelines

The AEMC recognises that the RIT-D process may take up to 18 months to complete.[4] Therefore, where the Businesses are required to invest to connect an embedded generator, and this triggers the RIT-D process, then the rules must expressly provide for the suspension of the connection application timeframes.

6. Augmentation of the network

The Businesses support the AEMC's proposal not to exempt embedded generators from contributing to deep augmentation costs. Exempting embedded generators may have provided incorrect signals to connection applicants in terms of efficiency and location of the connection, and may have imposed a cost burden on other network users.

7. The process undertaken by the Businesses

The Businesses currently have a clear and transparent process for connecting embedded generators, which is shown in Figure 1 below. This process has been developed following extensive review of actual embedded generator applications to the Businesses and identification of areas for improvement.

[4] AEMC, *Connecting Embedded Generators*, Draft Rule Determination, 27 June 2013, page 84.

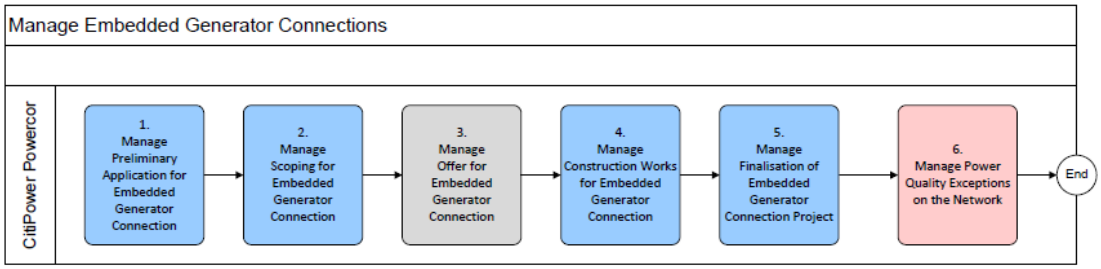

Figure 1 CitiPower and Powercor Australia's connection application process

The approach is collaborative, and with significant interaction between the Businesses and the generator before and after acceptance of the connection offer. The first stage is similar to the AEMC's proposed information pack, the second stage is comparable to the AEMC's detailed enquiry phase; and the third stage is agreeing the connection application. This process has been developed to ensure that other network users are not impacted by new embedded generators being connected to the network.

The Businesses would be happy to meet with the AEMC to discuss the benefits of our simplified process.